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UNITED STATES
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Climatological Data

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
ENVIRONMENTAL DATA SERVICE

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JUL 28 1971
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JANUARY

1971

Volume 22

No. 1

Asheville, N.C.

1971

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 1 JANUARY 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Bone-chilling cold prevailed during most of January from the northern Great Plains to New England.
2. Record warmth occurred at some points in the Southwest and in the Florida Peninsula.
3. Deep snow accumulated in the Cascades.

TEMPERATURE.--January was named for the ancient Roman god, Janus, who had two faces. A happy face looked one direction, a sad face looked the opposite direction. Weatherwise, January 1971 was as two-faced as Janus.

Cold weather prevailed over the West and East early in the month but unusual warmth occurred over southern Texas where Cotulla registered 96° on January 3. This is only 2° cooler than the highest temperature of record for any spot in the Nation. Fort McIntosh, Tex., registered 98° on January 18, 1914, and Laredo, Tex., recorded 98° on January 17, 1936. Cold air plunged southward behind a storm centered over Lake Michigan. In about 18 hours, from the afternoon of January 3 to the following morning, the temperature at Cotulla plunged 60° from 96° to 36°. Flagstaff, Ariz., registered 22° below zero Monday morning, January 4. By Tuesday morning, January 5, arctic air covered the West from Canada to Mexico and on Wednesday morning subzero weather was common from the northern Rocky Mountains to southern New Mexico and northeastward to Lakes Superior and Michigan.

On January 5, the temperature at Rock Springs, Wyo., went no higher than 18° below zero and on the 7th, Fraser, Colo., registered 42° below zero and the mercury at Albuquerque plunged to 17° below zero. This is the coldest temperature of record for Albuquerque. Other cold temperature readings included 47° below zero at Antero Reservoir, Colo., and some unofficial readings of -50° or colder. The minimum temperatures at Moline, Ill., on January 6 and 7 were -13° and -17°, respectively.

Cold weather continued over most of the Nation for several days. New York and New England registered subzero temperatures on 1 or 2 mornings; -25° at Massena, N. Y., on the 9th. Some warming occurred in the central Great Plains. Missouri warmed to the 40's on the 9th which is about normal for early January. Mild weather continued in the Florida Peninsula.

Bone-chilling cold continued from Montana to New England at midmonth while near-record warmth occurred over portions of the South. On January 18, the temperature at Los Angeles, Calif., climbed to 95°. This is 5° warmer than the previous January record for Los Angeles and only 3° cooler than the January record for any spot in the United States. On the 19th, the temperature at Phoenix and Yuma, Ariz., reached 88° setting new January high-temperature records for those localities.

At the other extreme, cold arctic air plunged southward over the central and eastern portions of the Country. Bemidji, Minn., registered 31° below zero and Houlton, Maine, 35° below zero on the same date that Phoenix and Yuma recorded their record-high January readings. The bitter cold pushed far southward over the eastern part of the Nation with subfreezing temperatures occurring in the Florida Everglades January 20 and 21. Meanwhile, southerly winds warmed the Great Plains. On the afternoon of the 20th, Rapid City, S. Dak., and Valentine, Nebr., were as warm as Orlando, Fla. The maximum at each station was 47°. On the 21st, the temperature at Tallahassee, Fla., dropped to 32° which was 11° colder than Fargo, N. Dak. Pueblo, Colo., warmed to 78°, a new January record.

Arctic air poured into the north-central States in the last week of January. It then spread eastward and southward. As the end of the month approached, subzero weather plunged as far south as central Illinois while record-breaking warmth covered parts of Washington, Oregon and southern Texas.

PRECIPITATION.--A giant storm developed in the Southwest early January 2. It intensified as it moved into the southern Great Plains and spread heavy snow from the Rocky Mountains across the northern and central Great Plains to the Great Lakes. Mixtures of freezing rain and sleet fell east and south of the snow belt. Rain and scattered thunderstorms occurred farther south. In the snow belt, snow depths reached 12 to 17 inches from the Colorado Rockies across Nebraska and Iowa to northern Illinois. Moline, Ill., received 16.4 inches of snow on January 3. This is the greatest 24-hour snowfall of record for Moline. LaCrosse, Wis., set a 24-hour snowfall record when 16 inches fell there. Strong winds drifted the snow badly. Numerous roads became blocked. The care of livestock became extremely difficult.

Early in the 2d week of January, a storm developed over the Gulf of Mexico. It dumped several inches of snow over the northern portions of Mississippi and Alabama. Another storm brought wet and windy weather to the Pacific Northwest. Rain fell along the coast with snow in the mountains and eastward to the northern Great Plains. By the evening of January 9, 15 inches of new snow covered Lincoln, Mont., near the Continental Divide. Freezing rain slicked the highways in parts of Oregon and Idaho. Another storm brought freezing rain from northern Louisiana to Virginia and rain southward to the Gulf coast. The freezing rain made highway driving treacherous. Ice accumulated on trees, poles, and wires. Limbs and wires broke. Electric service in the Athens, Ga., vicinity was interrupted for 12 hours.

On January 13, a front extended from the north-central states to the Carolinas with miserable weather on both sides of it. Snow fell in the Northern States and sleet, freezing rain, or freezing drizzle with fog, occurred south of the snow belt. By the 14th, a large area from Illinois to the Northern and Middle Atlantic States had become coated with a layer of ice that made walking or driving risky. Shortly after midmonth, an intense storm off the Pacific coast brought heavy precipitation and strong winds to the Northwest. After gusting to 109 m.p.h. at Cape Blanco, Oreg., late on the 15th, the winds slackened some but by the 17th, another storm was pounding the Pacific coast with winds up to 70 m.p.h.

More storms occurred in the last week of January. Stampede Pass, Wash., received 75 inches of snow in 3 days, January 22 to 24. This is the most that ever fell at Stampede Pass in 3 days. Eighty-eight inches of

new snow fell at Paradise Ranger Station, Wash., on the south side of Mt. Rainier in the same 3 days bringing their snow depth to 232 inches. A massive storm spread miserable weather from the Great Plains to New England. Strong winds, accompanied by heavy snow and poor visibility made automobile travel impossible in some places and extremely hazardous in many others. Thunderstorms occurred along the Atlantic coast and dense fog covered parts of the Deep South.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	82	15+	Hamilton 3 S	5	21+	Guntersville	7.66	Fort Morgan	2.01
Alaska	Eklutna Project	52	5	Prospect Creek Camp	-80	23	Little Port Walter	17.60	6 Stations	.00
Arizona	Tucson Univ of Arizona	90	20+	Hawley Lake	-40	7	Hawley Lake	1.33	39 Stations	.00
Arkansas	2 Stations	79	14	Gilbert	1	7	Dumas	6.31	Marshall	.37
California	Indio U S Date Garden	97	19	Bridgeport	-24	3	Elk Valley	20.70	12 Stations	.00
Colorado	2 Stations	78	30+	Taylor Park	-49	6	Berthoud Pass	3.70	2 Stations	.00
Connecticut	Norwich Pub Util Plt	51	5	Falls Village	-23	19	Woodbury	3.31	Coventry	1.22
Delaware	2 Stations	64	6+	Georgetown 5 SW	2	28	Bridgeville 1 NW	3.54	Wilmington NCastle WSO	2.22
Florida	Devils Garden Tower	88	6	Tallahassee WSO	11	21	Cedar Key 1 WSW	5.04	Tavernier	T
Georgia	Folkston 9 SW	81	25	2 Stations	7	21+	Ellijay	9.34	Sapelo Island	1.65
Hawaii	4 Stations	87	28+	Mauna Loa Slope Obs,Hawaii	19	22	Pahoa 65, Hawaii	36.54	Kulani Mauka 76,Hawaii	5.55
Idaho	Glenns Ferry	66	19	Stanley	-43	4	Mullan FAA	13.99	Leadore No. 2	.42
Illinois	2 Stations	66	30+	Moline WSO	-19	7	Dixon Springs Agr C	4.23	La Salle 1 S	.35
Indiana	Evans Landing Dam 43	63	14	2 Stations	-11	31+	Princeton 1 W	D 3.44	Kentland	.07
Iowa	Glenwood 2 NNW	56	29	Decorah	-31	7	Emmetsburg	3.15	Inwood 2 SW	T
Kansas	2 Stations	77	30	Washington	-21	6	Thayer	3.30	Ulysses	.03
Kentucky	Pikeville	74	14	Falmouth 5 WNW	-1	31	Sterns 1 W	6.96	Louisville	1.94
Louisiana	Shreveport WSO	84	30	Monroe FAA AP	10	9	Diamond 4 NW	4.84	Kaplan 8 S	.00
Maine	2 Stations	45	25	2 Stations	-37	19	Bar Harbor	4.24	Harris Station	.98
Maryland	Salisbury	65	5	Oakland 1 SE	-4	8	McHenry 2 NW	5.57	Brighton Dam	1.90
Massachusetts	New Bedford	54	5	Chester 2	-32	20	Boylston	4.05	Adams	.86
Michigan	Willis 5 SSW	48	4	Stambaugh 1 S	-31	8	Ishpeming	5.28	Entrican 1 W	.19
Minnesota	2 Stations	40	29+	Angus 4 NNE	-41	15	Winona	3.72	Pipestone	.02
Mississippi	2 Stations	80	15+	University	8	20	Booneville	7.58	Wiggins 4 SE	1.37
Missouri	4 Stations	72	30+	Albany	-26	6	Bloomfield	5.02	Maryville 2 E	.04
Montana	Cascade 5 S	64	19	Babb 6 NE	-47	13	Summit	10.19	Norris 3 ENE	.05
Nebraska	2 Stations	70	30+	2 Stations	-26	7	Lincoln College View	2.49	Gavins Point Dam	T
Nevada	Lathrop Wells 16 SSE	82	18	Ruth	-28	6	Mount Rose-Sky Tavern	5.51	9 Stations	.00
New Hampshire	3 Stations	47	26+	2 Stations	-36	28+	Mount Washington	8.18	North Stratford	1.37
New Jersey	2 Stations	60	5	Sussex 1 SE	-14	19+	Long Valley	3.75	Boonton 1 SE	1.58
New Mexico	3 Stations	82	31+	Eagle Nest	-47	6	Sandia Crest	1.82	8 Stations	.00
New York	3 Stations	52	5	Old Forge	-40	17	Hooker 4 N	5.89	Plattsburgh	.39
North Carolina	New Bern 3 NW	78	5	Grandfather Mountain	-6	27	Nantahala	10.09	Rowan Research Station	1.47
North Dakota	4 Stations	44	20+	Edmore 1 N	-41	15	Sheyenne	1.35	Verona	.10
Ohio	4 Stations	60	14	2 Stations	-13	31	Fernbank	2.94	Sandusky	.38
Oklahoma	Erick 4 E	79	29	Hooker 1 N	-16	6	Sallisaw	3.71	Snyder	T
Oregon	Milton Freewater 4 NW	70	31	Seneca	-35	2	Tillamook 13 ENE	28.64	Paisley	.53
Pennsylvania	Waynesburg 1 E	59	15	2 Stations	-22	31	Ebensburg Sewage Pl	5.87	Wellsboro 3 S	.73
Puerto Rico	Dos Bocas, P R	92	22	Adjuntas Substation, P R	46	16	Pico Del Este, P R	16.67	Puerto Real, P R	.00
Rhode Island	Block Island WSO	53	5	North Scituate 4 W	-10	19	Block Island WSO	2.48	Providence WSO	2.01
South Carolina	3 Stations	77	5+	Caesars Head 1 NE	4	20	Caesars Head 1 NE	7.92	Branchville 6 S	2.64
South Dakota	2 Stations	61	30+	Usta 8 WNW	-31	15	Lead 6 SSW	D 2.83	5 Stations	T
Tennessee	Selmer	75	15	Centerville Water Pl	1	20	Monterey	7.45	Clarksville Sew Plt	.89
Texas	Zapata	97	30	Sunray 4 SW	-12	6	Deweyville 5 S	2.47	116 Stations	.00
Utah	La Verkin	74	21	Scofield Dam	-39	6	Pine View Dam	5.75	7 Stations	.00
Vermont	Readsboro 1 SSE	47	6	West Burke	-34	20	Mount Mansfield	4.67	South Hero	.64
Virginia	Grundy	70	15	Partlow 3 WNW	-5	18	McDowell	5.51	Galax Radio WBOB	1.06
Washington	2 Stations	71	31	Mazama	-18	2	Rainier Paradise RS	30.49	Kennewick	.46
West Virginia	2 Stations	68	15	Buckeye	-11	2	Pickens 1	7.56	New Cumberland	1.43
Wisconsin	7 Stations	41	25+	Minong 5 WSW	-37	27	Goodman	3.46	Westby 2 NE	.44
Wyoming	3 Stations	65	30+	Bondurant 3 NW	-48	4	Snake River	5.41	3 Stations	T

\+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

JANUARY 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							°°
[illegible]	[illegible]	[illegible]	[illegible]	54	34	43.6	- 2.9	70	14	12	20	0	18	34	71	3.58	- 1.45	1.10	14	7	T	T	12.7	29	32	W	25	5	11	15	6.7	43
[illegible] VI	[illegible]	[illegible]	[illegible]	51	33	41.9	- 1.[illegible]	69	14	14	20	0	18	34	74	5.25	0.03	1.56	17	4	0.5	T	11.6	32	29	27	14	7	3	21	7.3	
[illegible] F	[illegible]	[illegible]	1019.7	63	44	53.7	0.7	79	24	22	20	0	4	44	74	2.19	- 2.49	1.51	7	2	0.0	0	11.2	36	26	34	19	5	7	19	7.1	
[illegible] O[illegible]	[illegible]	[illegible]	1019.8	60	37	48.0	- 0.1	79	14	18	20	0	13	37	70	2.63	- 1.63	0.93	10	4	0.0	0	9.2	29	27	NW	15	7	7	17	6.6	44
[illegible]												8																				
[illegible]	[illegible]	[illegible]	1015.5	10	- 6	2.7	- 9.4	41	5	-22	24	0	30	- 8	61	0.24	- 0.56	0.21	3	0	1.2	6	3.6	1	61	2	15	20	4	7	3.1	77
[illegible] TTE	[illegible]	[illegible]	1011.9	34	14	28.8	- 5.6	46	7	6	10	0	27	21	72	7.59	- 3.77	2.07	19	2	16.6	3	3.5	8	35	E	10	4	3	24	8.1	
[illegible]	[illegible]	[illegible]	[illegible]	-13	-28	19.5	- 3.3	18	10	-45	20	0	31	-24	78	0.18	0.00	0.09	5	0	1.8	9	3.9	11	29	11	17+	V	V	V		
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	-19	-31	22.7	- 5.9	17	11	-43	27+	0	31			0.55	0.15	0.36	4	2	5.8	21	4.3	25	48	27	24+	X	X	X		
[illegible]	[illegible]	[illegible]	[illegible]	1	13	- 6.3	- 9.0	30	10	-37	31	0	31	-11	80	0.15	- 0.97	0.09	6	2	6.3	14	11.2	3	41	E	9	14	4	13	6.2	
[illegible]				-25	-43	-34.1		20	4	-68	24	0	31			0.37		0.30	3	0	7.6	41			48	35	2	19	3	9	3.0	
[illegible]	[illegible]			-14	-34	24.4		27	5	-58	26+	0	31			0.29		0.12	5	2	5.2	10			30	12	3	14	4	13	3.0	
[illegible]	[illegible]	1011.2	1014.0	27	8	22.1	- 6.7	38	9	0	31	0	27	19	84	1.34	- 0.98	0.43	18	0	19.9	11	5.6	33	44	34	25	5	7	19	7.5	
[illegible]	[illegible]	[illegible]	[illegible]	-7	-41	31.2	-10.6	27	5	-40	19+	0	31	-40	64	0.33	- 0.56	0.21	4	0	8.5	32	0.8	1	15	24	E	7	5	19	6.0	
[illegible]	[illegible]	[illegible]	[illegible]	- 3	-30	19.5		40	5	-57	18	0	30	-33	53	0.06		0.04	3	0	0.7		3.7	36	52	N	15	22	4	7	3.0	
[illegible]	[illegible]			17	?	9.7		43	4	-19	25	0	29			0.69	- 1.36	0.28	6	2	8.6	5			31	?	?	19	5	7	3.4	
[illegible]	[illegible]	[illegible]	[illegible]	20	?	13.0	-12.1	40	6+	-14	25	0	29	8	80	5.56	1.56	1.20	12	2	51.0	23	5.0	0	28	[illegible]	15	7	3	21	7.4	37
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	-	- 9	- 2.6	-18.0	40	3	-34	28	0	30	-13	61	0.45	- 0.62	0.21	5	2	4.3	3	5.0	1	46	0	2	26	2	1[illegible]	4.6	
[illegible]	[illegible]	[illegible]	[illegible]	- 7	-21	-13.7	- 8.0	13	13+	-42	0	0	31	-22	67	0.16	- 0.23	0.07	4	0	2.9	12	9.4	2	40	[illegible]	17+	4	6	19	6.8	
M[illegible] [illegible]	[illegible]	[illegible]	[illegible]	-17	-38	-27.6	18.6	18	3	-60	23+	0	31			0.46	- 0.80	0.22	6	0	11.4	23	0.8	36	1[illegible]	36	2	17	3	11	4.5	
[illegible]	[illegible]	[illegible]	[illegible]	- 4	-15	- 5.7	-20.1	26	15+	-4[illegible]	22	0	31	-14	63	0.05	- 0.97	0.02	5	0	2.9	16	6.6	[illegible]	43	4	2	11	6	14	5.9	49
[illegible] [illegible] [illegible]	[illegible]	[illegible]	[illegible]	28	10	19.3	2.1	40	13	- 2	31	0	26	10	83	0.83	- 0.98	0.24	15	0	6.[illegible]	[illegible]	10.4	[illegible]	41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.1	
[illegible]	[illegible]	[illegible]	[illegible]	43	20	31.3	0.4	57	11+	19	1	0	26	22	73	1.36	- 1.14	0.72	11	2	5.6	8	6.2	11	[illegible]	[illegible]	8	1	7	27	9.3	
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	- 1	20	13.2		30	5+	-45	18	0	31	-20	70	0.61		0.45	7	0	14.1	40	16.6	7	33	[illegible]	26+	18	6	8	3.5	
[illegible] [illegible]	[illegible]				-20	7.5	-14.9	34	5	-46	26	0	31			1.17	- 0.59	1.00	4	0	7.7	31			24	4	15	20	3	8	4.2	
[illegible] [illegible] [illegible]	[illegible]			- 4	-17	-10.1		24	11	-36	26	0	31			0.53		0.38	6	0	5.4	26			26	0	0	19	4	10	6.2	
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	29	8	19.6	-11.8	48	5	-17	17	0	30	7	70	11.59	0.73	3.66	19	2	67.7	44	8.4	0	29	12	26+	9	1	21	6.9	
[illegible]																																
[illegible]	[illegible]	[illegible]	[illegible]	44	24	29.1	2.2	66	20	-22	4	0	30	14	57	0.08	- 1.76	0.08	2	0	0.8	7	0.0	21	22	[illegible]	[illegible]	20	1	[illegible]	3.3	
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	48	31	40.2	2.5	88	19	19	7	0	7	25	60	0.22	- 0.51	0.22	1	0	0.0	0	2.7	11	[illegible]	W	2	2	3	[illegible]	2.8	31
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	44	25	34.6	0.7	85	19	17	6	0	11	21	38	0.04	- 0.78	0.04	1	0	T	T	2.6	15	[illegible]	W	2	22	7	[illegible]	1.8	33
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	41	21	32.8	1.8	75	20	-16	6	0	29	14	53	0.07	- 0.36	0.07	2	0	1.1	1	2.0	20	[illegible]	21	13+	18	8	5	[illegible]	
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	46	21	34.8	1.4	88	19	24	8	0	6	26	39	0.04	- 0.45	0.04	1	0	0.7	4	4.7	26	[illegible]	NW	3	17	4	[illegible]	1.8	27
[illegible]																																
[illegible] [illegible]	[illegible]	[illegible]	1013.[illegible]	41	28	34.1	- 2.7	74	20	13	7	0	23	27	68	1.65	- 1.01	0.74	5	2	T	T	3.0	1	[illegible]	W	3	2	10	14	[illegible]	64
[illegible] [illegible]	[illegible]	[illegible]	1014.8	49	31	41.2	0.4	77	14	16	7	0	20	32	73	2.07	- 3.15	1.55	5	2	T	T	11.4	2	32	NW	4	5	10	14	[illegible]	46
[illegible]																																
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	54	29	41.6	0.5	70	18+	27	6	0	5	39	75	0.54	- 0.64	0.32	5	0	2.1	5	0.8	5	26	[illegible]	2	4	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	50	28	41.6	4.7	76	18	14	4	0	26			0.31	- 0.98	0.01	1		0.1	T			[illegible]	[illegible]	[illegible]		24	8	[illegible]	[illegible]	
[illegible] [illegible]	[illegible]			45	32	38.7	1.6	63	30+	13	3	0	15			8.11	- 3.59	1.79	9		5.41	12.4			[illegible]	6	2		7	9	11	[illegible]	[illegible]
[illegible]	[illegible]			[illegible]	41	45.7	- 1.7	67	17	31	3	0	2			5.41	- 1.29	1.18	12		T	T			33	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	54	36	45.7	- 0.4	69	18	22	5	0	9	30	83	0.40	- 1.63	0.26	4	2	T	0	2.4	12	[illegible]	NW	2	[illegible]	7	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	64	43	54.4	1.2	80	18	31	7	0	3	40	65	0.58	- 1.41	0.31	[illegible]	[illegible]	0.[illegible]	0	1.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	64	47	55.6	1.1	86	28+	35	5	0	0	40	62	0.64	- 2.30	0.39	3	2	0.0	0	1.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	60	44	52.8	3.0	86	18	35	6	4	0			0.43	- 2.64	0.18	3	2	0.0	0			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	44	27	35.4	0.1	68	[illegible]	10	13	0	26	27	76	4.53	1.83	2.44	21	[illegible]	[illegible]	20	0.8	36	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	54	32	43.2	0.6	64	18	33	7+	0	0	41	79	1.[illegible]	- 2.[illegible]	0.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	54	32	43.0	0.4	71	27+	27	3	0	9	33	69	2.[illegible]	- 1.[illegible]	1.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	29	45.3	0.1	64	20	26	6+	0	5	39	83	0.[illegible]	- 2.28	0.41	11	[illegible]	[illegible]	[illegible]	[illegible]	15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	50	36	42.6	2.7	68	19	14	4	0	12			0.24	- 2.41	0.[illegible]	2	0	2.3	0			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	54	34	44.3	0.7	81	28+	33	6	0	0	39	61	0.[illegible]	- 1.71	0.[illegible]	2	[illegible]	[illegible]	0	2.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	54	34	44.3	0.3	67	18	31	6+	0	3	41	77	1.27	- 2.74	0.58	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]	[illegible]	[illegible]	54	34	44.8	0.1	68	17	30	4	0	0			3.04	- 2.51	0.56	8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] [illegible]	[illegible]			[illegible]	31	40.0	- 0.1	84	18	24	5	0	6			0.61	- 2.23	0.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	14	9	10	[illegible]	[illegible]

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In	In.	In.			In	In.	M.p.h.		M.p.h.							%
ALABAMA																																
[illegible]	22	1022.3	1023.4	52	33	44.9	0.2	85	17	28	6+	0	9	37	76	0.95	- 1.60	0.39	7	2	0.0	0	0.4	16	18	34	7	4	6	19	7.1	
ALASKA																																
ANCHORAGE	7538	768.7		-9	- 1	19.1	1.7	62	20	-40	6	0	31			0.15	- 0.11	0.12	4		1.1	4						13	9	9	4.5	
COLDFOOT SPRINGS	6145	807.7	1017.4	42	18	29.8	1.2	67	20	-16	6+	0	29	12	53	0.34	- 0.05	0.29	3	3	0.7	7	3.4	1	49	31	25	10	9	12	5.6	
DENVER	5283	833.1	1014.7	46	18	32.1	3.6	69	20	-16	6	0	29	16	57	0.35	- 0.20	0.22	4	0	8.5	8	3.0	28	36	NW	30	7	8	16	5.7	62
GRAND JUNCTION	4843	854.4	1021.9	39	16	27.7	1.7	60	31	-15	7	0	31	15	63	0.19	- 0.45	0.10	6	0	3.2	2	2.0	12	25	W	13	7	5	19	6.8	58
PUEBLO	4684	854.4	1016.1	51	19	34.9	4.9	78	20	-17	7+	0	28	13	46	0.42	- 0.11	0.38	2	0	6.0	6	3.4	29	38	W	30+	10	7	14	6.0	67
CONNECTICUT																																
BRIDGEPORT	7	1013.2	1019.4	34	19	26.2	- 4.0	47	5	4	19	0	30	13	59	3.09	- 0.60	1.69	11	0	9.5	5	9.8	29	46	27	26	12	4	15	5.7	
HARTFORD	169	1006.4	1019.4	29	9	19.4	- 6.6	42	30+	-13	29	0	31	6	56	2.80	- 0.78	0.68	11	0	17.7	11	5.0	28	38	NW	27	8	14	9	5.7	59
DELAWARE																																
WILMINGTON	74	1018.3	1019.3	35	19	27.4	- 6.0	48	30+	8	31	0	31	17	66	2.22	- 1.18	1.18	12	1	5.8	6	6.6	30	37	29	26	7	5	19	6.9	
DISTRICT OF COLUMBIA																																
WASHINGTON CITY	292	1005.1	1017.1	38	20	28.6		52	30	6	29	0	29	18	64	2.27		1.70	10	1	7.5	15	3.9	30	38	30	26	6	8	17	7.2	
WASHINGTON NATIONAL	10	1014.6	1017.1	36	24	31.3	- 5.6	53	30+	14	29+	0	29	19	63	1.86	- 1.17	0.99	9	1	4.8	9	4.7	29	47	NW	26	5	10	16	7.5	39
FLORIDA																																
APALACHICOLA	13			61	47	53.8	- 1.3	75	31	26	20	0	2			2.12	- 1.02	1.25	8	1	0.0	0			26	NW	19+	8	10	13	5.9	66
DAYTONA BEACH	31	1018.6	1019.8	70	47	58.6	- 0.6	83	25	23	21	0	3	48	73	0.61	- 1.35	0.40	6	0	0.0	0	2.9	28	24	24	30	14	6	11	4.9	
FORT MYER	15	1019.3	1019.6	77	54	65.3	1.8	87	4	32	21	0	1	54	72	0.85	- 0.67	0.65	3	0	0.0	0	0.6	5	23	33	19+	16	11	4	3.0	
JACKSONVILLE	24	1018.6	1019.6	66	43	54.0	- 1.9	82	25	19	21	0	8	44	74	2.01	- 0.44	0.89	7	0	0.0	0	3.3	29	41	NW	15	11	12	8	5.1	60
KEY WEST	4	1018.3	1018.9	76	65	70.6	1.0	82	7	46	21	0	0	61	72	0.41	- 1.12	0.25	4	0	0.0	0	4.8	5	27	NW	19	13	13	5	4.1	91
LAKELAND AP	214			71	51	61.1	- 0.6	82	4	26	20	0	2			0.26	- 1.79	0.14	5	0	0.0	0						15	10	6	4.0	66
MIAMI	7	1018.6	1018.8	77	60	68.2	1.3	84	10	35	20	0	0	58	72	0.51	- 1.52	0.50	3	0	0.0	0	0.5	6	25	32	19+	14	15	2	4.3	
ORLANDO	108	1014.4	1019.2	74	50	62.0	1.6	86	24	28	20	0	2	49	68	0.45	- 1.55	0.30	6	0	0.0	0	2.3	30	31	30	10	15	6	10	4.6	
PENSACOLA	112	1015.9	1020.0	62	44	53.2	- 0.3	78	23+	23	20	0	6	45	75	1.61	- 2.61	0.55	10	0	0.0	0	2.2	1	25	36	19	7	6	18	6.7	
TALLAHASSEE	56	1017.6	1019.8	65	38	51.2	- 2.7	80	14	11	21	0	12	42	74	3.04	- 0.38	1.55	9	0	0.0	0	1.3	33	20	1	19+	8	10	13	5.0	
TAMPA	10	1019.3	1019.4	72	49	60.0	- 1.2	84	4	23	21	0	3	49	72	0.86	- 1.27	0.52	6	0	0.0	0	0.5	35	25	33	27+	13	11	7	4.7	62
WEST PALM BEACH	15	1018.3	1019.0	76	54	65.0	- 1.9	85	9	30	20	0	1	54	72	0.82	- 1.66	0.56	5	0	0.0	0	1.3	29	29	30	10	12	11	8	4.6	
GEORGIA																																
ATHENS	802	988.8	1018.4	52	33	42.8	- 1.8	68	14	14	20	0	15	33	71	4.06	- 0.83	0.83	12	3	T	T	4.2	27	23	31	26	9	4	18	6.6	
ATLANTA	1010	981.7	1019.2	52	34	42.9	- 1.8	67	14	15	20	0	17	33	72	4.40	- 0.04	1.17	14	5	T	T	3.4	29	33	NW	26	9	6	16	6.6	43
AUGUSTA	136	1013.2	1018.5	56	34	45.3	- 2.3	73	4	15	21+	0	12	35	72	4.62	1.63	1.30	10	4	T	T	3.7	26	25	27	26	8	3	20	7.0	
COLUMBUS	385	1006.1		58	38	48.2	0.4	74	14	18	20	0	11			5.33	1.27	1.97	12	4	0.0	0	2.4	30	29	32	15	10	2	19	6.6	
MACON	354	1006.1	1019.4	60	37	48.4	- 0.8	78	14	16	20	0	11	39	73	4.91	1.54	2.09	12	5	0.0	0	4.0	28	44	NW	14	9	4	18	6.6	47
ROME	637			51	30	40.5	- 1.6	67	14	12	20	0	20			4.49	- 1.02	1.45	13		0.1	T										
SAVANNAH	46	1017.3	1019.0	62	38	50.1	- 1.6	78	25+	17	21+	0	10	39	70	3.40	0.62	1.36	9	1	T	0	3.6	27	30	NW	15	7	5	19	6.8	46
HAWAII																																
HILO	27	1010.2	1011.3	80	62	71.3	0.5	87	27	58	8+	0	0	62	77	13.47	1.65	5.89	18	9	0.0	0	1.3	17	29	S	28	4	9	18	7.2	28
HONOLULU	7	1010.5	1010.9	79	65	71.7	- 0.8	82	29+	56	7	0	0	62	76	6.19	2.43	1.37	14	2	0.0	0	1.9	20	33	SW	15	6	6	19	7.3	49
KAHULUI	48	1008.5	1010.7	78	62	69.8	- 2.3	83	23	52	8	0	0	64		13.66	10.52	4.94	19	8	0.0	0	4.6	19	38	SW	15	8	7	16	6.7	56
LIHUE	103	1005.8	1011.0	77	63	69.7	- 1.2	81	15	53	7	0	0	62	76	11.94	6.43	3.55	20	5	0.0	0	3.2	23	36	SW	14	5	12	14	7.0	44
IDAHO																																
BOISE	2838	919.1	1022.1	40	28	33.9	4.8	55	26	6	5+	0	19	25	72	2.04	0.72	0.75	17	0	4.0	2	2.9	12	29	E	15	4	2	25	8.2	41
LEWISTON	1413			42	30	36.3	5.6	63	30	7	5	0	15			1.67	0.57	0.45	17		7.3	4						1	3	27	9.1	
POCATELLO	4454	864.2	1021.7	35	20	27.2	4.9	54	31	-13	5	0	27	20	73	1.47	0.26	0.32	15	0	13.1	6	8.1	22	40	SW	20	2	6	23	8.2	36
ILLINOIS																																
CAIRO U	314			41	26	33.5	- 3.9	63	13	14	19+	0	24			3.22	- 1.24	1.90	6		T	T			32	S	3	7	8	16	6.7	35
CHICAGO O HARE	658	992.2	1017.8	27	11	18.9	- 5.3	44	25	- 4	31+	0	31	9	65	0.93	- 0.89	0.49	9	0	10.0	5	6.7	25	47	28	29	11	5	15	6.0	
CHICAGO MIDWAY	607	993.9	1017.7	27	11	19.2	- 6.8	44	25	- 4	31+	0	31	8	62	1.11	- 0.75	0.82	8	0	12.8	7	6.8	25	39	W	29	11	5	15	6.0	55

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JANUARY 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation						Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0.3	Partly cloudy, 4.7	Cloudy, 8.10		
	Ft.	Mb.	Mb.	F.	F.	F	F.	F.		F.					%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ILLINOIS																																
[illegible]	582	998.6	1019.3	24	5	14.8	- 7.8	43	25	-19	7	0	31	6	67	1.79	0.18	1.70	5	1	17.7	13	5.7	26	44	W	25	10	8	13	5.6	62
PEORIA	652	994.1	1019.2	28	10	19.2	- 6.5	50	25	- 5	6	0	31	11	72	0.59	- 1.29	0.53	6	0	5.4	4	5.2	26	42	W	25	8	8	15	5.1	54
[illegible]	726	986.5	1017.0	24	4	14.4	- 7.2	41	25	-11	6	0	31	7	71	1.11	- 0.87	0.87	7	2	10.0	7	5.2	28	40	30	29	12	4	15	5.2	
SPRINGFIELD	588	994.1	1019.6	33	14	23.7	- 4.7	54	29	- 4	31	0	30	13	66	1.24	- 0.65	0.98	6	0	4.2	2	4.5	26	42	NW	26	8	8	15	5.2	69
INDIANA																																
EVANSVILLE	391	1005.4	1020.0	39	21	29.8	- 4.4	60	14	7	7	0	26	20	71	2.88	- 1.10	1.55	7	1	8.4	1	2.2	30	30	NW	26	7	6	18	7.1	44
FORT WAYNE	791	986.8	1018.2	29	11	20.2	- 6.8	51	4	-11	10	0	31	13	75	1.11	- 1.56	0.48	11	0	5.4	2	7.0	26	48	W	26	4	1	17	7.2	47
INDIANAPOLIS	738	988.[illegible]	1018.7	32	16	23.4	- 5.7	54	4	- 1	27	0	31	14	71	1.98	- 1.07	1.60	9	0	10.5	1	4.7	26	42	W	26	7	5	19	7.0	54
SOUTH BEND	773	987.8	1017.0	28	11	20.0	- 5.6	44	4	- 4	10	0	31	14	78	1.55	- 0.65	0.50	14	0	22.5	11	7.3	29	42	31	26	5	4	22	7.7	
IOWA																																
BURLINGTON	620			29	8	17.0	- 7.4	45	25+	-12	6	0	31	7	62	1.04	- 0.60	1.03	2	0	9.0	6	5.0	29	34	32	26+	8	9	14	6.3	
DES MOINES	838	983.6	1020.1	24	8	15.7	- 4.2	50	29	-14	7	0	31	6	64	1.75	0.45	1.46	6	1	15.9	14	4.6	30	36	NW	4	9	10	12	5.8	59
[illegible]	1164	977.[illegible]		20	4	11.2	- 8.6	37	29+	-17	7+	0	31			1.98	0.15	1.71	7		14.6	14						10	8	13	6.2	
SIOUX CITY	1.[illegible]	978.[illegible]	1020.4	22	6	13.8	- 4.6	49	29	-15	6	0	31	9	80	0.45	0.33	0.38	6	0	4.8	6	4.3	30	44	NW	25	10	5	16	6.1	61
WATERLOO	866	981.8	1019.6	17	- 1	7.7	-10.2	38	29	-26	7	0	31	- 1	67	1.76	0.61	1.64	9	0	16.7	17	5.9	31	36	33	4	10	8	13	5.6	
KANSAS																																
CONCORDIA	1477	964.4	1019.8	31	12	21.8	- 5.7	62	29	-11	6	0	31	14	73	0.76	0.06	0.73	4	1	9.1	9	1.7	31	40	NW	3	9	8	14	6.1	66
DODGE CITY	2582	924.8	1018.8	38	17	27.2	- 3.0	72	29	- 8	7+	0	30	17	71	1.10	0.53	1.08	3	1	9.9	10	1.4	30	46	NW	4	10	9	14	6.3	64
GARDEN CITY	2844	898.2	1016.8	44	17	30.8	2.4	71	20	-11	6	0	30	15	64	0.53	0.14	0.53	2	0	8.3	6	4.0	29	32	31	25+	9	6	16	6.0	
TOPEKA	877	987.1	1020.6	32	16	24.1	- 4.1	67	29	0	6	0	31	16	72	1.20	0.18	1.16	4	0	2.1	1	2.6	33	31	W	27	10	5	16	6.1	60
WICHITA	1301	949.[illegible]	1019.6	36	18	28.8	- 3.2	70	29	4	6	0	31	20	74	0.98	0.17	0.98	2	1	T	T	1.2	1	40	NW	4	10	7	14	5.0	62
KENTUCKY																																
COVINGTON	869	985.8	1018.5	37	19	28.3	- 3.3	58	14	2	31	0	29	18	67	2.47	- 1.09	1.10	7		3.2	1	5.3	26	40	[illegible]	26	5	10	16	7.0	
LEXINGTON	966	980.4	1019.2	38	21	29.7	- 4.8	60	14	5	31	0	27	21	72	3.29	- 1.65	1.43	9	2	4.0	2	4.0	29	30	28	26	5	4	17	7.0	
LOUISVILLE	477	1001.0	1019.3	36	23	30.9	- 4.1	64	14	9	31+	0	25	20	66	2.64	- 1.46	1.15	8	0	3.2	2	3.7	28	32	NW	30+	4	7	18	7.1	44
LOUISIANA																																
[illegible]	32	1015.2	1019.7	61	41	50.7	0.4	80	30	25	20	0	11			3.02	- 2.30	1.36	13	1	3.0	1	0.8	4	23	19	22+	4	6	21	7.6	
BATON ROUGE	64	1016.6	1019.4	63	43	52.8	- 0.1	78	30+	23	20	0	9	45	78	1.16	- 3.63	0.67	2	1	0.3	0	1.2	7	[illegible]	[illegible]	24	6	7	18	7.0	
LAKE CHARLES	9	1018.0	1019.0	65	46	55.6	1.9	78	24	30	20+	0	3	47	80	0.78	- 3.66	0.27	T	0	T	T	2.6	22	[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]	7.0	
NEW ORLEANS	4	1018.6	1019.6	66	45	55.1	0.5	80	30+	26	20	0	3	47	76	1.13	- 2.71	0.39	5	0	0.0	0	1.3	[illegible]	21	23	22+	[illegible]	[illegible]	[illegible]	7.6	
SHREVEPORT	254	1009.1	1018.7	62	40	50.6	3.1	84	30	21	9	0	11	40	72	0.27	- 4.53	0.14	3	0	0.8	1	1.3	14	16	14	14	5	2	17	6.2	47
MAINE																																
CARIBOU	624	985.[illegible]		16	- 4	6.8	- 4.7	41	27	-28	18	0	31			1.71	- 0.40	0.60	15		16.6	14						8	6	17	6.4	
PORTLAND	43	1009.1	1011.4	33	1	12.3	- 9.6	49	6	-24	10	0	31	4	66	2.25	- 0.12	0.54	10	0	17.2	17	6.2	28	28	W	0	14	7	10	6.6	44
MARYLAND																																
BALTIMORE	148	1011.2	1017.0	37	23	30.0	- 4.8	51	30+	15	29+	0	27	18	62	2.02	- 1.41	1.04	10	0	4.1	4	5.4	28	34	NW	26	4	7	18	7.0	
MASSACHUSETTS																																
BLUE HILL OBSY	630			29	13	20.6	- 6.4	49	5	- 2	10	0	31			1.64	- 0.63	0.63	9		12.2	16			48							6.7
BOSTON	15	1011.5	1012.6	31	17	23.8	- 6.1	46	5	2	28+	0	31	12	62	1.88	- 2.06	0.44	11	0	12.0	8	11.1	28	36	NW	27	11	6	14	5.6	44
WORCESTER	986	974.1	1012.6	26	10	17.8	- 6.3	47	5	- 6	28+	0	31	8	66	1.97	- 1.74	0.61	11	0	15.4	14	8.3	28	34	[illegible]	28	10	12	10	6.6	
MICHIGAN																																
ALPENA	689	980.8	1011.2	25	5	15.1	- 4.6	41	4	-16	30	0	31	10	75	1.42	0.47	0.63	12	0	43.2	28	4.1	24	28	NW	27	4	7	20	8.0	45
DETROIT	618			28	15	21.6	- 6.3	44	4	- 3	31	0	31	14	74	0.92	- 1.12	0.47	10	0	6.7	4	7.8	26	40	26	27	4	7	20	7.6	47
FLINT MUNI AIRPORT	777	967.2	1011.8	28	13	20.7	- 6.6	47	4	- 5	31	0	31	13	74	1.03	- 1.00	0.46	11	0	8.7	4	7.3	24	30	W	27	4	7	20	7.6	47
GRAND RAPIDS	791	968.9	1011.9	26	13	19.6	- 6.9	43	4	- 6	31	0	31	13	74	0.46	- 1.64	0.13	14	0	2.7	1	5.6	24	28	W	27	3	7	21	8.0	45
[illegible] AFB	796	965.[illegible]	1011.5	25	11	18.3	- 5.7	41	4	- 9	10	0	31	12	76	1.04	- 0.87	0.27	13	0	3.7	4	5.2	24	28	W	27	3	7	21	8.0	45
MUSKEGON AWOS	1149	962.9	1011.8	23	7	14.7	- 6.5	38	24+	-15	9	0	31	9	77	1.31	- 0.79	0.56	12	0	27.5	12	5.7	21	34	W	27	4	7	20	7.9	48
LANSING	866	981.4	1011.5	26	12	19.1	- 5.2	43	4	- 5	10	0	31	12	72	0.68	- 1.28	0.46	13	0	3.2	3	7.2	1	14	W	27	3	7	21	7.9	48
MARQUETTE	677			20	9	14.4	- 5.1	35	1	- 9	31+	0	31			1.47	1.68	1.04	11		12.6	14			41	W	27	3	7	21	8.0	45

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation						Wind				No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0.3	Partly cloudy 4-7	Cloudy 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	991.9	1015.7	32	14	23.0	- 6.0	41	4	- 7	19	0	31	13	74	1.87	- 0.23	0.38	19	0	45.2	14	14.4	28	44	31	24	7	2	29	8.8	
SAULT STE MARIE	721	984.8	1012.4	18	2	9.5	- 6.3	31	22+	-16	27	0	31	4	75	3.50	1.43	0.58	22	0	50.4	13	21.1	32	41	NW	26	4	7	20	7.6	46
MINNESOTA																																
DULUTH	1428	962.8	1017.8	20	- 9	9.6	- 8.1	28	1	-24	27	0	31	- 7	70	1.56	0.41	0.63	16	0	31.9	25	7.9	30	47	W	30	3	5	17	6.4	44
INTERNATIONAL FALLS	1179	976.2	1018.9	4	-18	- 7.1	-10.2	24	1	-38	12	0	31	-14	68	0.62	- 0.32	0.25	10	0	9.5	16	4.6	28	29	28	10+	11	8	12	5.4	
MINNEAPOLIS	834	887.1	1019.4	15	- 2	6.5	- 5.9	35	22+	-18	27	0	31	- 3	63	1.22	0.52	0.24	13	0	19.9	13	4.8	31	37	NW	22	11	7	13	4.0	53
ROCHESTER	1297	967.8	1018.6	15	- 3	5.8	- 7.8	34	1	-17	27+	0	31	0	74	1.12	0.21	0.66	12	0	16.7	17	6.8	29	38	31	29	11	6	14	5.8	
ST CLOUD	1034	979.3	1020.1	19	- 7	2.9	- 7.2	32	1	-22	27	0	31			0.86	0.14	0.17	11		13.1	12						9	5	16	6.1	
MISSISSIPPI																																
JACKSON	330	1007.8	1020.0	60	38	48.7	0.8	78	30	14	20	0	15	40	75	3.02	- 2.16	1.53	11	3	T	T	0.6	19	28	E	5	6	8	17	6.8	48
MERIDIAN	290	1008.8	1020.1	59	37	48.1	0.0	76	14	18	20	0	14	40	78	4.26	- 0.44	1.82	11	4	0.0	T	0.6	35	11	17	4+	6	8	17	6.8	
MISSOURI																																
COLUMBIA REGIONAL	887	986.1	1019.8	36	18	27.2	- 3.1	61	29	3	6	0	31	16	66	1.62	- 0.09	1.61	3	1	1.0	1	2.9	29	32	NW	26	8	7	16	6.6	51
KANSAS CITY	742	991.9	1020.2	36	19	27.7	- 4.0	62	29	5	6	0	28	18	70	1.48	0.07	1.47	3	1	1.3	1	2.8	32	34	W	20	10	6	15	5.2	52
ST JOSEPH	821			34	14	24.3	- 2.9	55	29	-20	6	0	29	12	64	1.50	0.30		3				2.9	32	32	31	4+	10	6	14	5.4	
ST LOUIS	535	998.6	1019.9	38	17	27.4	- 4.5	64	29	2	6	0	30	17	70	0.66	- 1.32	0.55	6	1	0.4	T	3.7	27	38	NW	26	7	7	16	6.6	61
SPRINGFIELD	1268	972.6	1019.4	43	20	31.4	- 2.2	67	29	3	6	0	31	21	68	1.23	- 0.73	0.94	5	1	0.1	T	0.4	23	31	E	3	10	8	13	6.8	60
MONTANA																																
BILLINGS	3567	888.9	1018.0	27	10	18.7	- 4.5	56	29+	-19	14	0	27	9	67	1.30	0.76	0.44	15	0	11.5	6	6.0	27	45	NW	20	2	2	27	8.9	24
GLASGOW	2284	933.6	1020.5	14	- 3	5.1	- 4.7	42	29	-23	14+	0	31	- 3	69	0.99	0.51	0.30	19	0	24.2	20	2.4	2	39	36	29	2	4	25	9.6	
GREAT FALLS	3662	885.9	1019.2	26	- 7	10.2	- 5.9	58	19	-30	14+	0	28	4	58	1.22	0.61	0.41	17	0	16.2	10	4.5	24	42	SW	29	3	4	24	8.2	38
HAVRE	2484	922.8	1019.9	16	- 4	6.3	- 7.6	48	19	-30	14	0	31	2	76	2.33	1.84	0.51	19	0	41.4	21	4.2	25	38	SW	22	1	5	25	8.6	47
HELENA	3828	878.8	1019.2	28	10	19.0	0.4	53	19	-30	13	0	30	9	62	1.38	0.91	0.57	10	0	16.2	14	5.5	27	42	SW	25+	2	4	25	8.3	24
KALISPELL	2965	909.2	1017.6	29	14	21.7	1.9	51	30	-16	5	0	25	15	73	1.81	0.44	0.38	19	2	25.7	18	2.1	16	45	S	10	1	3	27	9.2	
MILES CITY	2629	921.4	1019.2	21	1	11.2	- 5.3	43	29+	-24	11	0	31	5	76	1.78	1.34		17	0	17.2		5.2	31								
MISSOULA	3190	903.5	1018.9	33	19	26.3	7.1	52	29	- 7	13	0	25	22	83	1.81	0.89	0.29	23	0	9.9	6	0.7	27	34	NW	21	1	4	26	9.1	22
NEBRASKA																																
GRAND ISLAND	1841	950.6	1019.9	30	10	19.9	- 2.7	64	29	-16	6	0	31	8	63	0.82	0.19	0.69	6	0	10.3	8	4.0	30	35	34	4+	8	5	18	6.6	
LINCOLN U	1150			28	12	19.9	- 5.2	60	29	-10	7+	0	31			1.30	0.38	1.15	5		15.1	13			38	NE	3	9	7	15	6.1	62
NORFOLK	1544			25	7	16.0	- 3.4	56	29	-15	7	0	31			0.28	- 0.50	0.20	7		5.1	4						10	6	15	6.9	
NORTH PLATTE	2775	916.7	1018.5	35	10	22.1	- 1.9	64	29	-18	6	0	31	12	69	0.47	0.04	0.24	5	0	5.6	4	2.5	32	34	NW	25	6	8	17	6.9	57
OMAHA	977	983.1	1020.2	27	8	17.8	- 4.5	57	29	-16	6	0	31	9	67	0.95	0.13	0.76	6	0	13.1	10	3.6	33	39	NW	25	12	5	14	5.9	56
SCOTTSBLUFF	3957	877.1	1017.3	38	16	26.8	1.5	65	20	-14	7	0	27	12	58	0.23	- 0.06	0.19	4	0	2.2	2	6.1	31	40	28	25	3	8	20	7.8	
VALENTINE	2587			29	5	16.6	- 3.4	57	29	-17	6	0	31			0.49	0.09	0.37	6		9.3	8			37	NW	25	6	8	17	7.2	61
NEVADA																																
ELKO	5050	846.6	1022.0	39	21	30.3	7.7	58	31	-18	4	0	23			0.58	- 0.58	0.17	10	0	9.0	6	3.0	23	27	20	12	4	8	18	7.3	
ELY	6253	809.7	1022.5	39	10	24.2	1.4	57	18+	-26	5	0	31	14	69	0.63	- 0.15	0.54	4	0	8.8	10	5.6	20	39	N	2	11	5	15	6.0	69
LAS VEGAS	2162	943.4	1021.5	57	32	44.4	1.3	74	31+	12	6	0	15	18	37	T	- 0.53	T	0	0	T	0	3.1	27	37	SW	13	17	7	7	3.8	91
RENO	4404	869.3	1022.6	46	20	33.0	2.6	66	18	-11	3	0	27	23	71	0.75	- 0.44	0.35	5	0	11.4	6	1.4	21	42	W	13	10	9	12	5.4	67
WINNEMUCCA	4301	871.7	1022.4	47	21	33.7	6.5	68	18	- 9	4	0	24	24	70	0.19	- 0.86	0.08	5	0	1.8	1	3.5	22	29	SW	14	7	4	20	6.8	63
NEW HAMPSHIRE																																
CONCORD	342	999.3	1012.5	25	0	12.5	- 8.7	43	25	-29	19	0	31	5	67	1.63	- 1.60	0.51	9	0	15.6	24	5.5	29	35	NW	3	13	8	10	5.1	66
MT WASHINGTON OBS	6262			7	-11	- 2.1	- 8.4	36	5	-36	28+	0	31			8.18	2.74	1.40	21	0	57.2	24			125Y	W	7	6	4	22	8.0	32
NEW JERSEY																																
ATLANTIC CITY	64	1013.2	1015.6	38	20	28.8	- 6.0	54	5	3	19	0	28	16	60	2.67	- 0.89	1.23	13	1	7.2	3	7.1	29	47	29	26	4	10	17	6.9	43
ATLANTIC CITY U	11			38	25	31.5	- 4.5	51	5	15	20	0	25			2.89	- 0.86	1.37	13						36	W	27+					
NEWARK	7	1013.9	1016.0	34	21	27.3	- 5.0	46	30	7	19	0	28	18	70	2.74	- 0.59	1.05	12	0	13.2	7	7.6	27	33	27	27	8	8	15	6.5	
TRENTON U	56			34	22	28.1	- 5.0	49	5	8	19	0	28			2.61	- 0.49	1.07	11		11.0	6			38	NW	27	7	9	15	6.4	53

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
NEW MEXICO	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALBUQUERQUE	5311	838.8	1019.9	48	19	33.6	- 1.4	69	31	-17	7	0	26	16	55	0.27	- 0.14	0.26	2	0	3.0	3	2.7	2	34	-	3	18	5	8	3.8	87
CLAYTON	4969			50	19	34.2	1.0	76	30	- 9	7+	0	30			0.13	- 0.22	0.13	2		2.3	2						12	6	13	5.1	
ROSWELL	3612			58	24	41.3	3.4	78	30+	- 4	5	0	23			0.18	- 0.30	0.16	2		2.0	1			35	NW	30					75
NEW YORK																																
ALBANY	275	1003.4	1014.4	26	2	13.9	- 8.8	43	25	-28	19	0	31	8	73	1.78	- 0.69	0.46	11	1	15.2	16	5.0	27	39	W	27	9	10	12	5.6	53
BINGHAMTON	1593	952.9	1014.1	22	9	15.6	- 8.2	42	5	- 9	19	0	31	10	77	1.68	- 0.82	0.48	16	0	17.2	17	6.8	26	56	W	26	0	11	20	7.8	47
BUFFALO	705	987.5	1014.1	27	15	20.9	- 3.6	49	4	- 1	19+	0	30	13	73	1.46	- 1.38	0.45	21	0	17.2	6	9.7	27	47	W	26	1	7	23	8.5	36
NEW YORK (C)	132	1011.2	1014.4	33	21	27.0	- 6.2	46	23+	4	19	0	29	15	63	2.67	- 0.64	1.14	9	0	11.4	6	6.1	28	35	W	27					57
NEW YORK KENNEDY	13	1014.2	1015.0	34	22	27.9	- 3.9	48	5	7	19	0	29	16	63	2.31	- 0.92	0.91	10	0	11.6	6	9.6	20	40	27	26	8	9	14	6.4	
NEW YORK LA GUARDIA	11	1014.2	1015.3	34	23	28.8	- 4.8	48	30	7	19	0	27	14	55	2.27	- 1.04	0.92	10	0	10.4	6	9.1	30	44	W	26	5	11	15	6.7	
ROCHESTER	547	993.2	1014.3	27	12	19.5	- 5.7	44	4	- 5	19+	0	31	12	73	2.66	0.26	0.78	18	0	34.1	14	13.4	25	47	NW	26	2	8	21	7.8	45
SYRACUSE	410	998.3	1013.7	27	10	18.5	- 5.6	44	4	- 8	19+	0	31	10	68	1.90	- 1.25	0.40	21	1	30.3	15	6.3	24	47	W	30	4	3	22	7.6	32
NORTH CAROLINA																																
ASHEVILLE	2140	939.4	1017.2	47	26	36.5	- 1.1	65	11	12	21	0	24	28	75	2.53	- 1.64	1.04	10	0	9.1	4	5.8	34	40	32	26	6	10	15	6.7	50
CAPE HATTERAS (P	7	1016.9	1017.3	50	35	42.5	- 4.1	68	5	22	20	0	13	35	75	4.53	0.63	1.75	12	2	T	T	6.7	32	34	NW	27	3	7	21	7.9	43
CHARLOTTE	736	989.5	1017.6	48	31	39.9	- 2.8	67	5+	13	20	0	16	27	66	3.40	- 0.13	0.79	12	1	9.1	1	2.1	29	29	SW	26	5	6	21	7.6	37
GREENSBORO	807	985.1	1017.6	45	26	35.2	- 4.6	63	5	11	29+	0	24	25	68	1.80	- 1.60	0.45	11	1	9.4	2	4.5	27	43	NW	26	4	8	19	7.4	48
RALEIGH	434	1021.4	1017.6	46	28	37.0	- 4.6	67	5	10	29+	0	21	25	64	3.28	0.06	1.60	9	1	T	T	3.3	29	41	27	26	6	6	19	7.4	38
WILMINGTON	28	1016.6	1018.2	54	36	44.8	- 3.1	73	5	21	20	0	12	34	70	4.97	2.12	1.61	14	2	T	T	3.0	29	32	W	27	7	3	21	7.3	48
NORTH DAKOTA																																
BISMARCK	1647	957.0	1020.8	11	- 8	1.5	- 8.4	34	20+	-36	15	0	31	- 4	72	0.78	0.34	0.24	11	0	12.7	8	3.8	32	36	N	29	6	7	18	7.2	65
FARGO	896	985.8	1021.0	9	-11	- 0.7	- 8.0	32	20	-30	15	0	31	- 7	72	0.81	0.28	0.39	11	0	15.1	10	3.6	33	45	NW	29	10	6	16	6.0	60
WILLISTON	1899	947.5	1020.6	10	- 7	1.6	- 6.7	36	20	-31	15	0	31	- 3	77	0.79	0.24	0.21	13	0	10.5	10	4.5	32	33	N	29	5	5	21	7.0	60
OHIO																																
AKRON	1238	969.9	1016.2	32	14	22.6	- 5.7	55	4	- 4	31	0	30	14	72	1.76	- 1.11	0.52	14	0	9.0	4	6.6	25	39	26	26	4	3	24	8.1	
CINCINNATI ABBE OR	761			36	19	27.7	- 6.0	57	14+	3	31+	0	28			2.27	- 1.40	1.14	7		2.1	1			35	NW	26					40
CLEVELAND	777	986.5	1016.8	29	14	21.4	- 7.0	54	4	- 5	31	0	31	13	71	1.35	- 1.32	0.43	16	0	8.6	4	8.0	24	42	X	29+	3	3	25	8.0	42
COLUMBUS	812	986.8	1018.0	33	16	24.3	- 5.6	53	4	- 4	18	0	31	15	69	1.57	- 1.59	0.98	12	0	6.5	3	5.6	26	46	W	29	4	6	21	7.0	30
DAYTON	1002	980.4	1018.1	33	15	23.9	- 5.7	56	4	- 2	19	0	31	14	67	1.64	- 1.54	1.10	10	1	4.8	1	6.0	26	56	W	26	4	7	18	7.1	44
MANSFIELD	1295			31	14	22.4	- 4.9	54	4	- 5	31+	0	31	15	77	1.40	- 1.82	0.74	9	0	7.2	3	8.9	24	46	24	29	4	6	21	7.5	
TOLEDO	669	993.5	1016.6	29	12	20.3	- 6.0	51	4	- 5	31	0	31	12	70	0.82	- 1.51	0.44	13	0	8.5	3	7.5	26	47	W	29	4	9	18	7.5	36
YOUNGSTOWN	1178	971.9	1016.2	28	13	20.7	- 6.6	53	4	- 6	31	0	31	13	74	2.08	- 1.08	0.60	17	1	14.0	7	9.7	26	40	27	26	3	4	24	8.3	
OKLAHOMA																																
OKLAHOMA CITY	1285	971.2	1019.0	48	26	36.9	- 0.1	72	29	11	6	0	25	24	65	0.75	- 0.56	0.73	3	1	T	T	2.4	3	34	SW	21	13	4	13	4.1	73
TULSA	650	994.6	1019.5	47	26	36.5	0.3	74	29	10	6	0	26	24	64	1.37	- 0.34	1.26	4	1	T	T	0.9	1	29	S	20+	14	4	14	4.2	67
OREGON																																
ASTORIA	9	1019.3	1019.9	45	36	40.7	0.0	58	18	21	12	0	9	39	92	16.69	4.98	2.90	24	1	16.1	12	8.1	19	55	17	15+	2	4	27	9.6	
BURNS (J	4151	874.7	1021.6	39	21	29.9	5.1	58	31	-11	4	0	25	23	76	1.77	0.15	0.80	11	1	6.3	8	3.6	28				4	4	20	7.6	
EUGENE	359	1008.8	1022.5	46	35	40.1	1.0	65	30	18	13	0	11	36	87	10.83	4.50	1.84	18	0	19.2	11	5.6	17	33	28	19	0	4	26	9.2	
MEACHAM	4268	876.7	1020.2	36	25	30.5	4.5	57	31	4	4+	0	22			6.33	2.13	2.06	21		31.5	17			33	25	21	1	4	25	8.7	
MEDFORD	1298	974.9	1023.8	42	30	36.1	0.7	53	18	17	3	0	21	31	86	3.68	0.54	1.61	12	0	10.5	7	0.4	31	23	14	14	3	4	24	8.5	
PENDLETON	1482	964.8	1019.7	47	33	40.0	7.8	65	31+	12	4+	0	15	28	64	1.84	- 0.58	0.21	11	0	4.3	2	6.1	24	40	27	21+	6	7	23	7.9	
PORTLAND	21	1020.3	1021.4	45	36	40.4	2.0	60	19+	20	5	0	9	36	85	7.09	1.72	1.21	20	0	6.9	4	6.4	18	41	-	16	1	1	29	9.5	8
SALEM	196	1014.2	1021.7	45	33	39.1	0.6	64	30	16	5	0	14	34	83	6.49	0.21	1.04	22	0	11.1	9	8.1	10	32	18	16	2	3	26	9.3	
SEXTON SUMMIT R	3836	886.6	1022.1	41	30	35.6	1.5	65	31	13	2	0	19			9.44	3.85	2.81	13		30.0	14			48	21	15	8	4	20	7.3	
PACIFIC AREA																																
GUAM TAGUAC R	341	996.2	1008.9	84	73	78.1	- 0.1	86	1	65	14	0	0	73	86	5.25	0.62	1.51	24	1	0.0	0	8.0	8	22			12+	0	4	25	8.7	34
JOHNSTON	7	1010.2	1010.9	80	71	75.8	- 1.3	83	12	68	9	0	0	66	72	1.47	- 2.42	0.51	13	0	0.0	0	4.6	5	26	W	27+	13	13	5	4.6	47
KWAJALEIN	94	1004.4	1007.9	88	75	81.3	1.0	90	27+	73	17+	3	0	75	84	13.54	1.81	4.43	22	1	0.0	0	5.0	3	28	N	8	0	3	28	9.0	5
NAMU	8	1007.8	1008.4	86	77	81.6	1.5	90	18	73	25+	1	0	73	76	5.36	1.74	1.70	10	0	0.0	0	13.4	7	30	0	7	4	4	23	8.3	
MAJURO	10	1008.5	1008.6	85	77	80.6	0.4	87	17+	74	30+	0	0	73	77	8.21	1.24	2.27	14	1	0.0	0	10.5	6	28	-	24+	4	13	14	6.9	63

See footnotes at end of table

CLIMATOLOGICAL DATA

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State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation						Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, ice pellets				Fastest mile							
		Station ⌀	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h		M.p.h.						%
PACIFIC AREA																																
PAGO PAGO	10	1008.5	1008.5	86	75	80.0		88	27+	71	4+	0	0	74	82	11.48		2.64	24	3	0.0	0	2.3	NW	22			10	19	7.1	
[illegible]	12	[illegible]	[illegible]	88	74	80.6	0.0	90	17+	69	15+	6	0	74	82	16.64	[illegible]	[illegible]	28	1	[illegible]	0	2.1	[illegible]	19	NE	2		10	19	[illegible]	[illegible]
TRUK MOEN I LANS	5	1007.5	1007.9	86	77	81.5	0.8	88	29+	72	13			74	80	8.35	- 0.15	2.43	14	1	[illegible]	0	[illegible]					2	6	23	8.5	71
WAKE	11	1011.5	1011.6	82	73	77.5	0.1	84	30+	70	24+	0	0	68	74	1.79	0.65	0.56	11	2	[illegible]	0	[illegible]		35	NE	1	14	14	5	4.3	78
YAP R	44			86	75	80.3	- 0.2	88	27+	70	17+	0	0			13.42	2.55	[illegible]	[illegible]	[illegible]	[illegible]	0			25	NW	11+	2	11	20	[illegible]	[illegible]
PENNSYLVANIA																																
ALLENTOWN	387	1001.0	1015.7	29	15	22.0	- 7.[illegible]	40	5	2	19	0	31	15	75	2.71	[illegible]	1.41	9	2	11.0	8	6.9	28	33			5	11	14	6.5	
ERIE	731	988.2	1015.8	29	15	22.0	- 5.3	49	4	- 5	31	0	31	12	68	1.63	- 1.04	0.36	11	0	26.8	5	[illegible]	[illegible]	40	[illegible]	29	0	5	26	[illegible]	
HARRISBURG	338	1003.1	1016.[illegible]	33	19	26.4	- 4.9	45	11	10	31	0	31	14	61	2.70	[illegible]	1.06	11	1	11.5	11	[illegible]	[illegible]	46	[illegible]	26	5	[illegible]	17	[illegible]	45
PHILADELPHIA	5	1014.9	1015.9	35	21	27.8	- 4.5	53	5	10	19	0	30	18	69	2.13	- 1.13	1.06	10	[illegible]	[illegible]	5	[illegible]	27	42	W	26	[illegible]	[illegible]	[illegible]	[illegible]	51
PITTSBURGH	1137	970.9	1016.4	31	16	23.7	- 5.2	55	4	- 3	31	0	28	16	73	1.29	- 0.68	0.79	10	1	12.1	4	[illegible]	27	48	[illegible]	20	4	3	24	8.2	26
SCRANTON	933	980.0	1015.6	27	12	19.5	- 8.2	44	5	- 3	19	0	31	12	71	1.54	- 0.74	0.54	13	1	15.2	10	[illegible]	[illegible]	34	W	30+	[illegible]	[illegible]	18	[illegible]	60
WILLIAMSPORT	524	995.9	1015.8	31	15	23.0	- 5.8	43	12	- 5	31	0	30	14	67	2.64	- 0.13	0.73	12	1	14.2	5	[illegible]	[illegible]	35	[illegible]	27	[illegible]	[illegible]	17	[illegible]	
RHODE ISLAND																																
BLOCK ISLAND	110			33	20	26.8	- 5.3	53	5	3	20	0	30			2.48	- 1.36	1.21	10	1	3.5	1						[illegible]	[illegible]	[illegible]	[illegible]	
PROVIDENCE	51	1011.2	1013.4	32	14	22.9	- 6.3	50	5	- 5	20	0	30	12	62	2.01	- 1.80	1.62	10	2	11.0	9	8.1	[illegible]	6	23	[illegible]	14	4	13	[illegible]	62
SOUTH CAROLINA																																
CHARLESTON	48	1016.9	1019.0	60	40	49.9	0.1	77	4	22	20	0	7	37	64	5.45	2.91	1.60	9	4	T	0	2.8	27	45Y	NW	26	9	3	19	6.5	59
CHARLESTON C	9			57	42	49.3	- 2.2	72	4	23	20	0	5			4.67	2.27	1.33	9	1	T	0			31	NW	15					
COLUMBIA	213	1010.2	1018.4	57	34	45.4	- 1.5	75	4	14	20	0	12	35	69	[illegible]	1.53	1.33	10	3	T	T	[illegible]	27	36	[illegible]	34	8	2	21	7.1	42
GRNVLLE SPRTNBRG	967	982.[illegible]	1018.2	49	30	39.5	- 4.2	67	5	13	28	0	17	29	70	3.33	- 1.95	0.80	11	1	T	3	2.5	29	29	[illegible]	22	1	5	19	7.1	38
SOUTH DAKOTA																																
ABERDEEN	1296	970.9	1020.8	15	- 5	5.4	- 5.4	38	1	-29	15	0	31	- 3	67	0.35	- 0.31	0.11	7	0	10.2	5	4.1	33	31	36	29	9	[illegible]	16	6.6	
HURON	1281	973.9	1020.4	17	- 2	7.6	- 4.9	41	29	-27	15	0	31	1	71	0.19	- 0.30	0.05	8	0	4.6	5	4.1	31	38	NW	[illegible]	6	5	20	7.4	[illegible]
RAPID CITY	3152	902.8	1018.7	27	8	17.5	- 4.5	56	29	-10	15	0	31	8	67	1.18	- 0.82	0.73	10	2	13.2	9	4.6	34	54	NW	25	3	4	24	8.3	49
SIOUX FALLS	1418	965.1	1019.7	17	- 1	8.3	- 6.9	40	29	-21	7+	0	31	2	73	0.13	- 0.49	0.07	4	2	1.2	4	4.6	30	32	33	29	8	4	19	6.4	
TENNESSEE																																
BRISTOL	1537	962.8	1018.2	45	27	35.6	- 2.7	66	4	10	31	0	24	25	68	3.83	- 0.14	1.25	14	1	4.5	3	3.4	28	31	28	26	4	6	21	7.5	
CHATTANOOGA	655	993.6	1018.9	48	30	38.8	- 2.9	65	30	13	20	0	21	30	72	5.19	- 0.42	1.70	11	3	0.6	1	2.1	32	26	NW	26	6	5	20	7.6	39
KNOXVILLE	980	982.2	1018.7	48	30	38.5	- 2.9	65	13	14	31	0	21	28	68	5.03	- 0.15	1.62	13	3	1.3	3	3.9	30	33	SW	30	5	5	21	7.5	40
MEMPHIS	258	1009.5	1020.1	49	31	39.6	- 1.9	72	14	13	20	0	18	29	66	2.15	- 3.92	0.99	12	2	T	T	2.9	34	30	SE	3	7	8	16	6.8	50
NASHVILLE	590	997.0	1019.5	45	27	35.6	- 4.3	70	14	7	20	0	23	29	76	2.66	- 2.83	1.24	12	1	1.2	1	2.5	20	20	[illegible]	3	4	8	19	7.5	31
OAK RIDGE R	905			45	28	36.8	- 3.1	62	14	15	27+	0	21			4.88	- 1.06	2.12	10		1.7	3			40Y		26					
TEXAS																																
ABILENE	1762	955.3	1018.0	62	31	46.4	1.8	78	29+	9	5	0	14	23	45	0.01	- 0.87	0.01	1	0	0.0	0	1.4	26	37	SW	21	15	8	8	4.3	84
AMARILLO	3674	890.3	1016.1	53	23	37.8	1.1	76	20	- 4	5	0	24	16	49	0.10	- 0.55	0.10	2	0	0.8	1	3.0	27	34	W	13	14	4	13	5.0	74
AUSTIN	597	995.6	1017.9	67	42	54.6	4.2	90	30	23	5	1	7	38	59	2.04	- 2.31	0.92	2	0	0.0	0	1.4	3	30	N	3	8	11	12	5.6	58
BROWNSVILLE	19	1016.6	1017.1	76	57	66.5	5.1	93	31	35	7+	2	0	56	73	0.22	- 1.13	0.14	5	0	0.0	0	3.6	16	34	N	4	5	11	15	7.0	43
CORPUS CHRISTI	41	1015.9	1017.4	72	52	62.3	4.9	91	30	34	7+	1	0	52	75	0.03	- 1.60	0.02	2	0	0.0	0	4.5	12	34	S	21+	5	11	15	6.6	52
DALLAS	481	1000.7	1018.5	60	37	48.5	2.6	78	11	17	5	0	9	31	55	0.16	- 2.16	0.13	2	0	0.0	0	0.5	5	28	NW	3	12	8	11	4.8	76
DEL RIO	1026	983.7	1017.1	71	42	56.1	4.8	89	30	21	6	0	6	35	52	T	- 0.89	T	0	0	0.0	0	2.1	6	26	34	3	14	7	10	4.8	
EL PASO	3918	883.2	1017.3	61	28	44.6	1.7	75	31+	3	8	0	20	18	40	0.17	- 0.29	0.07	4	0	3.8	1	1.8	27	45	W	3	14	9	8	4.0	86
FORT WORTH	537	998.0	1019.0	60	33	46.7	1.2	77	11	17	A+	0	14	32	64	0.19	- 1.85	0.19	1	0	0.0	0	1.2	32	26	[illegible]	3	14	5	12	4.9	
GALVESTON U	7			62	52	57.0	2.1	73	25	29	7	0	2			0.18	- 3.28	0.07	4		T	0			27	N	7					46
HOUSTON INTERCON	96	1014.9	1018.8	68	45	56.7	5.4	82	30+	28	A+	0	7	47	76	0.36	- 3.57	0.25	3	0	T	T	1.3	13	22	20	21+	5	13	13	6.7	55
LUBBOCK	3254	903.[illegible]	1016.6	58	25	41.4	2.2	75	30+	- 4	5	0	25	18	45	T	- 0.68	T	0	0	T	T	2.4	28	31	28	8	15	3	13	4.9	
MIDLAND	2851	917.0	1016.5	64	31	47.4	3.4	80	30	2	5	0	12	17	35	T	- 0.80	T	0	0	T	T	2.3	25	29	4	21	13	13	5	4.0	
PORT ARTHUR	16	1018.3		66	49	57.5	3.9	78	23	30	20+	0	4	50	80	0.60	- 3.63	0.27	7	0	0.0	0	1.9	14	29	SW	21	6	11	14	6.9	42
SAN ANGELO	1903	949.9	1017.3	67	33	50.2	3.3	85	22	13	A+	0	10	25	44	T	- 0.97	T	0	0	0.0	0	2.3	23	28	18	3	14	12	5	4.1	
SAN ANTONIO	788	989.5	1017.9	71	42	56.6	4.0	89	30	25	5	0	8	38	57	0.04	- 1.70	0.03	2	0	0.0	0	1.8	1	32	N	3	8	12	11	5.6	63
VICTORIA	104	1013.9	1017.8	71	48	59.7	4.3	88	30	29	5	0	4	49	74	0.02	- 2.32	0.01	2	0	0.0	0	2.1	14	45Y	N	3	5	11	15	7.1	
WACO	501	1000.0	1018.2	65	38	51.7	3.7	88	30	21	5	0	9	35	57	0.03	- 2.24	0.03	1	0	T	T	0.9	25	27	33	4	13	9	9	4.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JANUARY 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days						No. of days		Snow, Ice pellets				Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
TEXAS																																
WICHITA FALLS	994	981.0	1018.5	55	26	40.6	- 2.2	73	29	10	5	0	28	26	65	0.54	- 0.58	0.42	4	0	0.0	0	14	34	32	32	3	12	8	11	4.8	
UTAH																																
MILFORD	5028	848.3		43	16	29.8	5.2	64	18	-25	4+	0	29			0.25	- 0.32	0.25	1		4.7	5						11	9	11	5.3	
SALT LAKE CITY	4220	874.0	1021.9	41	24	32.4	5.2	61	31+	- 6	6	0	22	23	70	1.06	- 0.29	0.60	9	0	13.6	7	3.7	16	40		10	3	5	23	8.1	40
WENDOVER	4237	873.4	1022.2	40	22	31.2	4.2	56	30	- 8	6	0	28			0.23	- 0.09	0.17	3		1.3	2						7	8	16	6.6	
VERMONT																																
BURLINGTON	332	999.7	1012.9	20	0	9.7	- 6.5	40	25	-20	18	0	31	1	64	1.24	- 0.71	0.60	16	0	17.1	21	2.2	22	30		22	3	10	19	7.5	51
VIRGINIA																																
LYNCHBURG	916			42	25	33.5	- 4.1	67	14	8	20	0	25			1.73	- 1.56	0.89	15		1.7	8			45	W	26	6	11	14	6.4	49
NORFOLK	22	1015.9	1016.8	46	32	38.6	- 2.6	68	5	14	29	0	15	27	67	4.03	0.70	1.76	12	1	T	T	4.4	29	45	W	26	2	5	23	8.1	34
RICHMOND	154	1010.8	1017.4	43	25	33.8	- 4.9	66	5	8	20	0	26	23	69	1.84	- 1.62	1.01	14	0	3.3	7	2.3	29	43	NW	26	3	11	17	7.7	34
ROANOKE	1149	973.6	1016.9	43	24	33.9	- 4.2	68	14	11	27	0	26	19	67	1.21	- 1.91	0.95	9	0	1.1	9	6.2	30	53	30	26	5	13	13	6.4	
WALLOPS ISLAND	9			41	26	33.0		60	26	14	29+	0	25			2.14		0.47	13		8.0	6			68Y	WNW	26					
WASHINGTON																																
OLYMPIA	195	1011.5	1019.0	44	34	38.6	0.5	56	18	14	5	0	12	37	92	11.15	3.30	3.42	22	0	19.4	19	7.9	20	38	20	16	0	2	29	9.5	
WILLAMETTE	179	1010.2	1017.5	44	35	39.5	0.9	52	18	18	3	0	11	37	91	23.34	8.07	6.63	28	1	26.4	18	3.7	20	32	NW	19	1	1	29	0.4	17
SEATTLE TACOMA	400	1001.7	1018.4	44	36	39.7	1.4	55	18	24	5+	0	11	34	81	5.32	- 0.41	1.22	21	0	9.1	5	8.6	19	45	05	16	0	1	28	9.3	16
SPOKANE	2356	930.9	1016.6	37	27	31.9	6.5	59	30	9	5+	0	18	26	80	2.11	- 0.33	0.82	15	0	7.1	5	3.7	21	43	SW	21	3	3	25	8.5	19
TAMPICO PASS	3858	876.7		30	24	27.1	3.6	45	31+	9	13	0	27			23.29	11.24	4.61	24		104.1	215						2	3	26	3.1	
WALLA WALLA	949			49	36	42.2	9.0	68	31	16	5	0	11			1.59	0.30	0.54	15		5.7	3			33	N	21	2	5	24	8.6	23
YAKIMA	1052	978.7	1018.1	44	26	34.8	7.3	68	30	7	4+	0	24	25	70	1.48	0.29	0.69	6	0	10.8	10	4.5	27	39	30	23+	4	4	23	7.8	
WEST INDIES																																
SAN JUAN P.R.	13	1014.6	1016.9	83	72	77.6	3.2	88	19+	68	24+	0	0	67	72	2.18	- 2.52	0.61	18	0	0.0	0	7.3	9	27	E	23+	8	16	7	6.1	57
WEST VIRGINIA																																
BECKLEY	2594	926.2	1018.3	36	19	27.7	- 5.9	61	14	0	31	0	26	21	77	3.74	- 0.52	1.03	21	1	14.0	10	5.7	26	37	28	26	3	10	18	7.8	
CHARLESTON	949	982.7	1018.0	38	21	29.4	- 7.2	63	14	5	31	0	26	22	75	2.35	- 1.97	1.70	15	1	11.6	11	4.8	26	37	31	26	2	5	24	8.2	
ELKINS	1948	943.1		35	14	24.2	- 8.3	59	14	- 9	2	0	28			4.33	0.71	1.86	20		25.2	20						3	5	23	8.4	
HUNTINGTON	827	987.1	1018.2	38	22	29.6	- 7.0	61	14	5	31	0	26	22	75	2.57	- 1.08	0.96	15	2	7.1	5	4.2	25	38	27	26	3	8	20	7.9	
PARKERSBURG	615			37	20	28.8	- 5.8	58	14	4	31	0	27			2.43	- 0.91	0.95	9		6.8	2			49	X	26					42
WISCONSIN																																
GREEN BAY	682	988.8	1016.0	17	- 3	6.9	- 9.9	33	1	-21	8	0	31	2	76	1.60	0.45	0.75	11	1	8.8	10	6.3	28	33	NW	26	13	4	14	5.8	51
LACROSSE	651	992.9	1019.1	18	- 3	7.4	- 9.1	36	1	-23	8	0	31	1	73	1.52	0.33	1.02	10	0	26.5	7	3.0	27								
MADISON	858	984.1	1017.2	21	- 1	9.6	- 7.9	37	25+	-26	18	0	31	3	73	1.48	0.08	0.96	9	3	21.9	21	5.2	27	39	NW	29	11	6	14	5.6	54
MILWAUKEE	672	990.5	1017.0	21	4	12.7	- 7.9	57	25	-12	31	0	31	5	70	1.37	- 0.46	0.96	10	0	15.8	12	8.6	26	36	NW	29	10	8	13	5.8	54
WYOMING																																
CASPER	5338	833.4	1016.0	36	15	25.4	2.0	60	30	-13	4	0	28	15	67	0.19	- 0.37	0.08	4	0	3.7	4	12.6	24	38	30	25+	3	5	23	8.0	
CHEYENNE	6126	808.0	1015.7	39	21	29.7	4.3	60	20	-15	6	0	25	11	49	0.51	- 0.01	0.31	3	0	8.6	8	15.6	29	54	W	30	4	6	19	7.0	69
LANDER	5563	825.3	1016.1	37	16	26.5	7.2	63	31	-14	5	0	29	12	57	0.36	- 0.10	0.26	4	0	4.9	6	3.8	26	54	W	26	4	8	19	7.7	60
SHERIDAN	3964	875.7	1018.0	30	9	19.5	- 1.8	60	19	-13	14+	0	30	7	59	1.43	0.79	0.37	15	0	15.6	8	4.7	31	38	NW	21+	1	2	28	9.0	44

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.
V Sun below horizon November 19 - 30, inclusive.
X Sun below horizon November 24 - 30, inclusive.

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max 32.2 °C or above	Temperature: No. of days Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days .25 mm or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset) Clear, 0-3	No. of days (sunrise to sunset) Partly cloudy 4-7	No. of days (sunrise to sunset) Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm	Mm.	Mm.			Mm	Mm	M.p.s.		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	997.0	1019.9	12.2	1.1	6.4	- 1.6	21.1	14	-11.1	20	0	18	1.1	71	91	- 37	28	14	7	T	T	0.8	29	14.3	W	25	5	11	15	6.7	43
HUNTSVILLE	190	996.3	1020.0	10.6	0.6	5.5	- 0.6	20.6	14	-10.0	20	0	18	1.1	74	133	1	40	17	4	13	T	0.7	32	13.0	27	14	7	3	21	7.3	
MOBILE	64	1011.5	1019.7	17.2	6.7	12.1	0.4	26.1	24	- 5.6	20	0	4	6.7	74	55	- 63	38	7	2	0	0	0.5	36	11.6	34	19	5	7	19	7.1	
MONTGOMERY	56	1012.5	1019.8	15.0	2.8	8.9	- 0.1	26.1	14	- 7.8	20	0	13	2.8	70	64	- 39	24	10	4	0	0	1.0	29	16.5	NW	15	7	7	17	6.5	44
ALASKA												B														B					
ANCHORAGE	35	1010.2	1015.5	-12.2	-20.6	-16.3	- 5.2	5.0	5	-30.0	24	0	30	-22.2	61	6	- 14	5	3	0	30	152	1.6	1	27.3	3	15	20	4	7	3.1	77
ANNETTE	34	1007.8	1011.9	1.1	- 4.4	- 1.8	- 3.1	7.8	7	-14.4	10	0	27	- 6.1	72	193	- 96	53	19	0	422	76	1.6	8	15.6	5	10	4	3	24	8.1	
BARROW	9	1026.4	1027.1	-25.0	-32.2	-28.6	- 1.8	- 7.8	10	-42.8	20	0	31	-31.1	78	5	0	2	5	0	46	229	1.7	11	13.0	11	17+	V	V	V		
BARTER ISLAND	12	1025.1	1027.2	-26.1	-35.0	-30.4	- 3.3	- 8.3	11	-41.7	27+	0	31			14	4	9	4	0	147	533	2.3	25	21.5	27	24+	X	X	X		
BETHEL	38	1014.2	1020.4	-17.2	-25.0	-21.3	- 5.5	- 1.1	10	-38.3	31	0	31	-23.9	80	4	- 25	2	6	0	160	305	4.9	3	18.3	5	2	14	4	13	5.2	
B. TTLES	196			-31.7	-41.7	-36.7		- 6.7	4	-55.6	24	0	31			9		8	3	0	193	1041			8.0	35	2	19	3	9	3.9	
BIG DELTA	386			-25.6	-36.7	-31.3		- 2.8	5	-50.0	25+	0	31			7		3	5	0	132	254			17.4	12	3	16	8	7	3.9	
COLD BAY	29	1011.2	1014.8	- 2.8	- 7.8	- 5.5	- 3.2	3.3	9	-17.8	31	0	27	- 7.2	84	34	- 25	11	18	0	505	279	2.5	33	19.7	34	25	5	7	19	7.5	
FAIRBANKS	133	1007.1	1026.2	-30.6	-40.6	-35.4	-11.4	- 2.8	5	-51.1	19+	0	31	-40.0	64	8	- 14	5	4	0	216	991	0.4	1	6.7	24	6	7	5	19	6.9	
GULKANA	479	959.0	1024.4	-22.8	-34.4	-28.6		4.4	5	-49.4	18	0	30	-36.1	53	2		1	3	0	18		1.7	36	23.2	4	15	20	4	7	3.2	
HOMER	20			- 8.3	-16.1	-12.4		6.1	4	-26.1	25	0	29			18	- 35	7	6	0	218	127			13.9	7	2	19	5	7	3.4	
JUNEAU	4	1013.5	1014.4	- 6.7	-13.9	-10.6	- 6.7	4.4	6+	-25.6	25	0	29	-13.3	80	141	40	30	19	0	1295	584	2.6	9	12.5	10	15	7	3	21	7.4	37
KING SALMON	15	1013.2	1015.2	-15.6	-22.8	-19.2	- 8.9	4.4	3	-36.7	28	0	30	-25.0	61	11	- 16	5	5	0	109	76	2.2	1	20.6	9	2	16	2	13	4.6	
KOTZEBUE	3	1024.7	1025.1	-21.7	-29.4	-25.4	- 4.4	-10.6	13+	-41.1	2	0	31	-30.0	67	4	- 6	2	4	0	74	305	4.2	9	17.9	10	17+	6	6	19	6.8	
MC GRATH	105	1009.1	1023.5	-27.2	-38.9	-33.1	-10.3	- 7.8	3	-51.1	23+	0	31			12	- 20	6	6	0	290	584	0.4	36	7.2	36	2	17	3	11	4.5	
NOME	4	1022.4	1023.3	-15.6	-26.1	-20.9	- 5.6	- 3.3	13+	-40.0	22	0	31	-25.6	63	1	- 25	1	5	0	74	406	2.9	6	19.2	4	2	11	6	14	5.9	39
ST. PAUL ISLAND	7	1018.3	1019.1	- 2.2	- 7.2	- 4.8	- 1.2	4.4	13	-18.9	31	0	26	- 7.2	83	21	- 25	6	15	0	160	152	4.6	2	27.3	35	3	6	7	18	7.1	
SHEMYA	37	1012.5	1016.2	0.6	- 1.7	- 0.6	- 0.2	2.8	11+	- 7.2	1	0	26	- 5.6	70	35	- 29	18	11	0	142	203	2.8	11	30.0	25	8	1	3	27	9.0	
SUMMIT	732	925.5	1024.0	-21.1	-28.9	-25.1		- 1.1	5+	-42.8	18	0	31	-28.9	70	15		11	7	0	358	1016	7.4	7	14.8	8	26+	18	5	8	3.5	
TALKEETNA	105			-15.0	-28.9	-21.9	- 9.4	1.1	5	-43.3	24	0	31			30	- 15	26	4	0	196	787			10.7	4	15	20	3	8	3.1	
UNALAKLEET	5			-20.0	-27.2	-23.4		- 4.4	11	-37.8	26	0	31			13		10	6	0	137	660			15.6	9	9	15	4	12	5.0	
YAKUTAT	9	1009.1	1010.3	- 5.0	-13.3	- 9.2	- 6.6	3.3	5	-27.2	17	0	30	-13.9	70	294	19	93	19	0	1720	1118	3.8	9	13.0	12	26+	9	1	21	6.9	
ARIZONA																																
FLAGSTAFF	2135	787.3	1020.8	7.2	-10.0	- 1.5	1.1	18.9	30	-30.0	4	0	30	-10.0	57	2	- 44	2	2	0	20	178	0.4	21	9.8	23	2	20	5	6	3.3	
PHOENIX	340	978.7	1018.2	20.0	2.2	11.2	1.4	31.1	19	- 7.2	7	0	7	- 3.9	40	6	- 13	6	1	0	0	0	0.8	11	12.5Y	W	2	22	3	6	2.8	91
TUCSON	788	927.9	1017.1	18.9	1.7	10.3	0.4	29.4	19	- 8.3	6	0	11	- 6.1	38	1	- 20	1	1	0	T	T	1.2	15	12.5	SW	2	20	7	4	2.8	93
WINSLOW	1492	853.4	1022.7	10.6	- 9.4	0.4	1.0	23.9	20	-26.1	6	0	29	-10.0	53	2	- 9	2	2	0	28	25	0.9	20	13.0	21	13+	18	8	5	3.3	
YUMA	59	1011.2	1018.6	20.0	5.0	12.7	0.8	31.1	19	- 4.4	8	0	5	- 3.9	36	1	- 9	1	1	0	0	0	2.1	36	12.1	NW	3	17	6	8	3.8	87
ARKANSAS																																
FORT SMITH	136	1002.4	1019.5	10.6	- 2.2	3.9	- 0.4	23.3	29	-10.6	7	0	23	- 2.8	68	42	- 26	19	5	2	T	0	1.3	1	11.6	W	3	9	10	12	5.9	64
LITTLE ROCK	78	1009.8	1019.8	10.6	- 0.6	5.0	0.2	25.0	14	- 8.9	7	0	20	0.0	73	53	- 80	39	5	2	T	T	0.6	3	13.9	NW	4	7	10	14	6.3	55
CALIFORNIA																																
BAKERSFIELD	145	1004.4	1022.2	13.3	3.9	8.7	0.1	21.1	18+	- 2.8	6	0	5	3.9	75	13	- 16	8	5	0	0	0	0.4	5	11.6	32	2	8	6	17	6.7	
BISHOP	1252	876.7		15.0	- 3.9	5.3	2.6	24.4	18	-10.0	4	0	26			T	- 25	T	1		T	T						14	8	9	4.5	
BLUE CANYON	1609			7.2	0.0	3.7	0.9	17.2	30+	-10.6	3	0	15			206	- 91	45	9		1374	3277			15.2	6	2	12	8	11	5.1	
EUREKA U	13			10.6	5.0	7.6	- 0.9	19.4	17	- 0.6	3	0	2			137	- 33	30	12		T	T			14.8	SE	15	5	5	21	7.4	50
FRESNO	100	1010.5	1022.5	12.8	2.2	7.6	- 0.2	20.6	18	- 5.6	5	0	9	3.9	83	10	- 41	7	4	0	T	0	0.6	12	11.2	NW	2	9	7	15	6.2	56
LONG BEACH	10	1018.3	1019.7	18.9	6.1	12.4	0.7	31.7	18	- 0.6	7	0	3	4.4	65	15	- 36	8	3	0	0	0	0.5	30	13.4	29	2	9	9	13	5.7	
LOS ANGELES	30	1015.6	1019.2	17.8	8.3	13.1	0.6	30.0	28+	1.7	5	0	0	4.4	62	17	- 51	10	3	0	0	0	0.4	25	18.3Y	N	2	10	9	12	5.7	
LOS ANGELES U	82			20.6	9.4	14.9	1.7	35.0	18	1.7	5	4	0			11	- 67	5	3		0	0			13.0	NW	2	11	13	7	4.7	77
MT SHASTA R	1080	895.7	1022.6	6.7	- 2.8	1.9	1.2	14.4	30	-12.2	13	0	26	- 2.8	76	115	- 46	61	11		683	508	0.4	35								
OAKLAND	2	1022.0	1022.3	12.2	5.6	8.9	0.0	17.8	18	0.6	7+	0	0	5.0	79	33	- 64	10	10	1	T	0	0.2	25	13.0	36	2	11	10	10	5.4	
RED BLUFF	104	1009.1	1022.0	12.2	2.8	7.7	0.2	21.7	27+	- 2.8	3	0	9	0.6	69	74	- 35	50	10	0	0	0	0.8	35	13.4	SE	15+	6	9	16	6.5	63
SACRAMENTO	5	1021.3	1022.3	11.1	3.9	7.4	0.1	17.8	20	- 3.3	6+	0	5	3.9	83	23	- 58	10	11	1	0	0	0.1	15	17.0	N	2	7	9	15	6.6	52
SANDBERG R	1377	864.9		10.0	1.7	5.9	1.5	20.0	19	-10.0	4	0	12			6	- 59	5	2		58	152			13.4	33	22	15	7	9	4.3	
SAN DIEGO	4	1018.3	1019.2	16.7	8.3	12.4	- 0.4	27.2	28+	0.6	5	0	0	3.9	61	8	- 43	5	2	0	0	0	1.1	30	13.4	W	2	10	10	11	5.3	69
SAN FRANCISCO	2	1021.7	1022.3	12.8	5.6	9.1	- 0.2	19.4	18	- 0.6	5+	0	2	5.0	77	32	- 70	15	9	0	T	0	0.3	34	15.6	34	2	12	8	11	5.3	
SAN FRANCISCO U	16			13.3	7.8	10.4	0.1	20.0	17	3.9	4	0	0			52	- 64	14	8		0	0			11.6	W	12					67
SANTA MARIA	72			16.7	2.8	9.9	- 0.2	28.9	18	- 5.0	5	0	6			15	- 57	7	6		0	0						13	8	10	4.7	
STOCKTON	7	1022.0	1023.0	11.1	3.3	7.2	0.1	18.3	17	- 3.3	6+	0	9	2.8	76	24	- 41	10	7	0	0	0	0.3	16	14.3	33	2	6	6	19	7.1	
COLORADO																																
ALAMOSA	2297	769.7		3.9	-18.3	- 7.2	0.9	16.7	20	-40.0	6	0	31			4	- 3	3	3		79	76						13	9	9	4.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min. 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: .25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
COLORADO																																
COLORADO SPRINGS	1873	807.7	1017.4	5.6	- 7.8	- 1.2	0.7	19.4	20	-26.7	6+	0	29	-11.1	53	9	1	7	3	0	221	178	1.5	1	21.9	31	25	10	9	12	5.6	
DENVER	1610	833.1	1014.7	7.8	- 7.8	0.1	2.0	20.6	20	-26.7	6	0	29	- 8.9	57	9	- 5	6	4	0	218	203	1.3	26	16.1	NW	30	7	8	16	6.7	62
GRAND JUNCTION	1476	854.4	1022.9	3.9	- 8.9	- 2.4	0.9	15.6	31	-26.1	7	0	31	- 9.4	63	5	- 11	3	6	0	81	51	0.9	12	11.2	W	13	7	5	19	6.8	58
PUEBLO	1428	853.4	1016.1	10.6	- 7.2	1.6	2.7	25.6	20	-27.2	7+	0	28	-10.6	45	11	3	10	2	0	152	152	1.5	29	17.0	W	30+	10	7	14	6.0	67
CONNECTICUT																																
BRIDGEPORT	2	1013.9	1014.4	1.1	- 7.2	- 3.2	- 2.2	8.3	5	-15.6	19	0	30	-10.6	59	78	- 15	43	11	0	216	127	4.4	29	19.7	27	26	12	4	15	5.7	
HARTFORD	52	1006.4	1013.4	- 1.7	-12.8	- 7.0	- 3.7	5.6	30+	-25.0	20	0	31	-14.4	56	71	- 20	17	11	0	450	279	2.2	28	17.0	NW	27	8	14	9	5.7	59
DELAWARE																																
WILMINGTON	23	1013.2	1016.3	1.7	- 7.2	- 2.6	- 3.3	8.9	30+	-13.3	31	0	31	- 8.3	66	56	- 30	30	12	1	147	152	3.0	30	16.5	29	26	7	5	19	6.9	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1005.1	1017.1	3.3	- 6.7	- 1.9		11.1	30	-15.0	29	0	29	- 7.8	64	58		43	10	1	191	381	1.7	30	17.0	30	26	6	8	17	7.2	
WASHINGTON NATIONAL	3	1014.6	1017.1	3.9	- 4.4	- 0.4	- 3.1	11.7	30+	-10.0	29+	0	29	- 7.2	63	47	- 30	25	9	1	122	229	2.1	29	21.0	NW	26	3	10	18	7.5	39
FLORIDA																																
APALACHICOLA U	4			16.1	8.3	12.1	- 0.7	23.9	31	- 3.3	20	0	2			54	- 26	32	8	1	0	0			11.6	NW	19+	8	10	13	5.9	66
DAYTONA BEACH	9	1018.6	1019.8	21.1	8.3	14.8	- 0.3	28.3	25	- 5.0	21	0	3	8.9	73	15	- 34	10	6	0	0	0	1.3	28	10.7	24	30	14	6	11	4.9	
FORT MYERS	5	1019.3	1019.6	25.0	12.2	18.5	1.0	30.6	4	0.0	21	0	1	12.2	72	22	- 17	17	3	0	0	0	0.3	5	10.3	33	19+	16	11	4	3.9	
JACKSONVILLE	7	1018.6	1019.6	18.9	6.1	12.2	- 1.1	27.8	25	- 7.2	21	0	8	6.7	74	51	- 11	23	7	0	0	0	1.5	29	18.3	NW	15	11	12	8	5.1	60
KEY WEST	1	1018.3	1018.9	24.4	18.3	21.4	0.6	27.8	7	7.8	21	0	0	16.1	72	10	- 28	6	4	0	0	0	2.1	5	12.1	NW	19	13	13	5	4.1	91
LAKELAND U	65			21.7	10.6	16.2	- 0.3	27.8	4	- 3.3	20	0	2			7	- 45	4	5		0	0						15	10	6	4.0	66
MIAMI	2	1018.6	1018.8	25.0	15.6	20.1	0.7	28.9	10	1.7	20	0	0	14.4	72	13	- 39	13	3	0	0	0	0.2	6	11.2	32	19+	14	15	2	4.3	
ORLANDO	33	1014.9	1019.3	23.3	10.0	16.7	0.9	30.0	24	- 2.2	20	0	2	9.4	68	11	- 39	8	6	0	0	0	1.0	30	9.4	30	19	15	6	10	4.6	
PENSACOLA	34	1015.9	1020.0	16.7	6.7	11.8	- 0.2	25.6	23+	- 5.0	20	0	6	7.2	75	41	- 66	14	10	0	0	0	1.0	1	11.2	36	19	7	6	18	6.7	
TALLAHASSEE	17	1017.6	1019.8	18.3	3.3	10.7	- 1.5	26.7	14	-11.7	21	0	12	5.6	74	77	- 10	39	9	0	0	0	0.6	33	8.9	1	19+	8	10	13	6.0	
TAMPA	6	1019.3	1019.4	22.2	9.4	15.6	- 0.7	28.9	4	- 5.0	21	0	3	9.4	72	22	- 32	13	6	0	0	0	0.2	35	11.2	33	27+	13	11	7	4.7	62
WEST PALM BEACH	5	1018.3	1019.0	24.4	12.2	18.3	- 1.1	29.4	9	- 1.1	20	0	1	12.2	72	21	- 42	14	5	0	0	0	0.6	29	13.0	30	19	12	11	8	4.6	
GEORGIA																																
ATHENS	244	988.8	1018.4	11.1	0.6	6.0	- 1.0	20.0	14	-10.0	20	0	15	0.6	71	103	- 21	21	12	2	T	T	1.9	27	10.3	31	26	9	4	18	6.6	
ATLANTA	308	981.7	1019.2	11.1	1.1	6.1	- 1.0	19.4	14	- 9.4	20	0	17	0.6	72	112	- 1	30	14	5	T	T	1.5	29	14.8	NW	26	9	6	16	6.6	43
AUGUSTA	41	1013.2	1018.5	13.3	1.1	7.4	- 1.3	22.8	4	- 9.4	21+	0	12	1.7	72	117	41	33	10	4	T	T	1.7	26	11.2	27	26	8	3	20	7.0	
COLUMBUS	117	1005.1		14.4	3.3	9.0	0.2	23.3	14	- 7.8	20	0	11			135	32	50	12	4	0	0	1.1	30	13.0	32	15	10	2	19	6.6	
MACON	108	1006.1	1019.4	15.6	2.8	9.1	- 0.4	25.6	14	- 8.9	20	0	11	3.9	73	125	39	53	12	5	0	0	1.8	28	19.7	NW	15	9	4	18	6.6	47
ROME	194			10.6	- 1.1	4.7	- 0.9	19.4	14	-11.1	20	0	20			114	- 26	37	13		T	T										
SAVANNAH	14	1017.3	1019.0	16.7	3.3	10.1	- 0.9	25.6	25+	- 8.3	21+	0	10	3.9	70	86	16	35	9	1	T	0	1.6	27	13.4	NW	15	7	5	19	6.8	46
HAWAII																																
HILO	8	1010.2	1011.3	26.7	16.7	21.8	0.3	30.6	27	14.4	8+	0	0	16.7	77	342	42	150	18	9	0	0	0.6	17	13.0	S	28	4	9	18	7.2	28
HONOLULU	2	1010.5	1010.9	26.1	18.3	22.1	0.4	27.8	29+	13.3	7	0	0	16.7	76	157	62	35	14	2	0	0	0.8	20	14.8	SW	15	6	6	19	7.3	49
KAHULUI	15	1008.5	1010.7	25.6	16.7	21.0	1.3	28.3	23	11.1	8	0	0	17.8		347	267	125	19	8	0	0	2.1	19	17.0	SW	15	8	7	16	6.7	56
LIHUE	31	1005.8	1011.0	25.0	17.2	20.9	0.7	27.2	15	11.7	7	0	0	16.7	76	303	163	90	20	5	0	0	1.4	23	16.1	SW	14	5	12	14	7.0	44
IDAHO																																
BOISE	865	919.1	1022.1	4.4	- 2.2	1.1	2.7	12.8	26	-14.4	5+	0	19	- 3.9	72	52	18	19	17	0	102	51	1.3	12	13.0	E	15	4	7	25	8.2	41
LEWISTON	431			5.6	- 1.1	2.4	3.1	17.2	30	-13.9	5	0	15			42	14	11	17		185	102						1	3	27	9.1	
POCATELLO	1358	864.2	1021.7	1.7	- 6.7	- 2.7	2.7	12.2	31	-25.0	5	0	27	- 6.7	73	37	7	8	15	0	333	152	3.6	22	17.9	SW	20	2	6	23	8.2	36
ILLINOIS																																
CAIRO U	96			5.0	- 3.3	0.8	- 2.2	17.2	13	-10.0	19+	0	24			82	- 31	48	6		T	T			14.3	S	3	7	8	16	6.7	35
CHICAGO O HARE	201	992.2	1017.8	- 2.8	-11.7	- 7.3	- 2.9	6.7	25	-20.0	31+	0	31	-12.8	65	24	- 23	12	9	0	254	127	3.0	25	21.0	28	29	11	5	15	6.0	
CHICAGO MIDWAY	185	993.9	1017.7	- 2.8	-11.7	- 7.1	- 3.8	6.7	25	-20.0	31+	0	31	-13.3	62	28	- 19	21	8	0	325	178	3.0	25	17.4	W	29	11	5	15	6.0	55
MOLINE	177	996.6	1019.3	- 4.4	-15.0	- 9.6	- 4.3	6.1	25	-28.3	7	0	31	-14.4	67	45	5	43	5	1	450	330	2.5	26	19.7	W	25	10	8	13	5.6	62
PEORIA	199	994.2	1019.3	- 2.2	-12.2	- 7.1	- 3.6	10.0	25	-20.6	6	0	31	-11.7	72	15	- 33	13	6	0	137	102	2.3	26	18.8	W	25	8	8	15	6.1	54
ROCKFORD	221	989.5	1017.9	- 4.4	-14.4	- 9.6	- 4.0	5.0	25	-23.9	6	0	31	-13.9	71	28	- 22	22	7	0	254	178	2.5	28	17.9	30	29	12	4	15	5.7	
SPRINGFIELD	179	996.3	1019.5	0.6	-10.0	- 4.6	- 2.6	12.2	29	-20.0	31	0	30	-10.6	66	31	- 17	25	6	0	107	51	2.0	26	18.8	NW	26	8	8	15	6.2	57
INDIANA																																
EVANSVILLE	116	1005.4	1020.0	3.9	- 6.1	- 1.2	- 2.4	15.6	14	-13.9	7	0	26	- 6.7	71	73	- 28	39	7	1	15	25	1.0	30	13.4	NW	26	7	6	18	7.1	44

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max 32.2 °C or above	Temperature: No. of days Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 25 mm or more	Precipitation: No. of days With thunderstorms	Snow, ice pellets: Total	Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C.	C.	C.	C.	C.		C.				C	%	Mm.	Mm	Mm.			Mm	Mm	M.p.s		M.p.s							%
INDIANA																																
FORT WAYNE	241	986.8	1018.2	- 1.7	-11.7	- 6.6	- 3.8	10.6	4	-23.9	19	0	31	-10.6	75	28	- 40	12	11	0	137	51	3.1	26	21.5	W	26	4	10	17	7.2	47
INDIANAPOLIS	241	988.2	1018.7	0.0	- 9.4	- 4.8	- 3.2	12.2	4	-19.4	27	0	31	-10.0	71	50	- 27	41	9	0	38	25	2.1	26	18.8	W	26	7	5	19	7.0	54
SOUTH BEND	236	987.8	1017.0	- 2.2	-11.1	- 6.7	- 3.1	6.7	4	-20.0	19	0	31	-10.0	78	39	- 17	13	14	0	572	279	3.3	25	14.3	31	26	5	4	22	7.7	
IOWA																																
BURLINGTON	211			- 3.3	-13.3	- 8.3	- 4.1	7.2	25+	-24.4	6	0	31	-13.9	62	26	- 15	26	2	0	229	152	2.2	29	13.0	32	26+	8	9	14	6.3	
DES MOINES	286	983.4	1020.1	- 4.4	-13.3	- 9.1	- 2.3	10.0	29	-25.6	7	0	31	-14.4	64	44	11	37	6	1	404	356	2.1	30	16.1	NW	4	9	10	12	5.8	59
DUBUQUE	322	977.3		- 6.7	-16.1	-11.6	- 4.4	2.8	29+	-27.2	7+	0	31			50	4	43	7		371	356						10	8	13	5.5	
SIOUX CITY	334	978.3	1020.4	- 5.6	-14.4	-10.1	- 2.7	9.4	29	-26.1	6	0	31	-12.8	80	11	- 8	10	6	0	122	152	1.9	30	19.7	NW	25	10	7	14	6.1	62
WATERLOO	265	985.8	1019.6	- 8.3	-18.3	-13.5	- 5.7	3.3	29	-31.7	7	0	31	-18.3	67	45	15	42	3	0	424	432	2.6	31	16.1	33	4	10	8	13	5.6	
KANSAS																																
CONCORDIA	448	964.4	1019.8	- 0.6	-11.1	- 5.7	- 3.2	16.7	29	-23.9	6	0	31	-10.0	73	19	2	19	4	1	231	229	0.8	31	18.8	NW	3	9	8	14	6.1	66
DODGE CITY	787	924.8	1018.8	3.3	- 8.3	- 2.7	- 2.2	22.2	29	-22.2	7+	0	30	- 8.3	71	28	13	27	3	1	251	254	0.6	30	20.6	NW	3	10	5	16	6.3	63
GOODLAND	1114	886.2	1016.8	6.7	- 8.9	- 1.2	1.3	21.7	20	-23.9	6	0	30	- 9.4	64	13	4	13	2	0	211	152	1.8	25	14.3	31	25+	9	6	16	6.2	
TOPEKA	267	987.5	1020.6	0.0	- 8.9	- 4.4	- 2.6	13.9	29	-17.8	6	0	31	- 8.9	73	30	5	29	4	0	53	25	1.2	33	13.9	SW	20+	10	5	16	6.1	60
WICHITA	403	969.9	1019.6	3.9	- 7.8	- 1.8	- 1.8	21.1	29	-15.6	6	0	31	- 6.7	74	25	4	25	2	1	T	T	1.4	1	18.8	NW	4	10	7	14	5.9	69
KENTUCKY																																
COVINGTON	265	985.8	1018.5	2.8	- 7.2	- 2.1	- 1.8	14.4	14	-16.7	31	0	29	- 7.8	67	63	- 28	28	7	2	81	25	2.4	26	17.9	27	26	5	10	16	7.2	
LEXINGTON	294	982.4	1019.2	3.3	- 6.1	- 1.3	- 2.7	15.6	14	-15.0	31	0	27	- 6.1	72	84	- 42	36	9	2	102	51	1.9	25	13.4	28	26	5	9	17	7.2	
LOUISVILLE	145	1001.0	1019.3	3.9	- 5.0	- 0.6	- 2.3	17.2	14	-13.9	31+	0	25	- 6.7	66	67	- 37	29	8	0	81	51	1.7	28	14.3	NW	29+	4	9	18	7.3	44
LOUISIANA																																
ALEXANDRIA	28	1015.2	1019.7	16.1	5.0	10.4	0.2	26.7	30	- 3.9	20	0	11			77	- 58	35	10	1	51	25	0.4	6	10.3	19	22+	4	6	21	7.5	
BATON ROUGE	20	1016.6	1019.4	17.2	6.1	11.6	0.1	25.6	30+	- 5.0	20	0	9	7.2	78	29	- 92	17	7	1	0	0	0.5	7	10.3	2	19+	6	7	18	7.0	
LAKE CHARLES	3	1018.0	1019.0	18.3	7.8	13.1	1.1	25.6	24	- 1.1	20+	0	3	8.3	80	20	- 93	7	5	0	T	T	1.2	11	11.2	36	4	6	7	18	7.1	
NEW ORLEANS	1	1018.6	1019.6	18.9	7.2	12.8	0.3	26.7	30+	- 3.3	20	0	3	8.3	76	29	- 69	10	5	0	0	0	0.6	2	9.4	23	30+	5	11	15	6.6	
SHREVEPORT	77	1009.1	1018.7	16.7	4.4	10.3	1.7	28.9	30	- 6.1	9	0	11	4.4	72	7	-115	4	3	0	20	25	0.6	14	11.6	14	3+	5	9	17	6.9	47
MAINE																																
CARIBOU	190	985.1		- 8.9	-20.0	-14.6	- 2.6	5.0	27	-33.3	18	0	31			43	- 10	15	15		422	483						8	6	17	6.4	
PORTLAND	13	1009.1	1011.4	- 5.0	-17.2	-11.0	- 5.3	4.4	5	-32.2	19	0	31	-15.6	66	57	- 54	14	10	0	437	686	2.7	28	17.0	W	30	16	6	9	4.5	64
MARYLAND																																
BALTIMORE	45	1011.2	1017.0	2.8	- 5.0	- 1.1	- 2.7	10.6	30+	-10.6	29+	0	27	- 7.8	62	51	- 36	26	10	0	104	127	2.6	28	24.1	NW	26	6	7	18	7.0	44
MASSACHUSETTS																																
BLUE HILL OBS R	192			- 1.7	-10.6	- 6.3	- 3.6	9.4	5	-21.7	19	0	31			50	- 64	13	9		310	406			21.5	W	27					57
BOSTON	5	1011.5	1012.5	- 0.6	- 8.3	- 4.6	- 3.4	7.8	5	-16.7	28+	0	31	-11.1	62	48	- 52	11	12	0	305	203	5.0	28	16.1	NW	27	11	10	10	5.6	66
WORCESTER	301	974.3	1012.6	- 3.3	-12.2	- 7.9	- 3.5	8.3	5	-22.8	28+	0	31	-13.3	66	50	- 44	15	11	0	422	610	4.0	28	14.3	28	27	10	11	10	5.6	
MICHIGAN																																
ALPENA	210	986.8	1013.3	- 3.9	-15.0	- 9.4	- 2.6	5.0	4	-26.7	30	0	31	-12.2	75	61	12	16	22	0	1097	711	2.0	26	17.0	NW	27+	2	7	22	8.0	39
DETROIT	189			- 2.2	- 9.4	- 5.8	- 2.9	6.7	4	-19.4	31	0	31	-10.0	74	23	- 29	12	16	0	170		3.5	26	17.9	26	29					
DETROIT METRO	193	990.9	1015.8	- 2.2	-10.6	- 6.3	- 3.1	8.3	4	-20.6	31	0	31	-10.6	74	26	- 23	12	11	0	221	102	3.3	26	22.4	W	30+	4	10	17	7.5	36
FLINT	235	985.8	1014.8	- 3.3	-10.6	- 6.9	- 2.7	6.1	4	-19.4	31	0	31	-10.6	74	12	- 31	3	14	0	246	152	3.4	26	16.1	29	29+	2	9	20	8.0	
GRAND RAPIDS	239	985.1	1015.5	- 3.9	-11.7	- 7.6	- 3.2	5.0	4	-22.8	19	0	31	-11.1	76	26	- 22	7	17	0	691	330	3.2	24	25.0	W	29	0	7	24	8.8	33
HOUGHTON LAKE	350	969.9	1013.8	- 5.0	-13.9	- 9.6	- 2.5	3.3	24+	-26.1	8	0	31	-12.8	77	33	- 5	14	16	0	699	305	2.6	27	13.9	34	26	0	9	22	8.5	
LANSING	256	982.4	1015.5	- 3.3	-11.1	- 7.2	- 2.9	6.1	4	-20.6	19	0	31	-11.1	72	17	- 33	7	12	0	226	178	3.5	25	24.1	W	30+	2	9	20	7.9	38
MARQUETTE U	206			- 6.7	-12.8	- 9.8	- 2.8	1.7	1	-22.8	31+	0	31			91	43	27	25		1336	864			18.8	SW	20	2	6	23	8.1	39
MUSKEGON	191	991.9	1015.7	- 2.8	-10.0	- 6.7	- 3.3	5.0	4	-21.7	19	0	31	-10.6	74	47	- 6	10	19	0	1148	356	2.9	28	19.7	31	26	0	2	29	9.5	
SAULT STE MARIE	220	984.8	1012.6	- 7.8	-16.7	-12.5	- 3.5	- 0.6	22+	-26.7	27	0	31	-15.6	75	89	36	15	22	0	1280	838	0.9	32	13.9	NW	26	4	7	20	7.6	46
MINNESOTA																																
DULUTH	435	962.8	1017.8	-12.2	-22.8	-17.4	- 4.6	- 2.2	1	-31.1	27	0	31	-21.7	70	40	10	16	16	0	808	635	3.5	30	16.5	W	30	9	5	17	6.4	46
INTERNATIONAL FALLS	359	972.2	1018.9	-15.6	-27.8	-21.7	- 5.7	- 4.4	1	-38.9	12	0	31	-25.6	68	13	- 8	6	10	0	241	406	2.1	28	10.3	28	30+	11	8	12	5.3	
MINNEAPOLIS	254	987.1	1019.4	- 9.4	-18.9	-14.2	- 3.3	1.7	22+	-27.8	27	0	31	-19.4	63	31	13	6	13	0	505	330	2.1	31	16.5	NW	29	11	7	13	6.0	52
ROCHESTER	395	967.8	1018.6	- 9.4	-19.4	-14.6	- 4.3	1.1	1	-27.2	27+	0	31	-17.8	74	28	5	17	12	0	411	432	3.0	29	17.0	31	29	12	6	13	5.8	
ST CLOUD	315	979.3	1020.1	-11.1	-21.7	-16.2	- 4.0	0.0	1	-30.0	27	0	31			22	4	4	11		333	305						9	6	16	6.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days Max 32.2 °C or above	Temperature: No of days Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days 25 mm. or more	Precipitation: No of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset) Clear, 0.3	No. of days (sunrise to sunset) Partly cloudy, 4-7	No. of days (sunrise to sunset) Cloudy, 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M p.s							%
MISSISSIPPI																																
JACKSON	94	1007.8	1020.0	15.6	3.3	9.3	0.4	25.6	30	-10.0	20	0	15	4.4	75	77	- 55	39	11	3	T	T	0.3	19	12.5	SE	3	6	8	17	6.8	48
MERIDIAN	88	1008.8	1020.1	15.0	2.8	8.9	0.0	24.4	14	- 7.8	20	0	14	4.4	78	108	- 11	46	11	3	0	T	0.2	35	9.4	17	4+	6	8	17	6.9	
MISSOURI																																
COLUMBIA REGIONAL	270	986.1	1019.8	2.2	- 7.8	- 2.7	- 1.7	16.1	29	-16.1	6	0	31	- 8.9	66	41	- 2	41	3	1	25	25	1.3	29	14.3	NW	26	8	7	16	6.6	57
KANSAS CITY	226	991.9	1020.1	2.2	- 7.2	- 2.4	- 2.2	16.7	29	-15.0	6	0	28	- 7.8	70	38	2	37	3	1	33	25	1.3	32	15.2	SW	20	10	6	15	5.9	72
ST JOSEPH	247			1.1	-10.0	- 4.3	- 1.6	12.8	29	-28.9	6	0	29	-11.1	64	38	8		3				1.3	32	14.3	31	4+	10	5	16	5.6	
ST LOUIS	163	998.6	1019.9	3.3	- 8.3	- 2.6	- 2.5	17.8	29	-16.7	6	0	30	- 8.3	70	17	- 34	14	5	1	10	T	1.7	27	17.0	NW	26	9	7	15	6.5	61
SPRINGFIELD	386	972.6	1019.4	6.1	- 6.7	- 0.3	- 1.2	19.4	29	-16.1	6	0	31	- 6.1	68	31	- 19	24	5	1	T	T	0.2	23	13.9	SE	3	10	8	13	5.8	60
MONTANA																																
BILLINGS	1087	888.9	1018.0	- 2.8	-12.2	- 7.4	- 2.5	13.3	29+	-28.3	14	0	27	-12.8	67	33	19	11	15	0	292	152	2.7	27	20.1	NW	20	2	2	27	8.9	24
GLASGOW	696	933.6	1020.5	-10.0	-19.4	-14.9	- 2.6	5.6	29	-30.6	14+	0	31	-19.4	69	25	13	8	19	0	615	508	1.1	2	17.4	36	29	2	4	25	8.5	
GREAT FALLS	1116	885.9	1019.1	- 3.3	-13.9	- 8.8	- 3.3	14.4	19	-34.4	14+	0	28	-15.6	58	31	15	10	17	0	411	254	4.2	24	18.8	SW	29	3	4	24	8.2	38
HAVRE	788	922.8	1019.9	- 8.9	-20.0	-14.3	- 4.2	8.9	19	-34.4	14	0	31	-16.7	76	59	47	13	19	0	1052	533	1.9	25	17.0	SW	21	1	5	25	8.6	37
HELENA	1167	878.8	1019.2	- 2.2	-12.2	- 7.2	- 0.2	11.7	19	-34.4	13	0	30	-12.8	62	35	23	14	10	0	411	356	2.5	27	18.8	SW	25+	2	4	25	8.3	24
KALISPELL	904	909.2	1017.6	- 1.7	-10.0	- 5.7	- 1.1	10.6	30	-26.7	5	0	25	- 9.4	73	46	11	10	19	0	653	457	0.9	16	15.6	2	10	1	3	27	9.2	
MILES CITY	801	921.4	1019.2	- 6.1	-17.2	-11.6	- 2.9	6.1	29+	-31.1	11	0	31	-15.0	76	45	34		17	0	437		2.3	31								
MISSOULA	972	903.5	1018.9	0.6	- 7.2	- 3.2	3.9	11.1	29	-21.7	13	0	25	- 5.6	83	46	23	7	23	0	251	152	0.3	27	15.2	NW	21	1	4	26	9.1	22
NEBRASKA																																
GRAND ISLAND	561	950.6	1019.9	- 1.1	-12.2	- 6.7	- 1.5	17.8	29	-26.7	6	0	31	-13.3	63	21	5	18	6	0	262	203	1.8	30	15.6	34	4+	8	5	18	6.6	
LINCOLN U	351			- 2.2	-11.1	- 6.7	- 2.9	15.6	29	-23.3	7+	0	31			33	10	29	5		384	330			17.0	NE	3	9	7	15	6.1	61
NORFOLK	471			- 3.9	-13.9	- 8.9	- 1.9	13.3	29	-26.1	7	0	31			7	- 13	5	7		130	102						10	6	15	6.0	
NORTH PLATTE	846	916.7	1018.5	1.7	-12.2	- 5.5	- 1.1	17.8	29	-27.8	6	0	31	-11.1	69	12	1	6	5	0	142	102	1.1	32	15.2	NW	25	6	8	17	6.9	57
OMAHA	298	983.1	1020.2	- 2.8	-13.3	- 7.9	- 2.5	13.9	29	-26.7	6	0	31	-12.8	67	24	3	19	6	0	333	254	1.6	33	17.4	NW	25	12	5	14	5.9	56
SCOTTSBLUFF	1206	877.1	1017.3	3.3	- 8.9	- 2.9	0.8	18.3	20	-25.6	7	0	27	-11.1	58	6	- 2	5	4	0	56	51	2.7	31	17.9	28	25	3	8	20	7.8	
VALENTINE	789			- 1.7	-15.0	- 8.6	- 1.9	13.9	29	-27.2	6	0	31			12	2	9	6		236	203			16.5	NW	25	6	8	17	7.2	61
NEVADA																																
ELKO	1539	846.6	1022.0	3.9	- 6.1	- 0.9	4.3	14.4	31	-27.8	4	0	23			15	- 15	4	10	0	229	152	1.3	23	12.1	20	12	4	8	19	7.3	
ELY	1906	809.7	1022.5	3.9	-12.2	- 4.3	0.8	13.9	18+	-32.2	5	0	31	-10.0	69	16	- 4	14	4	0	224	254	2.5	20	17.4	N	2	11	5	15	6.0	69
LAS VEGAS	659	943.4	1021.5	13.9	0.0	6.9	0.7	23.3	31+	-11.1	6	0	15	- 7.8	37	T	- 13	T	0	0	T	0	1.4	27	16.5	SW	13	17	7	7	3.8	91
RENO	1342	869.3	1022.6	7.8	- 6.7	0.6	1.4	18.9	18	-23.9	3	0	27	- 5.0	71	19	- 11	9	5	0	290	152	0.6	21	18.8	W	13	10	9	12	5.4	67
WINNEMUCCA	1311	871.7	1022.4	8.3	- 6.1	0.9	3.6	20.0	18	-22.8	4	0	24	- 4.4	70	5	- 22	2	5	0	46	25	1.6	22	13.0	SW	14	7	4	20	6.8	63
NEW HAMPSHIRE																																
CONCORD	104	999.3	1012.5	- 3.9	-17.8	-10.8	- 4.8	6.1	25	-33.9	19	0	31	-15.0	67	41	- 41	13	9	0	396	610	2.5	29	15.6	NW	3	13	8	10	5.1	66
MT WASHINGTON OBS	1909			-13.9	-23.9	-18.9	- 4.7	2.2	5	-37.8	28+	0	31			208	70	36	21	0	1453	610			55.9Y	W	7	5	4	22	9.0	32
NEW JERSEY																																
ATLANTIC CITY	20	1013.2	1015.6	3.3	- 6.7	- 1.8	- 3.3	12.2	5	-16.1	19	0	28	- 8.9	60	68	- 23	31	13	1	183	76	3.2	29	21.0	29	26	4	10	17	6.9	43
ATLANTIC CITY U	3			3.3	- 3.9	- 0.3	- 2.5	10.6	5	- 9.4	20	0	25			73	- 22	35	13							16.1	W	27+					
NEWARK	2	1013.9	1015.0	1.1	- 6.1	- 2.6	- 2.8	7.8	30	-13.9	19	0	28	- 7.8	70	70	- 15	27	12	0	335	178	3.4	27	14.8	27	27	8	8	15	6.5	
TRENTON U	17			1.1	- 5.6	- 2.2	- 2.8	9.4	5	-13.3	19	0	28			66	- 12	27	11		279	152			17.0	NW	27	7	9	15	6.4	53
NEW MEXICO																																
ALBUQUERQUE	1619	83■.8	1019.9	8.9	- 7.2	0.9	- 0.8	20.6	31	-27.2	7	0	26	- 8.9	55	7	- 4	7	2	0	76	76	1.2	2	15.2	E	3	18	5	8	3.8	87
CLAYTON	1515			10.0	- 7.2	1.2	0.6	24.4	30	-22.8	7+	0	30			3	- 6	3	2		58	51						12	6	13	5.1	
ROSWELL	1101			14.4	- 4.4	5.2	1.9	25.6	30+	-20.0	5	0	23			5	- 8	4	2		51	25			15.6	NW	30					75
NEW YORK																																
ALBANY	84	1003.4	1014.4	- 3.3	-16.7	-10.1	- 4.9	6.1	25	-33.3	19	0	31	-13.3	73	45	- 18	12	11	1	386	406	2.2	27	17.4	W	27	9	10	12	5.6	59
BINGHAMTON	485	952.9	1014.1	- 5.6	-12.8	- 9.1	- 4.6	5.6	5	-22.8	19	0	31	-12.2	77	43	- 21	12	16	0	437	432	3.0	26	26.0	SW	26	0	11	20	7.8	47
BUFFALO	215	987.5	1014.1	- 2.8	- 9.4	- 6.2	- 2.0	9.4	4	-18.3	19+	0	30	-10.6	73	37	- 35	11	21	0	437	152	4.3	27	21.0	SW	26	1	7	23	8.5	36
NEW YORK U	40	1011.2	1014.4	0.6	- 6.1	- 2.8	- 3.4	7.8	23+	-15.6	19	0	29	- 9.4	63	68	- 16	29	9	0	290	152	2.7	28	15.6	W	27					57
NEW YORK KENNEDY	4	1014.2	1015.0	1.1	- 5.6	- 2.3	- 2.2	8.9	5	-13.9	19	0	29	- 8.9	63	59	- 23	23	10	0	295	152	4.3	29	17.9	27	26	8	9	14	6.4	
NEW YORK LA GUARDIA	3	1014.2	1015.3	1.1	- 5.0	- 1.8	- 2.7	8.9	30	-13.9	19	0	27	-10.0	55	58	- 26	23	10	0	264	152	4.1	30	19.7	W	26	5	11	15	6.7	
ROCHESTER	167	993.2	1014.3	- 2.8	-11.1	- 6.9	- 3.2	6.7	4	-20.6	19+	0	31	-11.1	73	68	7	20	18	0	866	356	4.6	25	21.0	SW	26	2	8	21	7.8	45
SYRACUSE	125	998.3	1013.7	- 2.8	-12.2	- 7.5	- 3.1	6.7	4	-22.2	19+	0	31	-12.2	68	48	- 32	10	21	1	770	381	2.8	24	21.0	W	30	6	3	22	7.6	32

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)			Clear 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Elevation (ground)	Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 °C or lower	Average dew point	Average relative humidity	Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s		M.p.s							%
NORTH CAROLINA																																
ASHEVILLE	652	939.4	1017.2	8.3	- 3.3	2.5	- 0.6	18.3	11	-11.1	21	0	24	- 2.2	75	64	- 42	26	10	0	T	102	2.6	34	17.9	32	26	6	10	15	6.7	50
CAPE HATTERAS R	2	1016.9	1017.3	10.0	1.7	5.8	- 2.3	20.0	5	- 5.6	20	0	13	1.7	75	115	16	44	12	2	T	T	2.5	32	15.2	NW	27	3	7	21	7.8	43
CHARLOTTE	224	989.5	1017.6	8.9	- 0.6	4.4	- 1.6	19.4	5+	-10.6	20	0	16	- 2.8	66	86	- 3	20	12	1	T	25	0.9	29	13.0	SW	26	5	5	21	7.6	37
GREENSBORO	273	985.1	1017.6	7.2	- 3.3	1.8	- 2.5	17.2	5	-11.7	29+	0	24	- 3.9	68	46	- 41	11	13	1	10	51	1.6	27	19.2	NW	26	4	8	19	7.4	48
RALEIGH	132	1001.4	1017.6	7.8	- 2.2	2.8	- 2.6	19.4	5	-12.2	29+	0	21	- 3.9	64	83	2	41	9	1	T	T	1.5	29	18.3	27	26	6	6	19	7.4	38
WILMINGTON	9	1016.6	1018.1	12.2	2.2	7.1	- 1.7	22.8	5	- 6.1	20	0	12	1.1	70	126	54	41	14	2	T	T	1.3	29	14.3	W	27	7	3	21	7.3	48
NORTH DAKOTA																																
BISMARCK	502	957.0	1020.8	-11.7	-22.2	-16.9	- 4.7	1.1	20+	-37.8	15	0	31	-20.0	72	20	9	6	11	0	323	203	1.7	32	16.1	N	29	6	7	18	7.2	65
FARGO	273	985.8	1021.0	-12.8	-23.9	-18.2	- 4.4	0.0	20	-34.4	15	0	31	-21.7	72	21	7	10	11	0	384	254	1.6	33	20.1	NW	29	10	5	16	6.0	50
WILLISTON	579	947.5	1020.6	-12.2	-21.7	-16.9	- 3.7	2.2	20	-35.0	15	0	31	-19.4	77	20	6	5	13	0	267	254	2.0	32	14.8	N	29	5	5	21	7.9	60
OHIO																																
AKRON	368	969.9	1016.2	0.0	-10.0	- 5.2	- 3.2	12.8	4	-20.0	31	0	30	-10.0	72	44	- 28	13	16	0	229	102	3.0	25	17.4	26	26	4	3	24	8.1	
CINCINNATI ABBE OB	232			2.2	- 7.2	- 2.4	- 3.3	13.9	14+	-16.1	31+	0	28			58	- 36	29	7		53	25			15.6	NW	26					40
CLEVELAND	237	986.5	1016.8	- 1.7	-10.0	- 5.9	- 3.9	12.2	4	-20.6	31	0	31	-10.6	71	34	- 34	11	16	0	218	102	3.6	24	18.8	W	29+	3	3	25	8.3	42
COLUMBUS	247	986.8	1018.0	0.6	- 8.9	- 4.3	- 3.1	11.7	4	-20.0	18	0	31	- 9.4	69	40	- 40	25	12	0	165	76	2.5	26	20.6	W	29	4	6	21	7.6	30
DAYTON	305	980.4	1018.1	0.6	- 9.4	- 4.5	- 3.2	13.3	4	-18.9	19	0	31	-10.0	67	42	- 39	28	10	1	117	25	2.7	26	25.0	W	26	6	7	18	7.1	44
MANSFIELD	395			- 0.6	-10.0	- 5.3	- 2.7	12.2	4	-20.6	31+	0	31	- 9.4	77	36	- 46	19	9	0	183	76	4.0	24	20.6	24	29	4	6	21	7.6	
TOLEDO	204	990.5	1016.6	- 1.7	-11.1	- 6.5	- 3.3	10.6	4	-20.6	31	0	31	-11.1	70	21	- 38	11	13	0	216	76	3.4	26	21.0	W	29	4	9	18	7.5	36
YOUNGSTOWN	359	971.9	1016.2	- 2.2	-10.6	- 6.3	- 3.7	11.7	4	-21.1	31	0	31	-10.6	74	53	- 27	15	17	1	406	178	3.4	26	17.9	27	26	3	4	24	8.3	
OKLAHOMA																																
OKLAHOMA CITY	392	971.2	1019.0	8.9	- 3.3	2.7	- 0.1	22.2	29	-11.7	6	0	25	- 4.4	65	19	- 14	19	3	1	T	T	1.1	3	15.2	SW	21	13	6	12	5.1	73
TULSA	198	994.6	1019.5	8.3	- 3.3	2.5	0.2	23.3	29	-12.2	6	0	26	- 4.4	64	35	- 9	32	3	1	T	T	0.4	1	13.0	S	20+	14	3	14	5.3	67
OREGON																																
ASTORIA	2	1019.3	1019.9	7.2	2.2	4.8	0.0	14.4	18	- 6.1	12	0	9	3.9	92	424	126	76	24	1	409	305	2.7	19	24.6	17	15+	0	4	27	9.5	
BURNS U	1265	874.7	1021.6	3.9	- 6.1	- 1.2	2.8	14.4	31	-23.9	4	0	25	- 5.0	76	45	4	21	11		135	203	1.6	28				3	8	20	7.6	
EUGENE	109	1008.8	1022.5	7.8	1.7	4.5	0.6	18.3	30	- 7.8	13	0	11	2.2	87	275	114	47	18	0	480	279	2.5	17	14.8	18	15	0	5	26	9.2	
MEACHAM	1234	876.7	1020.2	2.2	- 3.9	- 0.8	2.5	13.9	31	-15.6	4+	0	22			161	54	52	21		800	432			13.9	25	21	1	5	25	8.7	
MEDFORD	396	974.9	1023.8	5.6	- 1.1	2.3	0.4	11.7	18	- 8.3	3	0	21	- 0.6	86	93	14	41	12	0	267	178	0.2	31	10.3	14	14	3	4	24	8.5	
PENDLETON	452	964.8	1019.7	8.3	0.6	4.4	4.3	18.3	31+	-11.1	4+	0	15	- 2.2	64	21	- 15	5	11	0	102	51	2.7	24	17.9	27	21+	5	3	23	7.9	
PORTLAND	6	1020.3	1021.4	7.2	2.2	4.7	1.1	15.6	19+	- 6.7	5	0	9	2.2	85	180	44	31	20	0	175	102	2.9	18	18.8	S	15	1	1	29	9.5	8
SALEM	60	1014.2	1021.7	7.2	0.6	3.9	0.3	17.8	30	- 8.9	5	0	14	1.1	83	165	- 5	26	22	0	282	229	3.6	19	14.3	18	15	0	3	28	9.3	
SEXTON SUMMIT R	1169	886.6	1022.1	5.0	- 1.1	2.0	0.8	18.3	31	-10.6	2	0	19			240	98	71	13		737	864			21.5	21	15	8	3	20	7.1	
PACIFIC AREA																																
GUAM TAGUAC R	110	996.3	1008.9	28.9	22.8	25.6	- 0.1	30.0	1	18.3	14	0	0	22.8	86	133	16	38	24	1	0	0	3.6	8	9.4	S	11+	0	6	25	8.7	34
JOHNSTON	2	1010.2	1010.9	26.7	21.7	24.3	- 0.7	28.3	12	20.0	9	0	0	18.9	72	37	- 61	13	13	0	0	0	2.1	5	11.6	W	27+	13	13	5	4.5	67
KOROR R	29	1004.4	1007.9	31.1	23.9	27.4	0.6	32.2	27+	22.8	17+	3	0	23.9	84	344	46	113	22	0	0	0	2.2	3	12.5	N	8	0	3	28	9.0	59
KWAJALEIN	2	1007.8	1008.4	30.0	25.0	27.6	0.8	32.2	18	22.8	25+	1	0	22.8	76	136	44	48	10	0	0	0	6.0	7	13.4	9	7	4	5	22	8.0	
MAJURO	3	1008.5	1008.6	29.4	25.0	27.0	0.2	30.6	17+	23.3	30+	0	0	22.8	77	209	31	70	16	1	0	0	4.7	6	13.0	E	23+	4	13	14	6.9	63
PAGO PAGO	4	1008.5	1008.5	30.0	23.9	26.7		31.1	27+	21.7	4+	0	0	23.3	82	292		67	24	2	0	0	1.0	6	10.7	NW	22	2	10	19	7.6	50
PONAPE R	37	1002.7	1008.0	31.1	23.3	26.9	0.0	32.2	17+	20.6	15+	6	0	23.3	82	423	141	98	22	1	0	0	2.7	7	8.5	NE	2	2	10	19	7.7	52
TRUK MOEN ISLAND	2	1007.5	1007.9	30.0	25.0	27.5	0.4	31.1	29+	22.2	13	0	0	23.3	80	210	- 4	59	16	1	0	0	3.6	7	9.8	NE	2	1	5	25	8.5	71
WAKE	3	1011.5	1011.6	27.8	22.8	25.3	0.1	28.9	30+	21.1	26+	0	0	20.0	74	45	17	14	11	0	0	0	3.1	7	15.6	NE	1	14	12	5	4.3	78
YAP R	13			30.0	23.9	26.8	- 0.1	31.1	27+	21.1	17+	0	0			265	65	59	24	1	0	0			10.3	NW	11+	0	11	20	8.1	86
PENNSYLVANIA																																
ALLENTOWN	118	1001.0	1015.7	- 1.7	- 9.4	- 5.6	- 3.9	4.4	5	-16.7	19	0	31	- 9.4	75	69	- 11	36	9	0	284	203	3.1	28	17.4	27	30	6	11	14	6.5	
ERIE	223	988.2	1015.8	- 1.7	- 9.4	- 5.6	- 2.9	9.4	4	-20.6	31	0	31	-11.1	68	41	- 26	9	21	0	681	127	3.8	24	17.9	25	29	0	5	26	9.0	
HARRISBURG	103	1003.1	1016.3	0.6	- 7.2	- 3.1	- 2.7	7.2	11	-12.2	31	0	31	-10.0	61	69	- 2	27	11	1	295	279	3.0	29	20.6	W	26	5	9	17	7.1	49
PHILADELPHIA	2	1014.9	1015.9	1.7	- 6.1	- 2.3	- 2.5	11.7	5	-12.2	19	0	30	- 7.8	69	54	- 30	27	10	0	196	127	3.0	27	18.8	W	26	7	7	17	6.9	51
PITTSBURGH	347	970.9	1016.4	- 0.6	- 8.9	- 4.6	- 2.9	12.8	4	-19.4	31	0	28	- 8.9	73	58	- 17	25	20	1	307	102	3.4	27	21.5	27	30	4	3	24	8.2	26
SCRANTON	283	980.0	1015.6	- 2.8	-11.1	- 6.9	- 4.6	6.7	5	-19.4	19	0	31	-11.1	71	39	- 19	14	13	1	386	254	2.5	25	15.2	W	30+	7	6	18	6.9	60
WILLIAMSPORT	160	995.9	1015.8	- 0.6	- 9.4	- 5.0	- 3.2	6.1	12	-20.6	31	0	30	-10.0	67	65	- 3	19	12	1	361	127	2.1	28	15.6	30	27	7	7	17	6.7	
RHODE ISLAND																																
BLOCK ISLAND	34			0.6	- 6.7	- 2.9	- 2.9	11.7	5	-16.1	20	0	30			63	- 35	31	10		89	25						10	7	14	5.7	
PROVIDENCE	16	1011.2	1013.4	0.0	-10.0	- 5.1	- 3.5	10.0	5	-20.6	20	0	30	-11.1	62	51	- 46	16	10	0	279	229	3.6	30	15.6	23	30	14	4	13	5.2	62

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JANUARY 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max 32.2 °C or above	Temperature: No. of days Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days .25 mm or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset) Clear, 0.3	No. of days (sunrise to sunset) Partly cloudy, 4-7	No. of days (sunrise to sunset) Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm	M.p.s.		M.p.s.							
SOUTH CAROLINA																																
CHARLESTON	12	1016.9	1019.0	15.6	4.4	9.9	0.1	25.0	4	- 5.6	20	0	7	2.8	64	138	74	41	9	4	T	0	1.3	27	20.1Y	NW	26	9	3	19	6.5	58
CHARLESTON U	3			13.9	5.6	9.6	- 1.2	22.2	4	- 5.0	20	0	5			119	58	34	9		T	0			13.9	NW	15					
COLUMBIA	65	1010.2	1018.4	13.9	1.1	7.4	- 0.8	23.9	4	-10.0	20	0	12	1.7	69	116	39	34	10	3	T	T	1.6	27	15.6	SE	31+	8	2	21	7.1	42
GRNVLLE SPRTNBRG	292	982.7	1018.2	9.4	- 1.1	4.2	- 2.3	19.4	5	-10.6	28	0	17	- 1.7	70	85	- 24	20	11	1	T	51	1.1	29	13.0	SW	23	7	5	19	7.1	38
SOUTH DAKOTA																																
ABERDEEN	395	970.9	1020.8	- 9.4	-20.6	-14.8	- 3.0	3.3	1	-33.9	15	0	31	-19.4	67	9	- 8	3	7	0	259	127	1.8	33	13.9	36	29	9	6	16	6.6	
HURON	390	970.9	1020.4	- 8.3	-18.9	-13.6	- 2.7	5.0	29	-32.8	15	0	31	-17.2	71	5	- 8	1	8	0	117	127	1.8	31	17.0	NW	29	6	5	20	7.4	57
RAPID CITY	964	902.8	1018.7	- 2.8	-13.3	- 8.1	- 2.5	13.3	29	-23.3	15	0	31	-13.3	67	30	21	19	10	0	335	229	2.1	34	24.1	NW	25	3	4	24	8.3	49
SIOUX FALLS	432	965.1	1019.7	- 8.3	-18.3	-13.2	- 3.8	4.4	29	-29.4	7+	0	31	-16.7	73	3	- 12	2	6	0	48	152	2.1	30	14.3	33	29	8	6	17	6.4	
TENNESSEE																																
BRISTOL	459	962.8	1018.2	7.2	- 2.8	2.0	- 1.5	18.9	4	-12.2	31	0	24	- 3.9	68	97	4	32	14	1	114	76	1.5	28	13.9	28	26	4	6	21	7.5	
CHATTANOOGA	203	993.6	1018.9	8.9	- 1.1	3.8	- 1.6	18.3	30	-10.6	20	0	21	- 1.1	72	132	- 11	43	11	3	15	25	0.9	32	11.6	NW	26	6	5	20	7.6	32
KNOXVILLE	299	982.7	1018.7	8.9	- 1.1	3.6	- 1.6	18.3	13	-10.0	31	0	21	- 2.2	68	128	4	41	13	0	33	76	1.7	30	14.8	SW	30	5	5	21	7.5	45
MEMPHIS	79	1009.5	1020.1	9.4	- 0.6	4.2	- 1.1	22.2	14	-10.6	20	0	18	- 1.7	66	55	-100	25	12	2	T	T	0.4	34	13.4	SE	3	7	8	16	6.8	50
NASHVILLE	180	997.0	1019.5	7.2	- 2.8	2.0	- 2.4	21.1	14	-13.9	20	0	23	- 1.7	76	68	- 72	31	12	1	30	25	1.1	29	13.0	SE	3	4	8	19	7.5	31
OAK RIDGE R	276			7.2	- 2.2	2.7	- 1.7	16.7	14	- 9.4	27+	0	21			124	- 27	54	10		43	76			17.9Y		26					
TEXAS																																
ABILENE	537	955.3	1018.0	16.7	- 0.6	8.0	1.0	25.6	29+	-12.8	5	0	14	- 5.0	45	T	- 22	T	1	0	0	0	0.6	26	16.5	SW	21	15	8	8	4.3	84
AMARILLO	1098	890.3	1016.1	11.7	- 5.0	3.2	0.6	24.4	20	-20.0	5	0	24	- 8.9	49	3	- 14	3	2	0	20	25	1.3	27	15.2	W	13	14	4	13	5.0	74
AUSTIN	182	995.6	1017.9	19.4	5.6	12.6	2.3	32.2	30	- 5.0	5	1	7	3.3	59	1	- 59	1	2	0	0	0	0.6	3	13.4	N	3	8	11	12	5.6	58
BROWNSVILLE	6	1016.6	1017.1	24.4	13.9	19.2	2.8	33.9	31	1.7	7+	2	0	13.3	73	6	- 29	4	5	0	0	0	1.6	16	15.2	N	4	5	11	15	7.0	43
CORPUS CHRISTI	12	1015.9	1017.4	22.2	11.1	16.8	2.7	32.8	30	1.1	7+	1	0	11.1	75	1	- 41	1	2	0	0	0	2.0	12	15.2	S	21+	5	11	15	6.6	52
DALLAS	147	1000.7	1018.5	15.6	2.8	9.2	1.4	25.6	11	- 8.3	5	0	9	- 0.6	55	4	- 55	3	2	0	0	0	0.2	5	12.5	NW	3	12	8	11	4.8	76
DEL RIO	313	980.7	1017.1	21.7	5.6	13.4	2.7	31.7	30	- 6.1	6	0	6	1.7	52	T	- 23	T	0	0	0	0	0.9	6	11.2	34	3	14	7	10	4.8	
EL PASO	1194	883.2	1017.3	16.1	- 2.2	7.0	0.9	23.9	31+	-16.1	8	0	20	- 7.8	40	4	- 7	2	4	0	97	25	0.8	27	20.1	W	3	14	9	8	4.0	86
FORT WORTH	164	998.0	1019.0	15.6	0.6	8.2	0.7	25.0	11	- 8.3	8+	0	14	0.0	64	5	- 47	5	1	0	0	0	0.5	32	11.6	20	3	14	5	12	4.9	
GALVESTON U	2			16.7	11.1	13.9	1.2	22.8	25	- 1.7	7	0	2			5	- 83	2	4		T	0			12.1	N	7					46
HOUSTON INTERCON	29	1014.9	1018.8	20.0	7.2	13.7	3.0	27.8	30+	- 2.2	8+	0	7	8.3	76	9	- 91	6	3	0	T	T	0.6	13	9.8	20	21+	5	13	13	6.7	55
LUBBOCK	992	903.5	1016.6	14.4	- 3.9	5.2	1.2	23.9	30+	-20.0	5	0	25	- 7.8	45	T	- 17	T	0	0	T	T	1.1	28	13.9	28	8	15	3	13	4.9	
MIDLAND	869	917.0	1016.5	17.8	- 0.6	8.6	1.9	26.7	30	-16.7	5	0	12	- 8.3	35	T	- 20	T	0	0	T	T	1.0	25	13.0	4	21	13	13	5	4.0	
PORT ARTHUR	5	1018.3		18.9	9.4	14.2	2.2	25.6	23	- 1.1	20+	0	4	10.0	80	15	- 92	7	7	0	0	T	0.8	14	13.0	SW	21	6	11	14	6.9	42
SAN ANGELO	580	949.9	1017.3	19.4	0.6	10.1	1.8	29.4	22	-10.6	8+	0	10	- 3.9	44	T	- 25	T	0	0	0	0	1.0	23	12.5	18	3	14	12	5	4.1	
SAN ANTONIO	240	989.5	1017.9	21.7	5.6	13.3	2.2	31.7	30	- 3.9	5	0	8	3.3	57	1	- 43	1	2	0	0	0	0.8	1	14.3	N	3	8	12	11	5.6	63
VICTORIA	32	1013.9	1017.8	21.7	8.9	15.4	2.4	31.1	30	- 1.7	5	0	4	9.4	74	1	- 59	T	2	0	0	0	0.9	14	20.1Y	N	3	5	11	15	7.1	
WACO	153	1000.0	1018.2	18.3	3.3	10.9	2.1	31.1	30	- 6.1	5	0	9	1.7	57	1	- 57	1	1	0	T	T	0.4	26	12.1	33	4	13	9	9	4.6	
WICHITA FALLS	303	981.0	1018.5	12.8	- 3.3	4.8	- 1.2	22.8	29	-12.2	5	0	28	- 3.3	65	14	- 15	11	3	2	0	0	0.6	36	14.3	32	3	12	8	11	4.8	
UTAH																																
MILFORD	1533	848.3		6.1	- 8.9	- 1.2	2.9	17.8	18	-31.7	6+	0	29			6	- 8	6	1		119	127						11	9	11	5.3	
SALT LAKE CITY	1286	874.0	1021.9	5.0	- 4.4	0.2	2.9	16.1	31+	-21.1	6	0	22	- 5.0	70	27	- 7	15	9	0	345	178	1.7	16	17.9	S	10	3	5	23	8.1	40
WENDOVER	1291	873.4	1022.2	4.4	- 5.6	- 0.4	2.3	13.3	30	-22.2	6	0	28			6	- 2	4	3		81	51						7	8	16	4.6	
VERMONT																																
BURLINGTON	101	999.7	1012.9	- 6.7	-17.8	-12.4	- 3.6	4.4	25	-28.9	18	0	31	-17.2	64	31	- 18	15	16	0	434	533	1.0	22	13.4	S	22	2	10	19	7.5	57
VIRGINIA																																
LYNCHBURG	279			5.6	- 3.9	0.8	- 2.3	13.9	14	-13.3	20	0	25			44	- 40	23	15		43	203			20.1	W	26	6	11	14	6.4	49
NORFOLK	7	1015.9	1016.8	7.8	0.0	3.7	- 1.4	20.0	5	-10.0	29	0	15	- 2.8	67	102	18	45	12	1	T	T	2.0	29	20.1	SW	26	3	5	23	8.1	33
RICHMOND	50	1010.8	1017.4	6.1	- 3.9	1.0	- 2.7	18.9	5	-13.3	29	0	26	- 5.0	69	47	- 41	26	14	0	84	76	1.0	29	19.2	NW	26	3	11	17	7.7	34
ROANOKE	350	973.6	1016.9	6.1	- 4.4	1.1	- 2.3	20.0	14	-11.7	27	0	26	- 7.2	57	31	- 49	24	9	0	28	229	2.8	30	23.2	NW	26	5	13	13	6.4	
WALLOPS ISLAND	3			5.0	- 3.3	0.6		15.6	26	-10.0	29+	0	25			54		12	13		203	127			28.9Y	WNW	26					
WASHINGTON																																
OLYMPIA	59	1011.5	1019.0	6.7	1.1	3.7	0.3	13.3	18	-10.0	5	0	12	2.8	92	283	84	62	22	0	391	254	3.5	20	17.0	20	16	0	2	29	9.5	
QUILLAYUTE	55	1010.2	1017.5	6.7	1.7	4.2	0.5	11.1	18	- 7.8	3	0	11	2.8	91	593	205	168	28	1	671	457	1.4	20	14.3	SW	15	1	1	29	9.4	17
SEATTLE TACOMA	122	1001.7	1018.4	6.7	2.2	4.3	0.8	12.8	18	- 4.4	5+	0	11	1.1	81	135	- 10	31	21	0	231	127	3.8	19	20.1	SW	16	2	1	28	9.3	15
SPOKANE	718	930.9	1016.6	2.8	- 2.8	- 0.1	3.6	15.0	30	-12.8	5+	0	18	- 3.3	80	54	- 8	21	15	0	155	127	4.3	21	19.2	SW	21	3	3	25	8.5	19
STAMPEDE PASS R	1206	876.7		- 1.1	- 4.4	- 2.7	2.0	7.2	31+	-12.8	13	0	27			592	286	92	24		3635	5461						2	3	26	9.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2°C or above	Temperature: No. of days: Min 0°C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	M	Mb	Mb	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm	Mm			Mm	Mm	M.p.s		M.p.s							
WASHINGTON																																
WALLA WALLA U	289			9.4	2.2	5.7	5.0	20.0	31	- 8.9	5	0	11			40	- 8	14	1		145	76			14.8	N	21	3	5	24	8.4	52
YAKIMA	321	978.7	1018.3	6.7	- 3.3	1.6	4.1	20.0	30	-13.9	4+	0	24	- 3.9	70	38	7	18	6	2	274	254	2.0	27	17.4	30	28+	4	4	23	7.8	
WEST INDIES																																
SAN JUAN P.O.	4	1014.6	1016.9	28.3	22.2	25.3	1.8	31.1	19+	20.0	24+	0	0	19.4	72	55	- 64	13	18	0	0	0	3.3	9	12.1	1	28+	9	16	7	5.1	67
WEST VIRGINIA																																
BECKLEY	763	926.2	1018.3	2.2	- 7.2	- 2.4	- 3.3	16.1	14	-17.8	31	0	26	- 6.1	77	95	- 13	26	21	1	356	254	2.5	26	16.5	28	26	3	10	18	7.8	
CHARLESTON	286	982.7	1018.3	3.3	- 6.1	- 1.4	- 4.0	17.2	14	-15.0	31	0	26	- 5.6	75	60	- 50	18	15	2	225	279	1.7	26	16.5	31	26	2	5	24	8.2	
ELKINS	594	943.1		1.7	-10.0	- 4.3	- 4.6	15.0	14	-22.8	2	0	28			110	18	47	20		640	508						3	5	23	8.4	
HUNTINGTON	252	987.1	1018.2	3.3	- 5.6	- 1.3	- 3.9	16.1	14	-15.0	31	0	26	- 5.6	75	65	- 27	24	15	2	188	127	1.9	25	17.0	27	26	3	8	20	7.9	
PARKERSBURG U	187			2.8	- 6.7	- 1.8	- 3.2	14.4	14	-15.6	31	0	27			62	- 23	24	9		173	51			21.9	W	26					32
WISCONSIN																																
GREEN BAY	208	988.8	1016.0	- 8.3	-19.4	-13.9	- 5.5	0.6	1	-29.4	8	0	31	-16.7	76	41	11	19	11	1	528	483	2.8	28	14.8	NW	25	13	4	14	5.8	51
LA CROSSE	198	992.9	1019.1	- 7.8	-19.4	-13.7	- 5.1	2.2	1	-30.6	8	0	31	-17.2	73	39	8		12	2	673		1.3	27								
MADISON	262	984.1	1017.2	- 6.1	-18.3	-12.4	- 4.4	2.8	25+	-32.2	18	0	31	-16.1	73	38	2	24	9	2	556	533	2.3	27	17.4	NW	29	11	6	14	5.5	54
MILWAUKEE	205	990.5	1017.0	- 6.1	-15.6	-10.7	- 4.4	2.8	25	-24.4	31	0	31	-15.0	70	35	- 12	24	10	2	401	305	3.8	26	16.1	NW	29	10	8	13	5.8	54
WYOMING																																
CASPER	1627	833.4	1016.0	2.2	- 9.4	- 3.7	1.1	15.6	30	-25.0	4	0	28	- 9.4	67	5	- 9	2	5	2	94	102	5.6	24	17.0	30	25+	3	5	23	8.0	
CHEYENNE	1867	808.0	1015.7	3.9	- 6.1	- 1.3	2.4	15.6	20	-26.1	6	0	25	-11.7	49	13	T	8	3	2	218	203	6.9	29	24.1	W	30	6	6	19	7.0	69
LANDER	1696	825.3	1016.1	2.8	- 8.9	- 3.1	4.0	17.2	31	-25.6	5	0	29	-11.1	67	9	- 3	6	4	2	175	152	1.7	26	25.0	SW	25	4	8	19	7.7	60
SHERIDAN	1208	875.7	1018.0	- 1.1	-12.8	- 6.9	- 1.0	15.6	19	-25.0	14+	0	30	-13.9	59	36	20	9	15	6	396	203	2.1	31	17.0	NW	21+	1	2	28	9.0	34

Data from airport unless specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

V Sun below horizon November 19 - 30, inclusive.
X Sun below horizon November 24 - 30, inclusive.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	447	1787	1609
MONTGOMERY	348	1847	1922
MOBILE	261	906	1
MONTGOMERY	325	1373	1
ALASKA			
ANCHORAGE	1934	6791	6429
ANNETTE	1111	4283	3930
BARROW	2624	11964	11028
BARTER ISLAND	2764	11783	10796
BETHEL	2210	7248	7570
BETTLES	2474	10755	
BIG DELTA	2777	9276	
COLD BAY	1323	5369	5389
FAIRBANKS	3002	9437	8794
KOTZEBUE	2624	9946	
HOMER	1711	6440	
JUNEAU	1607	6188	5149
KING SALMON	2094	7295	6552
KOTZEBUE	2444	9295	8846
MCGRATH	2873	9483	8680
NOME	2196	8521	7918
ST. PAUL ISLAND	1288	5862	6006
SHEMYA	1049	5206	5300
SUMMIT	2428	9453	
TALKEETNA	2249	7085	6925
UNALAKLEET	2331	8530	
YAKUTAT	1527	6024	5124
ARIZONA			
FLAGSTAFF	1098	3956	3982
PHOENIX	396	910	1145
TUCSON	445	1049	1133
WINSLOW	992	3031	3024
YUMA	331	743	830
ARKANSAS			
FORT SMITH	795	2104	2074
LITTLE ROCK	737	1890	2073
CALIFORNIA			
BAKERSFIELD	532	1257	1367
BISHOP	719	2573	2537
BLUE CANYON	809	2962	2761
EUREKA	590	2720	2573
FRESNO	593	1556	1561
LONG BEACH	332	794	871
LOS ANGELES	311	729	906
LOS ANGELES U	255	578	708
MT SHASTA R	911	3320	3169
OAKLAND	523	1702	1592
RED BLUFF	584	1683	1531
SACRAMENTO	603	1600	1647
SANDBERG R	690	2371	2181
SAN DIEGO	331	740	749
SAN FRANCISCO	513	1744	1638
SAN FRANCISCO U	443	1853	1648
SANTA MARIA	471	1838	1554
STOCKTON	616	1567	1458
COLORADO			
ALAMOSA	1417	4919	5043
COLORADO SPRINGS	1086	3747	3607
DENVER	1018	3547	3544
GRAND JUNCTION	1152	3473	3451
PUEBLO	926	2894	3201
CONNECTICUT			
BRIDGEPORT	1196	3601	3053
HARTFORD	1410	3617	3516
DELAWARE			
WILMINGTON	1159	2741	2816
DIST.OF COLUMBIA			
WASHINGTON DULLES	1121	2891	
WASHINGTON NATIONAL	1034	2423	2474
FLORIDA			
APALACHICOLA U	337	795	835
DAYTONA BEACH	240	537	546
FORT MYERS	110	204	279
JACKSONVILLE	348	788	738
KEY WEST	25	37	68
LAKELAND U	176	406	416
MIAMI	67	132	139
ORLANDO	165	364	490
PENSACOLA	373	890	967
TALLAHASSEE	423	1156	961
TAMPA	201	461	433
WEST PALM BEACH	113	211	158
GEORGIA			
ATHENS	678	1745	1806
ATLANTA	681	1742	1824
AUGUSTA	601	1601	1512
COLUMBUS	515	1293	1515
MACON	507	1287	1335
ROME	754	1978	2070
SAVANNAH	458	1122	1167

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
IDAHO			
BOISE	958	3354	3469
LEWISTON	885	3224	3278
POCATELLO	1166	4233	4055
ILLINOIS			
CAIRO	967	2345	2360
CHICAGO O HARE	1422	3591	3748
CHICAGO MIDWAY	1413	3544	3482
MOLINE	1556	3875	3712
PEORIA	1418	3714	3509
ROCKFORD	1549	4044	3920
SPRINGFIELD	1275	3246	3217
INDIANA			
EVANSVILLE	1087	2819	2743
FORT WAYNE	1382	3539	3588
INDIANAPOLIS	1281	3282	3293
SOUTH BEND	1387	3668	3612
IOWA			
BURLINGTON	1483	3769	3577
DES MOINES	1521	3835	3937
DUBUQUE	1663	4095	4262
SIOUX CITY	1581	4417	4028
WATERLOO	1776	4748	4262
KANSAS			
CONCORDIA	1333	3596	3224
DODGE CITY	1163	3269	2940
GOODLAND	1084	3494	3517
TOPEKA	1262	3314	3101
WICHITA	1118	3103	2808
KENTUCKY			
COVINGTON	1133	2797	3053
LEXINGTON	1087	2811	2750
LOUISVILLE	1052	2658	2781
LOUISIANA			
ALEXANDRIA	452	1309	1231
BATON ROUGE	392	1065	1
LAKE CHARLES	311	819	951
NEW ORLEANS	329	885	894
SHREVEPORT	459	1231	1373
MAINE			
CARIBOU	1833	5400	5480
PORTLAND	1634	4326	4129
MARYLAND			
BALTIMORE	1080	2557	2738
MASSACHUSETTS			
BLUE HILL OBS R	1371	3710	3464
BOSTON	1269	3362	3059
WORCESTER	1461	4116	3854
MICHIGAN			
ALPENA	1641	4489	4610
DETROIT	1338	3503	3454
DETROIT METRO	1368	3678	3620
FLINT	1400	3929	3806
GRAND RAPIDS	1441	4026	3885
HOUGHTON LAKE	1556	4551	4574
LANSING	1416	4020	3835
MARQUETTE U	1563	4467	4522
MUSKEGON	1387	3853	3819
SAULT STE MARIE	1712	5133	4903
MINNESOTA			
DULUTH	1996	5765	5599
INTERNATIONAL FALLS	2239	6424	6126
MINNEAPOLIS	1811	4887	4846
ROCHESTER	1832	4961	4755
ST CLOUD	1927	5363	5116
MISSISSIPPI			
JACKSON	507	1347	1398
MERIDIAN	521	1445	1481
MISSOURI			
COLUMBIA REGIONAL	1164	2988	2999
KANSAS CITY	1151	2818	2808
ST JOSEPH	1254	3392	3270
ST LOUIS	1159	2968	2900
SPRINGFIELD	1035	2863	2718
MONTANA			
BILLINGS	1429	4520	4022
GLASGOW	1856	5624	5237
GREAT FALLS	1509	4802	4321
HAVRE	1821	5788	4998
HELENA	1422	5067	4690
KALISPELL	1338	5026	4785
MILES CITY	1664	5031	4460
MISSOULA	1195	4627	4804

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
NEBRASKA			
GRAND ISLAND	1392	3981	3815
LINCOLN U	1393	3740	3411
NORFOLK	1512	4391	4038
NORTH PLATTE	1320	4213	3891
OMAHA	1458	3873	3670
SCOTTSBLUFF	1177	4200	3832
VALENTINE	1494	4573	4206
NEVADA			
ELKO	1068	4268	4264
ELY	1259	4585	4328
LAS VEGAS	630	1667	1770
RENO	985	3425	3724
WINNEMUCCA	962	3658	3919
NEW HAMPSHIRE			
CONCORD	1622	4402	4158
MT WASHINGTON OBS	2079	7680	7709
NEW JERSEY			
ATLANTIC CITY	1117	2781	2655
ATLANTIC CITY U	1029	2582	2502
NEWARK	1160	2769	2856
TRENTON U	1137	2788	2810
NEW MEXICO			
ALBUQUERQUE	968	2889	2681
CLAYTON	950	3115	2966
ROSWELL	729	2235	2439
NEW YORK			
ALBANY	1580	4116	3879
BINGHAMTON	1525	4213	4030
BUFFALO	1361	3650	3826
NEW YORK U	1173	2840	2691
NEW YORK KENNEDY	1144	2796	2810
NEW YORK LA GUARDIA	1117	2685	2638
ROCHESTER	1405	3811	3687
SYRACUSE	1437	3923	3749
NORTH CAROLINA			
ASHEVILLE	875	2345	2670
CAPE HATTERAS R	690	1554	1452
CHARLOTTE	770	1971	1950
GREENSBORO	916	2362	2300
RALEIGH	863	2183	2076
WILMINGTON	620	1429	1432
NORTH DAKOTA			
BISMARCK	1967	5684	5115
FARGO	2035	5720	5323
WILLISTON	1964	5859	5329
OHIO			
AKRON	1309	3342	3420
CINCINNATI OBS	1150	2869	2805
CLEVELAND	1344	3488	3397
COLUMBUS	1256	3239	3278
DAYTON	1265	3188	3232
MANSFIELD	1316	3330	3589
TOLEDO	1379	3727	3669
YOUNGSTOWN	1367	3647	3601
OKLAHOMA			
OKLAHOMA CITY	866	2348	2311
TULSA	878	2382	2378
OREGON			
ASTORIA	746	3024	2854
BURNS U	1077	4236	4000
EUGENE	767	2643	2670
MEACHAM	1062	4466	4294
MEDFORD	890	2689	2917
PENDLETON	767	3202	3073
PORTLAND	757	2585	2659
SALEM	796	2939	2662
SEXTON SUMMIT R	906	3485	3274
PENNSYLVANIA			
ALLENTOWN	1326	3359	3297
ERIE	1324	3638	3464
HARRISBURG	1192	2939	3046
PHILADELPHIA	1145	2763	2950
PITTSBURGH	1277	3361	3397
PITTSBURGH U	1200	2994	3076
SCRANTON	1404	3748	3607
WILLIAMSPORT	1297	3205	3407
RHODE ISLAND			
BLOCK ISLAND	1180	3025	2917
PROVIDENCE	1298	3468	3277
SOUTH CAROLINA			
CHARLESTON	465	1234	1299
CHARLESTON U	484	1072	1112
COLUMBIA	602	1575	1576
GRNVLLE SPRTNBRG	782	2012	1878
SOUTH DAKOTA			
ABERDEEN	1846	5178	4941
HURON	1777	4982	4768
RAPID CITY	1463	4602	4082
SIOUX FALLS	1754	5057	4551

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
TENNESSEE			
BRISTOL	903	2351	2516
CHATTANOOGA	807	2110	2049
KNOXVILLE	813	2072	2147
MEMPHIS	781	1964	2022
NASHVILLE	902	2267	2193
OAK RIDGE R	870	2248	2312
TEXAS			
ABILENE	569	1556	1693
AMARILLO	837	2448	2467
AUSTIN	328	917	1112
BROWNSVILLE	170	268	420
CORPUS CHRISTI	274	490	631
DALLAS	505	1264	1508
DEL RIO	278	828	1081
EL PASO	685	1751	1861
FORT WORTH	564	1361	1539
GALVESTON	250	572	586
HOUSTON	298	864	1075
LUBBOCK	723	2151	2249
MIDLAND	668	1520	1711
PORT ARTHUR	269	678	940
SAN ANGELO	653	1251	1489
SAN ANTONIO	282	893	1126
VICTORIA	228	610	770
WACO	411	1076	1305
WICHITA FALLS	749	1977	1881
UTAH			
MILFORD	1088	3704	3802
SALT LAKE CITY	1002	3540	3603
WENDOVER	1039	3728	3511
VERMONT			
BURLINGTON	1710	4714	4592
VIRGINIA			
LYNCHBURG	968	2489	2485
NORFOLK	812	1866	1980
RICHMOND	960	2297	2344
ROANOKE	959	2501	2488
WALLOPS ISLAND	983	2305	
WASHINGTON			
OLYMPIA	810	3345	2993
QUILLAYUTE	783	3388	3158
SEATTLE TACOMA	778	2849	2882
SPOKANE	1022	3985	3887
STAMPEDE PASS R	1168	5313	5131
WALLA WALLA	699	2767	2907
YAKIMA	932	3601	3636
WEST VIRGINIA			
BECKLEY	1149	3070	3131
CHARLESTON	1097	2766	2653
ELKINS	1258	3446	3298
HUNTINGTON	1089	2665	2641
PARKERSBURG U	1112	2736	2777
WISCONSIN			
GREEN BAY	1797	4778	4487
LA CROSSE	1781	4664	4388
MADISON	1718	4554	4446
MILWAUKEE	1615	4239	4239
WYOMING			
CASPER	1222	4397	4139
CHEYENNE	1087	4111	4056
LANDER	1187	4594	4520
SHERIDAN	1407	4744	4317

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

JANUARY 1971

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	1	1	
HUNTSVILLE	1	1	
MOBILE	18	18	
MONTGOMERY	4	4	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	0	0	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	0	0	
BIG DELTA	0	0	
COLD BAY	0	0	
FAIRBANKS	0	0	
GULKANA	0	0	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	0	
PHOENIX	7	7	
TUCSON	6	6	
WINSLOW	0	0	
YUMA	22	22	
ARKANSAS			
FORT SMITH	0	0	
LITTLE ROCK	0	0	
CALIFORNIA			
BAKERSFIELD	0	0	
BISHOP	0	0	
BLUE CANYON	0	0	
EUREKA U	0	0	
FRESNO	0	0	
LONG BEACH	12	12	
LOS ANGELES	23	23	
LOS ANGELES U	71	71	
MT SHASTA R	0	0	
OAKLAND	0	0	
RED BLUFF	0	0	
SACRAMENTO	0	0	
SANDBERG R	0	0	
SAN DIEGO	6	6	
SAN FRANCISCO	0	0	
SAN FRANCISCO U	0	0	
SANTA MARIA	7	7	
STOCKTON	0	0	
COLORADO			
ALAMOSA	0	0	
COLORADO SPRINGS	0	0	
DENVER	0	0	
GRAND JUNCTION	0	0	
PUEBLO	0	0	
CONNECTICUT			
BRIDGEPORT	0	0	
HARTFORD	0	0	
DELAWARE			
WILMINGTON	0	0	
DIST.OF COLUMBIA			
WASHINGTON DULLES	0	0	
WASHINGTON NATIONAL	0	0	
FLORIDA			
APALACHICOLA U	0	0	
DAYTONA BEACH	39	39	
FORT MYERS	128	128	
JACKSONVILLE	15	15	
KEY WEST	204	204	
LAKELAND U	61	61	
MIAMI	176	176	
ORLANDO	77	77	
PENSACOLA	14	14	
TALLAHASSEE	3	3	
TAMPA	54	54	
WEST PALM BEACH	121	121	
GEORGIA			
ATHENS	0	0	
ATLANTA	0	0	
AUGUSTA	0	0	
COLUMBUS	0	0	
MACON	0	0	
ROME	0	0	
SAVANNAH	1	1	
HAWAII			
HILO	203	203	
HONOLULU	216	216	
KAHULUI	157	157	
LIHUE	156	156	
IDAHO			
BOISE	0	0	
LEWISTON	0	0	
POCATELLO	0	0	
ILLINOIS			
CAIRO U	0	0	
CHICAGO O HARE	0	0	
CHICAGO MIDWAY	0	0	
MOLINE	0	0	
PEORIA	0	0	
ROCKFORD	0	0	
SPRINGFIELD	0	0	
INDIANA			
EVANSVILLE	0	0	
FORT WAYNE	0	0	
INDIANAPOLIS	0	0	
SOUTH BEND	0	0	
IOWA			
BURLINGTON	0	0	
DES MOINES	0	0	
DUBUQUE	0	0	
SIOUX CITY	0	0	
WATERLOO	0	0	
KANSAS			
CONCORDIA	0	0	
DODGE CITY	0	0	
GOODLAND	0	0	
TOPEKA	0	0	
WICHITA	0	0	
KENTUCKY			
COVINGTON	0	0	
LEXINGTON	0	0	
LOUISVILLE	0	0	
LOUISIANA			
ALEXANDRIA	17	17	
BATON ROUGE	21	21	
LAKE CHARLES	25	25	
NEW ORLEANS	29	29	
SHREVEPORT	22	22	
MAINE			
CARIBOU	0	0	
PORTLAND	0	0	
MARYLAND			
BALTIMORE	0	0	
MASSACHUSETTS			
BLUE HILL OBS R	0	0	
BOSTON	0	0	
WORCESTER	0	0	
MICHIGAN			
ALPENA	0	0	
DETROIT	0	0	
DETROIT METRO	0	0	
FLINT	0	0	
GRAND RAPIDS	0	0	
HOUGHTON LAKE	0	0	
LANSING	0	0	
MARQUETTE U	0	0	
MUSKEGON	0	0	
SAULT STE MARIE	0	0	
MINNESOTA			
DULUTH	0	0	
INTERNATIONAL FALLS	0	0	
MINNEAPOLIS	0	0	
ROCHESTER	0	0	
ST CLOUD	0	0	
MISSISSIPPI			
JACKSON	9	9	
MERIDIAN	5	5	
MISSOURI			
COLUMBIA REGIONAL	2	0	
KANSAS CITY	0	0	
ST JOSEPH	0	0	
ST LOUIS	0	0	
SPRINGFIELD	0	0	
MONTANA			
BILLINGS	0	0	
GLASGOW	0	0	
GREAT FALLS	0	0	
HAVRE	0	0	
HELENA	0	0	
KALISPELL	0	0	
MILES CITY	0	0	
MISSOULA	0	0	
NEBRASKA			
GRAND ISLAND	0	0	
LINCOLN U	0	0	
NORFOLK	0	0	
NORTH PLATTE	0	0	
OMAHA	0	0	
SCOTTSBLUFF	0	0	
VALENTINE	0	0	
NEVADA			
ELKO	0	0	
ELY	0	0	
LAS VEGAS	0	0	
RENO	0	0	
WINNEMUCCA	0	0	
NEW HAMPSHIRE			
CONCORD	0	0	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	0	0	
ATLANTIC CITY U	0	0	
NEWARK	0	0	
TRENTON U	0	0	
NEW MEXICO			
ALBUQUERQUE	0	0	
CLAYTON	0	0	
ROSWELL	0	0	
NEW YORK			
ALBANY	0	0	
BINGHAMTON	0	0	
BUFFALO	0	0	
NEW YORK U	0	0	
NEW YORK KENNEDY	0	0	
NEW YORK LA GUARDIA	0	0	
ROCHESTER	0	0	
SYRACUSE	0	0	
NORTH CAROLINA			
ASHEVILLE	0	0	
CAPE HATTERAS R	0	0	
CHARLOTTE	0	0	
GREENSBORO	0	0	
RALEIGH	0	0	
WILMINGTON	0	0	
NORTH DAKOTA			
BISMARCK	0	0	
FARGO	0	0	
WILLISTON	0	0	
OHIO			
AKRON	0	0	
CINCINNATI ABBE OB	0	0	
CLEVELAND	0	0	
COLUMBUS	0	0	
DAYTON	0	0	
MANSFIELD	0	0	
TOLEDO	0	0	
YOUNGSTOWN	0	0	
OKLAHOMA			
OKLAHOMA CITY	0	0	
TULSA	0	0	
OREGON			
ASTORIA	0	0	
BURNS U	0	0	
EUGENE	0	0	
MEACHAM	0	0	
MEDFORD	0	0	
PENDLETON	0	0	
PORTLAND	0	0	
SALEM	0	0	
SEXTON SUMMIT R	0	0	
PACIFIC AREA			
GUAM TAGUAC R	411	411	
JOHNSTON	342	342	
KOROR R	514	514	
KWAJALEIN	519	519	
MAJURO	494	494	
PAGO PAGO	474	474	
PONAPE R	491	491	
TRUK MOEN ISLAND	517	517	
WAKE	394	394	
YAP R	480	480	
PENNSYLVANIA			
ALLENTOWN	0	0	
ERIE	0	0	
HARRISBURG	0	0	
PHILADELPHIA	0	0	
PITTSBURGH	0	0	
SCRANTON	0	0	
WILLIAMSPORT	0	0	
RHODE ISLAND			
BLOCK ISLAND	0	0	
PROVIDENCE	0	0	
SOUTH CAROLINA			
CHARLESTON	2	2	
CHARLESTON U	0	0	
COLUMBIA	0	0	
GRNVLLE SPRTNBRG	0	0	
SOUTH DAKOTA			
ABERDEEN	0	0	
HURON	0	0	
RAPID CITY	0	0	
SIOUX FALLS	0	0	
TENNESSEE			
BRISTOL	0	0	
CHATTANOOGA	0	0	
KNOXVILLE	0	0	
MEMPHIS	0	0	
NASHVILLE	0	0	
OAK RIDGE R	0	0	
TEXAS			
ABILENE	0	0	
AMARILLO	0	0	
AUSTIN	14	14	
BROWNSVILLE	185	185	
CORPUS CHRISTI	98	98	
DALLAS	0	0	
DEL RIO	10	10	
EL PASO	0	0	
FORT WORTH	0	0	
GALVESTON U	8	8	
HOUSTON INTERCON	48	48	
LUBBOCK	0	0	
MIDLAND	0	0	
PORT ARTHUR	42	42	
SAN ANGELO	0	0	
SAN ANTONIO	14	14	
VICTORIA	70	70	
WACO	6	6	
WICHITA FALLS	0	0	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	0	0	
WENDOVER	0	0	
VERMONT			
BURLINGTON	0	0	
VIRGINIA			
LYNCHBURG	0	0	
NORFOLK	0	0	
RICHMOND	0	0	
ROANOKE	0	0	
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	0	0	
QUILLAYUTE	0	0	
SEATTLE TACOMA	0	0	
SPOKANE	0	0	
STAMPEDE PASS R	0	0	
WALLA WALLA U	0	0	
YAKIMA	0	0	
WEST INDIES			
SAN JUAN P.R.	398	398	
WEST VIRGINIA			
BECKLEY	0	0	
CHARLESTON	0	0	
ELKINS	0	0	
HUNTINGTON	0	0	
PARKERSBURG U	0	0	
WISCONSIN			
GREEN BAY	0	0	
LA CROSSE	0	0	
MADISON	0	0	
MILWAUKEE	0	0	
WYOMING			
CASPER	0	0	
CHEYENNE	0	0	
LANDER	0	0	
SHERIDAN	0	0	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								† DAMAGE				† DAMAGE				† DAMAGE			† DAMAGE			† DAMAGE					† DAMAGE		
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	2	1	0	0	4					0	0	4	2	0	0	4	0												
Alaska										0	?	6	0																
Arizona *																													
Arkansas	1	1	0	10	4									0	0	4	0												
California *																													
Colorado												4																	
Connecticut *																													
Delaware										0	4	5	0																
Florida	1	1	0	0	2					0	0	3	0																
Georgia	12	4	1	13	5	0	0	3	0	0	3	5	0									0	0	4	0				
Hawaii	1	1	0	4	6					0	3	5	4													0	0	6	4
Idaho										0	0	4	0					0	1	4	0								
Illinois N																													
Indiana										0	0	4	0					0	0	4	0								
Iowa																		0	0	6	0								
Kansas																		2	0	0	4	0	0	4	0				
Kentucky										0	2	?	0	0	2	4	0												
Louisiana																		0	0	4	0	0	0	4	0				
Maine										0	0	3	0									0	0	3	0				
Maryland										0	4	5	0									9	300+	5	0				
Massachusetts										0	0	4	0																
Michigan										0	1	5	0					2	?	4	0	0	32+	0	0				
Minnesota																		2	0	5	0								
Mississippi						0	0	?	0	0	0	4	0					0	0	?	0	0	0	?	0	0	0	?	0
Missouri																		1	10	4	0	2	250	5	0				
Montana																		1	0	0	0								
Nebraska																		1	?	5	0								
Nevada										0	0	?	0					0	0	?	0								
New Hampshire *																													
New Jersey																				4									
New Mexico																										0	0	6	C
New York												5						1											
North Carolina	1	1	0	0	5					0	0	5	0	0	0	4	0					1	0	5	0	0	0	4	0
North Dakota *																													
Ohio										0	79	6										3	270	5					
Oklahoma										0	1	4	0									2	0	?	0				
Oregon										0	0	6	6					0	1	5	0					0	0	6	0
Pacific Area *																													
Pennsylvania										0	17	6	5	0	0	4	0	2	20	5	5								
Puerto Rico *																													
Rhode Island *																													
South Carolina						0	0	2	0	0	4	5	0									0	0	4	4				
South Dakota *																													
Tennessee						0	0	?	0	0	2	5	0																
Texas																		0	0	5	0								
Utah																						0	?	5	0	0	0	5	0
Vermont *																													
U. S. Virgin Is. *																													
Virginia										0	23	5	0																
Washington												5														5	6		
West Virginia										0	0	5	0	0	0	3	0												
Wisconsin														0	0	5	0	5	15	6	0								
Wyoming *																													

° Includes crop damage
C Crop damage
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm
Freezing drizzle and freezing rain, commonly known as glaze
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
JANUARY 1971

Elmer R. Nelson, Office of Hydrology

Major flooding occurred in western Oregon during January. The most severe flooding occurred on the Coquille River which remained above flood stage for 5-days. The Geological Survey reported that the peak discharges of some streams were the highest for January in more than 60 years. In southwestern Washington, the Chehalis River at Grand Mound was the 3d highest since 1928.

Extreme low temperatures caused several ice jams and minor flooding on the Kenai River near Cooper Landing, Alaska, on Jan. 11-15. The accumulation of snow in the Fairbanks, Alaska, area at the end of the month totalled 39 inches with water equivalent of nearly 7 inches.

HUDSON BAY DRAINAGE

Red River of the North Basin.--River stages in the Red River of the North Basin were near seasonal normal during the month of January. All rivers were ice covered, except near sewer or industrial discharge outlets. Most smaller tributaries were frozen solid.

The snow depth over the Red River of the North Basin averaged 14 inches and 11 inches over the Souris Basin. The heaviest snow cover was in the upper reaches of the Red Lake River where average snow depths ranged from 20 to 28 inches. Average snow depths in the Pembina Basin ranged from 12 to 20 inches. The water equivalent of the snow pack in the Souris Basin averaged 1.5 inches at the end of the month. The soil was frozen to depths greater than 36 inches over most sections of the basin.

ATLANTIC SLOPE DRAINAGE

Heavy rainfall (1 to 2 inches) during the afternoon and evening of the 4th caused flooding on the Neuse River at Smithfield, N. C., and on the lower Cape Fear on the 6-9th. Rainfall amounts in the headwater areas ranged locally up to 2.5 inches. No damage resulted from the overflows.

There were two rises on the Lumber River at Lumberton, N. C. The first rise occurred on the 16th-22d and the second on the 30th which continued into February. Moderate lowland flooding occurred on the Pee Dee River from below Blewett Lake to Cheraw, S. C. Flood stage was reached at Peedee, S. C., on the 13th. The overflows were due to rainfall that averaged 1 inch on the 8-9th and on the 25-26th. Flood damages along the Pee Dee River were estimated at $4,000 and were due to the cost of moving logging machinery from the lowlands. Flood damages along the Lumber River were minor.

Heavy rainfall on the 24-26th in the Savannah Basin caused moderate flooding on Stevens Creek at Modoc, S. C., on the 26-27th. Slight to moderate damage resulted from the overflow.

EAST GULF OF MEXICO DRAINAGE

The Apalachicola River at Blountstown, Fla., was out of its banks on the 6-15th. The crest on the 8th was almost 3 ft. above flood stage. Wooded and unpopulated areas not susceptible to much damage were flooded.

Moderate rains in the headwaters of the Tombigbee Basin caused minor flooding at Fulton and Aberdeen, Miss., between the 24th and 27th. No damage resulted.

Moderate to heavy rainfall during the last few days of December produced rising stages on the Pearl River during the first week of January. Discharges from Ross Barnett Reservoir raised the Pearl River to slightly above flood stage at Jackson, Miss., on the 3d-5th. Flooding was confined to the immediate vicinity of the river and was of little consequence. Local rains caused flooding at Bogalusa, La., during the first 10 days of the month and again during the last few days of January. Flooding was confined to low-lying farm and timber lands adjacent to the river and was of little consequence.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Precipitation during January in Minnesota and Wisconsin was above normal except in the Minnesota River Basin above Mankato, Minn. In most areas, the precipitation was twice the amount received during December. The water equivalent of the snow that fell during January ranged from 1 inch in west-central Minnesota to 2.5 to 3 inches over central and eastern Wisconsin. The snowfall during January on the south shore of Lake Superior ranged in depth from 32 inches to over 50 inches in the Gurney-Hurley, Wisconsin, area.

Locally heavy rains of 1 to 1.5 inches on the 3d-4th caused a slight overflow of the Salt River at New London, Mo. No significant damage was reported.

Missouri Basin.--Some minor flooding occurred along lowland areas on the Gallatin River in Montana on the 12-15th due to ice jams. The ice jammed for about 30 miles between Toston and Logan, Mont., causing minor damage.

Heavy rain or rain and snow mixed on the 3d and 4th caused 3 to 8 ft. of flooding on several streams in northwestern Missouri. Precipitation amounts ranged from 1.5 to slightly over 2 inches. Heavy snow fell just north of the Kansas City, Mo., area eastward into central Missouri and to the north of this line. Snowfall measured from 4 to 8 inches over most of northwest and north-central Missouri and from 10 to 16 inches over extreme northeast Kansas, southeast Nebraska and southwest and south-central Iowa. No significant damage resulted from the flooding.

Heavy precipitation (1.5 to 2.5 inches) on the Marais des Cygnes and 2 to 3 inches on the Marmaton on the 2d-3d produced substantial rises on these streams. One to 3 foot overflows occurred on Pottawatomie Creek and on the Marais des Cygnes from Osawatomie, Kans., downstream from the 4th to the 7th. The flooding was brief and caused no crop losses. Livestock in low lying pastures were either moved or water was not deep enough to cause losses.

Some minor flooding occurred along the upper Missouri River in Montana on the 12-15th due to ice jams. In the reach at and below Sioux City, Iowa, ice action caused a rise of over 10 ft. at Sioux City. The high water and ice caused some damage to low docks and boats. Ice bridges remained during the entire month in the Leavenworth, Kans. - St. Joseph, Mo., areas and northward. Occasional ice bridges occurred from around the Kansas City area to several miles downstream.

Ohio Basin.--Heavy snowfall occurred over most of the Monongahela Basin on Dec. 31 to Jan. 1. Totals of 12 inches or more covered the Cheat, Tygart and upper Youghiogheny and West Fork Rivers. The largest amounts were 26 inches at Thomas and Alpena, W. Va., in the headwaters of the Cheat River. Heavy rains on the 4th and 5th melted most of the snow cover except in the Cheat Basin where 6 inches of snow remained. Minor flooding occurred on the West Fork at Weston and Clarksburg, W. Va., and on the Tygart River at Philippi, W. Va. The lower Mononghela River in Pennsyl-

vania exceeded flood stage by 1 foot or less. This was about the same level as in December. No significant damage resulted from the overflows.

Heavy rain on the 4th and 5th caused flooding in the headwater areas of the Little Kanawha River and Twelvepole Creek in West Virginia. Some overflow occurred on Point Creek near Paintsville, W. Va. Some highways were cut off by the high water.

Heavy rains on the 2d-3d and on the 13-14th caused up to 2 ft. of flooding on the Muscatatuck River at Austin, Ind. No damage resulted from the overflows on the 5th and 14-16th.

The main stem of the Ohio River at Fords Ferry, Ky., continued in flood from Dec. 27 to Jan. 1.

White Basin.--Heavy rain on the 13-14th caused the Black River at Black Rock, Ark., to rise rapidly above flood stage on the 14th. It crested on the 15th 3.7 ft. above flood stage and receded within its banks on the 19th.

The Cache River at Patterson, Ark., continued above flood stage from Dec. 19 through January.

The White River rose to flood stage at Clarendon, Ark., on Dec. 31 to Jan. 2 and again on Jan. 14-15.

No damage resulted from the flooding in the White Basin during January.

Arkansas Basin.--Minor lowland flooding occurred on the Neosho River at Commerce, Okla., on the 5-6th. This overflow was due to over 2 inches of rain on the 3d.

Lower Mississippi Basin.--Locally heavy rains at mid-month resulted in slight lowland flooding on the St. Francis River in the St. Francis, Ark., reach on the 16th - 20th. No damage resulted from this rise.

PACIFIC SLOPE DRAINAGE

Sacramento Basin.--One major storm period, with precipitation beginning about the 12th and continuing through the 18th, produced a major rise on the upper Sacramento River on the 16-17th. Flood stage was exceeded at Tehama Bridge and Vina, Calif., just above Hamilton City, and warning stages were exceeded from Ord Ferry to Fremont, Calif. Overflow into the Sutter Bypass began on the 17th and continued through January. Overflow into the Yolo Bypass began on the 19th and continued through the 29th with flooding of the lower tracts. Runoff in the Feather-Yuba River System was effectively controlled by the Oroville and New Bullards Bar reservoir systems.

Central Coastal Basins.--Heavy precipitation on the 10-18th, totalling 15.5 inches in the Smith Basin and 10.4 inches in the Eel Basin, caused overflow in these basins on the 16-18th. The Eel River at Fernbridge, Calif., rose steadily to 2 ft. above flood stage on the 17th. There were two periods of overflow on the Smith River near Crescent City, Calif., and Fort Dick River, Calif. The first rise occurred on the 16-17th and the second on the 17-18th. The major effect of the overflows was the temporary dislocation of persons and livestock and the deposit of silt and debris over the inundated areas. Moderate to heavy damage occurred to roads and highways from mud slides due to the heavy precipitation.

Coastal streams in southwestern Oregon rose out of their banks during the period from the 15th to the 20th. Snowfall from the 11th to the 14th blanketed all of southwestern Oregon with 6 to 12 inches of snow in the valleys and 2 to 3 ft. in the foothills. A warm rain beginning on the 15th was reported up to the 10,000 foot level by the evening of the 16th. The warm rains decreased the snowpack at Crater Lake Park Headquarters by 20 inches on the 17th and 18th. The resulting runoff triggered general flooding west of the Cascade Mountains. The most severe flooding occurred on the Coquille River, which remained above flood stage for 5 days. The crest at Myrtle Point, Oreg., on the 17th was 9.5 ft. above flood stage. Flood waters affected the Rogue and Umpqua Rivers on the 17-18th with crests 5 to 10 ft. above flood stage. Damage due to the high water was confined mostly to siltation and debris.

Columbia Basin.--Runoff over the Snake River Basin during January ranged from higher than average to record high over most of the basin. Warm rains near mid-month caused considerable snowmelt along small streams at low elevations in the southwest valleys and in the central plains area of southern Idaho. Rain and snowmelt in the central plains area of south Idaho accumulated as it flowed over frozen surface ground. This resulted in flooding of farmlands, in the lower areas, and the filling of many residential basements. Damage was primarily due to ice jamming and plugging drainage facilities that soon became inadequate, causing the runoff to pond. Extreme runoff occurred over the lower drainage areas of the Owyhee River above the reservoir. The Portneuf River at Pocatello, Idaho, was above flood stage on the 8-16th due to ice plugging the channel at and for a mile below the gaging station. The Weiser River near Weiser, Idaho, was out of its banks on the 15-16th due to ice blocking the channel. Earlier flooding in the vicinity of Montour, Idaho, along the Payette River below the Horseshoe Bend gaging station was due to an ice jam in the channel. The main damage from the flooding occurred in this area. The total damages in Washington and Cassia Counties, Idaho, were estimated at $235,000.

The flooding in the Willamette Basin streams during the first few days of January was due to a series of storms during the last 4 days of December. All streams crested on Dec. 31 except the Tualatin at Farmington, Oreg., which crested on Jan. 2 nearly 2 ft. above flood stage. All streams continued falling until the weekend of Jan. 8-10 when a series of storms brought 0.5 to 0.75 inches of precipitation to Willamette valley stations. In the local Portland area, Johnson Creek crested 0.5 ft. over bankfull stage late on the 8th with a second peak nearly as high on the morning of the 10th. Primarily because of the low freezing levels, other streams in the Willamette Basin responded only slightly.

During the period from the 11th to the 14th, an outbreak of windy, snowy weather brought 6 to 12 inch snowfall amounts in the Willamette Valley. A flow of warm, moist air from low latitudes beginning on the 15th caused the freezing levels to rise to the 8 to 10 thousand foot levels both west and east of the Cascade mountains. Rainfall totalled about 6 inches at valley stations during the period from the 15th to the 20th. This rain, coupled with warm weather, melted the snow cover on the valley floor up to elevations near 3,500 feet. The Willamette tributaries which head in the Coast Range, rose to above flood stage on the 15-17th. Crests ranged up to 5 ft. above flood stage on the South Yamhill at Whiteson, Oreg., on the 16th. Local creeks in the Portland, Oreg., area had their highest crests from the rainfall-snowmelt runoff on the 15-16th. The more sluggish drainages, the Tualatin and Pudding Rivers, reached their crests on the 19-20th. The main stem of the Willamette rose above flood stage at Harrisburg and Oregon City, Oreg., on the 18-19th. The crests ranged up to 3.6 ft. above flood stage at Oregon City on the 19th.

Coast Range Willamette tributaries had secondary

rises and crests over flood stage during the last week of the month. The crests were lower than those observed earlier as the heavier precipitation occurred along the coastal sections of extreme northwest Oregon. The Nehalem and Wilson River drainages received close to 8 inches of rainfall. The Nehalem River at Foss, Oreg., crested 6.4 ft. above flood stage.

The Corps of Engineers estimated damages in the Willamette, lower Columbia and Oregon Coastal Basins at about $1.6 million. Damages from a flash flood on Pataha Creek at Pomeroy, Wash., on the 9th were estimated at nearly $0.5 million.

Northern Coastal Basins.--Minor flooding occurred in the Chehalis Basin on Dec. 31 to Jan. 1, moderate flooding on the 16-20th and severe flooding on the 25-28th. The first overflow was due to heavy rain; the second and 3d overflows to rain and snowmelt. The 3d flood was the most severe since 1937. The peak flow of 40,100 c.f.s. at the Grand Mound, Wash., USGS gage was the 3d highest on record. It flooded considerable farmland, numerous roads, many homes and a number of motels and business establishments. Preliminary damage estimates by the Corps of Engineers were placed at $1 million.

The Snohomish River exceeded flood stage 3 times during the month. The first flood on the 19-20th was the highest with a crest 3.2 ft. above flood stage. The causes of the overflows were heavy rain and snowmelt. Only minor damage resulted as the dikes held.

Serious flooding occurred on the Nooksack River at Deming, Wash., on the 30th-31st. This overflow was due to warm rains of 2 to 4 inches in 24 hours plus rapid snowmelt. Heavy antecedent snowfall had built up a deep snowpack over the upper basin. Temperatures rose to the upper 40's in the upper reaches and to the 50's in the lowlands. Flash flooding in the upper reaches washed out two bridges above Deming, Wash., and stranded some 200 skiers on Mount Baker overnight. The river crested 2 ft. above flood stage at Deming on the 30th.

Shallow flooding occurred the length of the flood plain. Some 150 people were evacuated from their homes near Marietta. Preliminary estimates of flood damages were placed at $200,000.

FLOOD STAGE DATA

(All dates in January unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From–	To–	Crest* Stage	Date
ATLANTIC SLOPE DRAINAGE	Ft.			Ft.	
Neuse: Smithfield, N. C.	13	6	8	15.8	7
Cape Fear: Wm. O. Huske L&D (nr) Tarheel, N. C.	42	6	8	45.8	7
Lock No. 2, Elizabethtown, N. C.	20	6	9	23.2	7
Lumber: Lumberton, N. C.	9	16	22	9.7	18
		30	1		
Pee Dee: Peedee, S. C.	19	13	13	19.0	13
Stevens Creek: Modoc, S. C.	18	26	27	21.7	26
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	6	15	# 1.80	8
Tombigbee: Fulton, Miss.	16	24	27	17.5	25
Aberdeen, Miss.	34	27	27	34.1	27
Pearl: Jackson, Miss.	18	3	5	19.3	4
Bogalusa, La.	15	1	9	16.3	6
		29	30	15.5	29
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Salt: New London, Mo.	19	5	5	20.5	5
Missouri Basin					
Blue: Kansas City(Banister Rd), Mo.	21	3	3	24.2	3
Little Blue: Lake City, Mo.	18	3	4	22.9	4
Lamine: Clifton City, Mo.	19	4	5	25.8	4
Blackwater: Valley City, Mo.	20	3	5	28.5	4
Blue Lick, Mo.	25	4	10	29.95	8
Pottawatomie Creek: Garnett,Kans.	26	3	4	27.9	3
Lane, Kans.	23	4	5	25.8	3-4
Marais des Cygnes: Osawatomie, Kans.	28	4	5	W 29.5	4
La Cygne,Kans.	25	4	7	W 28.3	5
Trading Post, Kans.	24	5	6	W 24.6	5
Kansas-Missouri State Line	25	5	6	W 26.1	5
Ohio Basin					
Tygart: Philippi, W. Va.	17	5	5	17.4	5
West Fork: Weston, W. Va.	17	5	5	17.2	5
Clarksburg, W. Va.	7	5	6	8.05	5
Monongahela: Lock No. 4, Charleroi, Pa.	26	5	6	27.1	5
Lock No. 3, Elizabeth, Pa.	20	5	6	20.4	5
Lock No. 2, Braddock, Pa.	19	5	6	19.7	5
Muscatatuck: Austin, Ind.	16	5	5	16.5	5
		14	16	17.9	15
Ohio: Dam No. 50, Fords Ferry,Ky.	34	Dec. 27	1	36.7	Dec. 30
White Basin					
Black: Black Rock, Ark.	14	14	19	18.7	15
Cache: Patterson, Ark.	7	Dec. 19	1	9.0	Dec. 24
					Dec. 28
White: Clarendon, Ark.	26	Dec. 31	2	26.0	Dec. 31
		14	15	26.0	14
Arkansas Basin					
Neosho: Commerce, Okla.	15	5	6	15.5	5
Lower Mississippi Basin					
St. Francis: St. Francis, Ark.	18	16	20	18.4	18
PACIFIC SLOPE DRAINAGE					
Sacramento Basin					
Sacramento: Tehama Bridge, Calif.	213	M	M	216.3	17
Vina(Woodson Bridge), Calif.	183	M	M	185.3	17
Ord Ferry, Calif.	W110.5	16	18	112.2	17
Moulton Weir, Calif.	W76.8	16	20	79.7	18
Colusa Weir, Calif.	W61.8	17	28	66.4	18
Colusa Bridge, Calif.	W63	17	21	65.3	18
Tisdale Weir, Calif.	W45.5	1	4		
		16	1/	48.7	19
Fremont Weir, Calif.	W33.5	19	29	35.4	20

River and station	Flood stage	Above flood stages -dates From–	To–	Crest* Stage	Date
PACICIC SLOPE DRAINAGE-Cont.	Ft.			Ft.	
Central Coastal Basins					
Eel: Fernbridge, Calif.	20	16	17	22.0	17
Smith: Crescent City(nr), Calif.	35	16	17	36.6	16
		17	18	36.3	17
Fort Dick River, Calif.	33	16	17	33.6	17
		17	18	33.4	17
Rogue: Eagle Point(nr), Oreg.	10	17	18	11.0	17
Raygold Dam, Oreg.	12	17	18	15.6	17
Grants Pass, Oreg.	19	17	18	25.0	17
Coquille: Coquille, Oreg.	21	16	20	25.4	18
Myrtle Point, Oreg.	35	15	20	44.5	17
South Umpqua: Roseburg, Oreg.	22	17	18	27.8	17
Winston(nr), Oreg.	26	17	18	30.6	17
Tiller, Oreg.	15	17	18	18.45	18
North Umpqua: Winchester Dam, Oreg.	18	18	18	18.2	18
Umpqua: Elkton(nr), Oreg.	33	17	18	43.6	18
Riddle(nr), Oreg.	18	15	15	20.9	15
		16	18	25.0	17
Nehalem: Foss, Oreg.	13	15	20	15.7	17
		24	27	19.4	26
Columbia Basin					
Portneuf: Pocatello, Idaho	8	8	16	10.0	10
Weiser: Weiser(nr), Idaho	8	15	16	9.3	15
Mary's: Philomath, Oreg.	20	15	18	20.4	16
Luckiamute: Suver, Oreg.	27	Dec. 31	1	28.1	Dec. 31
		16	20	29.8	17
		26	26	27.3	26
Santiam: Jefferson, Oreg.	15	19	20	16.1	19
South Yamhill: Whiteson, Oreg.	38	Dec. 31	2	42.5	Dec. 31
		15	20	43.0	16
				43.25	17
		26	27	41.1	26
Pudding: Aurora, Oreg.	20	Dec. 31	2	21.3	1
		12	12	20.0	12
		15	29	23.4	17
				25.2	20
				22.0	26
Tualatin: Dilley, Oreg.	17	Dec. 30	1	17.8	Dec. 31
Farmington, Oreg.	29	1	5	30.9	2
		17	31	32.8	19
				31.6	28
Johnson Creek: Sycamore, Oreg.	8	15	15	9.0	15
		19	19	9.15	19
Willamette: Harrisburg, Oreg.	12	18	19	13.3	18
		19	20	12.6	20
Oregon City, Oreg.	27	18	22	30.6	19
Northern Coastal Basins					
Skookumchuck: Centralia, Wash.	85	25	26	86.0	26
Chehalis: Centralia, Wash.	63	Dec. 31	1	64.5	Dec. 31
		16	20	65.2	17
		25	28	70.2	26
Snohomish: Snohomish, Wash.	25	19	20	28.2	19-20
		26	26	25.5	26
		31	Feb. 1	27.2	31
Skagit: Mt. Vernon, Wash.	21	31	Feb. 1	22.5	31
Nooksack: Deming, Wash.	12	30	31	14.0	30

* Provisional
1/ Continued at end of month
\# Highest stage observed
W Warning stage
M Missing

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	ALBANY, N. Y. 1028 MB						ALBUQUERQUE, N. MEX. 839 MB						AMARILLO, TEXAS 890 MB						* ANCHORAGE, ALASKA 1011 MB						* ANNETTE, ALASKA 1009 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	-10.9	-15.2	27	1.6	28	1,619	-4.4	-10.4	03	1.7	31	1,095	-2.3	-10.0	29	2.0	31	45	-17.1	-24.1	02	2.1	31	37	-2.1	-6.6	08	1.9
1000	31	111			29	2.7	28	211					31	160					31	124			02	3.4	31	105	-2.1	-7.6	11	1.8
950	31	507	-9.8	-14.1	28	7.4	28	625					31	575					31	510	-15.4	-23.1	02	4.8	31	511	-4.7	-9.1	16	1.9
900	31	924	-11.1	-14.8	28	10.3	28	1,059					31	1,008					31	920	-14.4	-23.2	03	5.0	31	934	-7.3	-11.7	20	2.3
850	31	1,362	-12.5	-16.4	28	13.1	28	1,513					31	1,469	4.0	-8.7	28	5.3	31	1,353	-15.1	-24.5	04	3.3	31	1,378	-9.5	-13.9	25	3.9
800	31	1,824	-13.3	-19.3	28	15.4	28	1,996	-.2	-13.9	32	3.7	31	1,961	3.4	-11.0	28	7.0	31	1,809	-17.2	-26.5	04	2.5	31	1,845	-11.7	-16.4	25	6.3
750	31	2,315	-14.3	-22.5	28	17.9	28	2,510	-2.7	-16.0	30	6.1	31	2,483	1.0	-13.1	28	9.1	31	2,291	-19.5	-29.0	02	2.8	31	2,337	-14.1	-19.5	25	8.2
700	31	2,837	-16.1	-24.6	28	20.2	28	3,055	-4.8	-19.1	30	9.0	31	3,034	-1.7	-16.3	28	11.6	31	2,802	-21.7	-32.2	34	3.5	31	2,858	-16.8	-23.5	26	11.0
650	31	3,392	-18.6	-26.8	28	23.8	28	3,636	-7.0	-23.3	29	10.9	31	3,621	-5.0	-19.6	28	13.1	31	3,345	-24.1	-34.8	33	5.1	31	3,412	-19.7	-26.0	26	13.5
600	31	3,987	-21.1	-30.5	28	26.1	28	4,256	-10.5	-27.3	29	13.2	31	4,245	-9.0	-23.4	28	15.4	31	3,926	-26.8	-37.4	33	6.8	31	4,003	-22.8	-29.5	27	15.4
550	31	4,624	-24.7	-33.9	28	28.7	28	4,921	-14.2	-31.5	28	14.8	31	4,913	-13.2	-27.6	28	17.9	31	4,550	-30.2	-40.0	32	7.4	31	4,637	-26.4	-33.3	27	18.1
500	31	5,312	-28.8	-36.7	27	32.1	28	5,637	-18.8	-36.2	28	16.6	31	5,632	-17.8	-32.4	28	21.1	31	5,222	-34.5	-43.2	32	8.5	31	5,320	-30.6	-35.3	27	21.2
450	31	6,059	-33.4	-39.0	27	29.7	28	6,414	-24.1	-40.9	28	18.0	31	6,412	-23.2	-37.2	27	22.9	31	5,952	-38.4	-44.3	32	10.4	31	6,062	-34.9	-36.7	28	23.9
400	31	6,877	-38.6	-43.5	28	33.5	28	7,283	-30.6	-45.0	28	18.2	31	7,263	-29.8	-42.8	27	26.1	31	6,755	-42.6	-46.2	32	11.4	31	6,874	-40.3	-39.9	29	23.7
350	31	7,787	-43.5	-44.6	27	36.2	28	8,200	-37.8	-50.4	27	18.9	31	8,205	-36.5	-45.6	27	28.7	31	7,652	-46.5		31	11.7	31	7,777	-45.8	-42.3	28	24.8
300	30	8,814	-49.1		27	40.1	28	9,243	-45.3		27	21.5	31	9,253	-44.1		27	31.0	31	8,665	-49.6		31	12.1	30	8,780	-50.7		29	25.0
250	30	9,997	-53.7		27	28.6	28	10,439	-52.7		27	25.8	31	10,454	-52.3		27	33.9	31	9,856	-50.4		29	13.7	30	9,959	-54.1		28	22.6
200	30	11,427	-54.5		27	30.8	28	11,861	-58.0		26	29.5	31	11,675	-58.3		27	35.5	31	11,315	-49.3		28	13.6	29	11,390	-54.4		29	22.9
175	30	12,282	-54.5		27	29.0	28	12,702	-58.6		26	30.4	31	12,713	-59.8		27	36.4	31	12,192	-48.4		28	13.8	28	12,261	-52.6		30	22.2
150	30	13,269	-55.0		27	27.6	28	13,667	-59.6		26	28.7	31	13,674	-60.9		27	35.2	31	13,208	-47.9		28	13.1	28	13,258	-52.1		30	20.5
125	30	14,432	-56.3		27	27.5	28	14,800	-62.3		27	27.0	31	14,802	-62.9		27	32.4	30	14,415	-48.5		29	10.6	28	14,437	-52.9		30	18.5
100	29	15,849	-57.6		26	27.9	26	16,162	-64.1		26	23.5	31	16,167	-65.5		27	27.1	30	15,883	-49.1		29	9.2	28	15,874	-54.0		31	17.4
80	29	17,256	-58.1		26	28.4	23	17,517	-64.9		27	18.0	30	17,516	-66.4		27	22.6	28	17,356	-49.2		30	8.0	28	17,307	-53.8		31	16.1
70	28	18,089	-58.3		26	27.9	23	18,334	-63.7		27	14.6	30	18,326	-66.2		27	18.4	27	18,236	-50.0		31	7.1	28	18,164	-54.5		32	14.0
60	28	19,059	-58.4		26	24.6	22	19,279	-63.3		27	12.2	28	19,264	-65.9		27	15.7	25	19,248	-49.8		30	6.6	28	19,153	-54.2		33	12.2
50	27	20,220	-57.5		26	23.2	22	20,403	-62.4		27	7.6	25	20,373	-64.7		28	11.4	25	20,442	-49.5		31	5.9	28	20,321	-54.4		34	10.8
40	24	21,626	-55.9		25	20.7	18	21,785	-62.2		30	3.8	23	21,730	-64.1		28	11.8	25	21,901	-50.3		33	4.9	25	21,783	-53.8		36	9.1
30	24	23,469	-53.6		24	13.6	11	23,612	-58.6		04	4.5	20	23,513	-61.0		27	12.0	25	23,781	-49.7		35	4.7	22	23,630	-54.0		02	12.0
25	24	24,632	-52.7		24	12.5	10	24,755	-57.6		06	5.4	18	24,647	-59.5		27	12.9	24	24,970	-50.2		01	5.4	21	24,791	-54.6		02	12.7
20	19	26,082	-52.4		22	6.3	8	26,148	-56.3				17	26,036	-57.5		27	14.1	21	26,440	-50.1		36	3.8	20	26,206	-54.4		04	17.1
15	18	27,932	-52.8		16	.2	7	27,984	-54.9				12	27,879	-54.2				19	28,322	-49.4		34	5.8	18	28,043	-52.9		05	17.7
10	14	30,562	-52.1																						13	30,685	-51.1			
7																									9	32,963	-50.2			
5																									5	35,261	-45.8			

Standard pressure surface (mb)	ATHENS, GEORGIA 989 MB						* BARROW, ALASKA 1026 MB						BARTER IS., ALASKA 1013 MB						BETHEL, ALASKA 1013 MB						* BISMARCK, N. DAK. 956 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	3.4	.1	28	2.4	29	8	-29.0	-30.1	12	.8	29	15	-30.3	-33.1	24	1.5	15	39	-20.0	-22.1	02	3.9	31	503	-17.5	-21.2	31	1.1
1000	31	152					29	194	-25.1	-28.1	24	.5	29	193	-25.6	-29.8	21	1.0	15	134	-18.4	-24.8			31	165				
950	31	569	4.2	-1.2	28	6.6	29	569	-23.3	-28.1	01	.8	29	566	-24.1	-28.4	24	1.3	15	521	-13.6	-18.2	03	4.6	31	551			31	1.8
900	31	1,010	4.3	-3.0	28	10.3	29	965	-22.7	-28.9	02	1.5	29	962	-22.7	-28.2	26	1.3	15	933	-13.5	-19.8	01	4.0	31	958	-14.8	-17.9	31	6.3
850	31	1,475	2.9	-6.5	29	12.0	29	1,384	-22.7	-28.6	01	1.6	29	1,382	-22.6	-28.5	31	1.5	15	1,368	-13.9	-20.3	35	4.4	31	1,393	-12.3	-16.3	31	9.7
800	31	1,964	1.0	-7.6	28	14.6	29	1,829	-23.0	-30.0	36	2.2	29	1,827	-22.8	-28.9	34	1.7	15	1,827	-15.7	-21.9	34	5.6	31	1,857	-12.1	-17.4	31	12.2
750	31	2,482	-.6	-10.6	28	16.8	29	2,301	-24.1	-31.0	35	2.3	29	2,299	-24.0	-30.5	35	2.5	15	2,311	-18.7	-24.6	33	5.7	31	2,350	-13.4	-19.7	30	14.2
700	31	3,031	-2.6	-13.5	28	20.0	29	2,803	-26.0	-32.2	34	2.6	29	2,801	-25.8	-32.6	01	3.3	15	2,822	-22.2	-28.5	32	6.1	31	2,873	-15.8	-22.5	30	14.8
650	31	3,616	-5.6	-16.4	27	22.6	29	3,337	-28.3	-35.1	33	2.8	29	3,335	-28.6	-34.9	02	3.8	15	3,364	-24.8	-31.9	31	6.7	31	3,428	-19.1	-25.9	30	17.5
600	31	4,240	-9.2	-19.6	27	24.8	29	3,908	-31.2	-38.2	34	3.5	29	3,907	-30.8	-37.6	02	4.9	15	3,943	-28.0	-35.8	28	6.6	31	4,020	-22.5	-28.1	30	20.5
550	31	4,907	-13.4	-23.8	27	27.3	29	4,520	-34.7	-40.7	33	4.0	29	4,520	-34.0	-40.3	02	6.4	15	4,564	-30.9	-38.6	28	7.1	31	4,634	-26.6	-31.8	30	22.0
500	31	5,626	-18.1	-28.5	27	28.0	29	5,180	-38.7	-40.0	33	4.3	29	5,182	-37.9	-41.8	02	7.0	15	5,234	-35.2	-41.3	26	10.0	31	5,335	-31.3	-35.9	30	24.4
450	31	6,406	-23.3	-33.6	27	31.1	29	5,898	-42.9	-43.7	32	5.2	29	5,902	-42.0	-41.9	02	8.1	14	5,975	-38.3	-43.4	25	11.3	31	6,075	-35.8	-39.2	30	27.1
400	31	7,257	-29.4	-39.3	27	35.7	28	6,685	-47.0		31	6.7	29	6,692	-46.6		01	8.6	14	6,778	-42.3		25	12.2	31	6,885	-41.1	-42.1	30	30.1
350	31	8,200	-36.1	-43.9	27	41.2	28	7,564	-50.8		30	8.2	29	7,572	-50.8		01	10.8	14	7,676	-46.3		24	12.5	31	7,784	-46.8		30	33.1
300	31	9,250	-43.9	-51.4	27	44.5	28	8,559	-53.0		30	10.3	29	8,567	-53.0		36	12.1	14	8,691	-49.1		25	14.5	31	8,792	-51.5		30	35.9
250	31	10,453	-51.9		27	48.0	28	9,734	-52.9		30	10.7	29	9,743	-52.4		35	12.3	14	9,882	-51.2		25	14.5	31	9,968	-53.9		30	36.7
200	30	11,888	-57.6		27	48.8	27	11,177	-51.6		29	12.3	28	11,198	-50.4		32	10.2	14	11,333	-50.0		26	13.8	30	11,398	-54.5		29	33.5
175	29	12,726	-58.3		27	46.4	28	12,046	-50.2		29	12.6	28	12,071	-49.7		32	10.8	14	12,207	-49.2		26	12.7	30	12,254	-54.0		29	31.9
150	27	13,680	-60.0		27	43.3	28	13,055	-49.1		28	13.5	28	13,083	-48.7		31	10.7	14	13,220	-48.6		26	10.8	30	13,244	-53.9		29	31.5
125	25	14,796	-63.5		27	40.6	28	14,254	-48.7		28	14.4	28	14,283	-48.1		31	11.4	14	14,420	-48.8		26	11.2	30	14,411	-55.4		29	28.6
100	25	16,154	-66.5		27	31.7	28	15,724	-48.2		28	14.7	28	15,757	-47.3		31	11.2	14	15,886	-48.8		27	8.8	30	15,827	-57.5		29	25.1
80	25	17,499	-68.0		27	26.4	27	17,193	-48.1		27	15.7	28	17,233	-47.8		32	12.6	14	17,352	-48.9		27	7.8	29	17,236	-58.8		29	23.4
70	24	18,298	-67.6		27	22.6	27	18,074	-48.0		27	16.6	28	18,115	-47.9		32	12.7	14	18,230	-49.0		27	6.3	26	18,080	-58.7		29	20.6
60	21	19,245	-66.0		27	17.7	27	19,090	-48.3		27	17.4	28	19,133	-47.6		31	11.4	14	19,241	-49.2		27	5.5	25	19,055	-57.8		30	18.6
50	20	20,361	-64.3		27	16.5	27	20,291	-48.1		28	16.5	28	20,339	-47.2		32	13.3	14	20,437	-49.4		27	4.2	25	20,203	-58.8		30	15.9
40	19	21,737	-61.1		27	13.9	25	21,763	-48.7		28	15.8	28	21,814	-47.9		33	10.5	14	21,900	-49.1		29	3.3	25	21,605	-58.4		30	13.2
30	16	23,532	-59.0		26	13.5	21	23,670	-48.7		29	13.0	28	23,709	-48.9		33	9.1	14	23,790	-48.9		32	2.2	25	23,419	-56.5		32	11.3
25	16	24,681	-57.2		26	12.7	16	24,867	-48.3		29	13.7	26	24,914	-47.9		33	8.9	14	24,987	-48.9		36	2.8	23	24,605	-54.8		34	7.9
20	14	26,101	-55.1		27	9.1	9	26,362	-45.0				23	26,387	-48.2		33	8.8	12	26,467	-48.3		02	4.5	22	26,031	-54.0		35	9.0
15	15	27,944	-53.0		27	6.7							19	28,289	-49.1		35	10.0	11	28,341	-48.8		03	5.1	22	27,886	-52.3		02	8.7
10	12	30,584	-49.4		28	6.5							9	30,987	-47.5				5	31,093	-44.3				20	30,563	-49.9		01	7.4
7	9	32,948	-45.3																						16	32,930	-50.3		01	13.8

Standard pressure surface (mb)	BOISE, IDAHO 919 MB						* BROWNSVILLE, TEXAS 1016 MB						BUFFALO, N. Y. 987 MB						CAPE HATTERAS, N. C. 1017 MB						* CARIBOU, MAINE 985 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	871	-.4	-4.1	13	2.0	31	7	15.6	12.5	21	.9	31	218	-7.1	-10.7	27	4.6	31	4	5.2	1.3	32	2.6	31	191	-16.9	-20.1	28	2.3
1000	31	190					31	142	15.6	13.8	18	2.0	31	114					31	139	5.8	-.8	31	3.8	31	75				
950	31	626					31	578	14.4	11.9	17	5.7	31	513	-9.0	-11.5	26	7.4	31	558	4.4	-2.8	28	5.9	31	462	-15.7	-18.6	29	4.8
900	31	1,040	.0	-4.3	13	.9	31	1,035	13.8	6.4	18	5.5	31	930	-10.9	-13.9	26	10.9	31	997	3.0	-5.0	27	9.1	31	871	-15.4	-18.6	28	6.8
850	31	1,498	-.6	-5.7	27	3.9	31	1,517	13.2	-.3	19	4.5	31	1,368	-12.3	-16.8	27	13.4	31	1,439	1.4	-8.1	27	12.2	31	1,302	-15.7	-19.1	28	7.8
800	31	1,981	-3.0	-7.6	28	7.8	31	2,026	11.7	-3.8	21	5.0	31	1,831	-13.3	-18.8	28	15.2	31	1,947	-.3	-10.2	27	15.0	31	1,759	-16.8	-21.0	28	8.5
750	31	2,490	-5.8	-10.0	29	10.1	31	2,564	9.2	-5.6	23	5.9	31	2,322	-14.9	-21.2	28	16.1	31	2,461	-2.7	-10.6	27	17.7	31	2,242	-18.3	-23.3	27	9.9
700	31	3,028	-8.7	-13.8	30	11.7	31	3,132	5.9	-9.9	25	8.4	31	2,841	-17.2	-22.9	28	17.7	31	3,005	-5.3	-14.3	27	20.1	31	2,755	-20.5	-26.0	27	11.6
650	31	3,599	-11.6	-17.9	30	13.9	31	3,735	2.4	-14.9	26	9.9	31	3,395	-19.5	-26.2	28	19.9	31	3,585	-7.8	-18.1	27	24.5	31	3,301	-22.7	-29.4	27	14.1
600	31	4,209	-14.9	-20.6	29	16.6	31	4,376	-1.9	-19.6	26	11.9	31	3,986	-22.3	-29.7	28	20.8	31	4,204	-11.2	-22.0	27	27.0	31	3,885	-25.7	-32.8	27	15.1
550	31	4,863	-18.5	-25.3	29	19.4	31	5,062	-6.4	-23.6	26	13.8	31	4,622	-25.6	-33.1	28	24.6	31	4,867	-14.8	-26.3	27	30.0	31	4,512	-29.4	-36.9	27	16.2
500	31	5,568	-22.9	-30.4	29	20.8	31	5,801	-10.9	-28.4	26	16.4	31	5,307	-29.3	-37.6	27	29.3	31	5,583	-18.9	-31.1	27	31.7	31	5,186	-33.6	-40.4	27	17.1
450	30	6,333	-28.0	-33.6	29	23.6	31	6,602	-16.6	-33.6	26	18.4	31	6,053	-33.8	-39.9	27	31.1	31	6,360	-24.2	-35.5	27	35.0	31	5,919	-38.1	-42.5	27	19.1
400	30	7,168	-34.1	-39.1	30	25.5	31	7,475	-23.2	-37.3	26	21.1	31	6,869	-39.3	-44.3	28	32.7	31	7,208	-30.3	-39.9	27	37.1	31	6,721	-42.9	-44.0	26	21.6
350	30	8,092	-41.2	-41.8	30	27.0	31	8,441	-30.7	-43.1	26	23.1	31	7,776	-44.6	-47.1	28	33.0	31	8,148	-36.5	-44.2	27	41.7	31	7,616	-47.2		26	25.5
300	30	9,120	-48.6		30	29.8	31	9,513	-39.5	-49.7	26	25.7	31	8,793	-49.9		28	31.4	30	9,211	-43.6	-49.1	27	46.0	31	8,625	-50.7		26	31.2
250	30	10,301	-55.4		30	30.6	31	10,735	-49.3		26	29.0	31	9,974	-53.5		28	35.4	30	10,416	-51.0		27	48.5	31	9,808	-52.2		26	33.3
200	30	11,711	-59.1		30	28.5	31	12,170	-57.0		25	32.4	31	11,406	-54.5		28	31.9	29	11,845	-55.7		27	52.1	31	11,250	-52.7		27	31.0
175	29	12,534	-57.2		30	26.1	31	13,010	-60.0		25	34.1	31	12,262	-54.5		28	32.6	29	12,695	-56.1		27	51.0	31	12,113	-52.5		26	29.0
150	28	13,379	-57.3		29	24.3	30	13,863	-63.9		25	34.4	31	13,249	-55.0		28	30.7	28	13,679	-58.2		27	45.7	31	13,109	-53.0		26	27.2
125	27	14,256	-58.5		30	22.3	30	15,071	-68.6		25	28.7	29	14,416	-56.6		28	27.0	27	14,826	-62.1		27	40.1	31	14,283	-53.8		26	26.8
100	25	16,063	-59.9		30	18.3	29	16,389	-73.6		28	20.2	28	15,819	-57.8		28	20.2	25	16,193	-65.1		27	36.4	31	15,714	-54.8		26	24.6
80	23	17,448	-61.0		30	14.1	25	17,686	-74.9		26	11.5	26	17,209	-58.7		27	25.6	24	17,546	-65.6		27	28.7	31	17,140	-55.3		25	23.6
70	20	18,265	-59.7		30	11.8	25	18,484	-73.3		27	6.4	26	18,048	-59.0		27	24.9	24	18,357	-65.3		27	25.2	31	17,991	-55.6		25	23.1
60	18	19,224	-59.5		30	9.4	24	19,372	-69.8		29	5.1	24	19,020	-58.8		26	23.7	23	19,310	-63.7		27	20.1	30	18,965	-54.8		25	21.2
50	13	20,429	-58.0		34	4.2	24	20,468	-66.4		28	5.9	23	20,171	-58.1		26	20.6	23	20,435	-61.6		27	19.6	29	20,132	-54.9		25	18.3
40	10	21,871	-56.8				23	21,827	-63.5		27	6.5	20	21,603	-57.1				23	21,831	-58.2		26	15.0	29	21,563	-53.4		24	15.9
30	4	23,683	-55.7				22	23,610	-60.2		26	8.2	18	23,451	-54.4				22	23,646	-56.4		27	9.2	28	23,423	-51.0		23	12.9
25	4	24,846	-55.1				19	24,744	-58.5		26	8.0	17	24,622	-54.2				19	24,822	-55.8		27	5.8	28	24,609	-51.6		23	9.4
20	4	26,274	-54.3				16	26,150	-54.7		26	10.8	15	26,057	-53.0				19	26,245	-55.0		25	3.4	26	26,056	-52.9		23	6.9
15	6	28,136	-53.5				13	27,991	-51.0		26	17.0	11	27,901	-53.6				18	28,088	-53.5		32	2.2	23	27,903	-54.4		29	4.9
10							10	30,624	-46.4				8	30,500	-54.2				11	30,722	-49.1				19	30,494	-55.0		32	9.6
7							5	33,016	-40.4																10	32,759	-54.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1971

CHARLESTON, S. C. — 1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	13	6.4	1.9	26	1.0
1000	30	149	7.8	2.8	26	2.9
950	30	572	7.4	1.2	26	7.9
900	30	1,017	6.4	-.6	27	10.3
850	30	1,485	4.7	-3.0	27	12.1
800	30	1,978	2.9	-5.5	27	13.6
750	30	2,499	.5	-8.2	27	16.6
700	30	3,051	-1.9	-12.0	27	18.8
650	30	3,637	-4.6	-16.0	27	21.3
600	30	4,263	-8.5	-19.1	27	23.6
550	30	4,933	-12.4	-22.7	27	26.1
500	30	5,655	-16.9	-28.8	27	29.7
450	30	6,438	-22.1	-33.4	27	32.3
400	30	7,294	-27.9	-39.2	27	36.2
350	30	8,242	-34.9	-44.4	27	39.2
300	30	9,297	-42.8	-48.6	27	42.4
250	30	10,505	-51.4		27	46.8
200	30	11,934	-56.4		27	50.2
175	29	12,788	-58.0		27	49.2
150	29	13,755	-60.0		27	46.0
125	29	14,882	-64.2		27	42.9
100	29	16,235	-67.9		27	35.6
80	26	17,594	-69.3		27	26.4
70	26	18,393	-69.0		27	22.8
60	26	19,318	-67.3		27	18.8
50	25	20,436	-64.1		27	14.4
40	25	21,812	-61.5		27	10.7
30	24	23,606	-58.6		26	9.1
25	24	24,757	-57.2		28	6.6
20	24	26,174	-55.5		27	2.7
15	22	28,003	-54.0		31	2.1
10	20	30,629	-49.5		35	3.4
7	9	32,994	-44.0			

CHATHAM, MASS. — 1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	16	-4.0	-6.9	25	2.6
1000	29	92	-4.3	-11.6	28	5.2
950	29	496	-6.2	-11.4	27	10.4
900	29	918	-8.0	-13.8	27	12.8
850	29	1,361	-9.2	-17.6	28	14.0
800	29	1,829	-10.2	-18.8	28	15.3
750	29	2,325	-12.0	-20.7	28	16.5
700	29	2,852	-13.9	-23.1	27	18.6
650	29	3,412	-16.4	-25.3	27	22.0
600	29	4,011	-19.5	-29.0	27	27.0
550	29	4,653	-23.1	-32.9	27	29.3
500	29	5,345	-27.6	-36.6	27	32.8
450	29	6,096	-31.9	-38.3	27	35.5
400	29	6,919	-37.2	-42.7	27	38.0
350	29	7,834	-42.6	-44.2	27	41.0
300	29	8,859	-48.3		26	43.5
250	29	10,045	-53.4		27	43.7
200	29	11,474	-54.8		27	42.9
175	28	12,325	-54.7		27	41.0
150	27	13,306	-54.7		27	39.6
125	27	14,469	-56.2		27	33.3
100	27	15,881	-58.3		27	31.1
80	27	17,284	-58.7		26	25.7
70	27	18,125	-57.9		26	21.0
60	27	19,098	-57.7		26	19.4
50	27	20,250	-56.7		26	19.5
40	27	21,670	-54.6		26	14.7
30	25	23,532	-53.4		25	10.8
25	24	24,699	-53.4		25	8.9
20	23	26,139	-53.1		25	7.4
15	22	27,985	-52.5		26	5.7
10	18	30,610	-50.4			

CHIHUAHUA, MEXICO — 858 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	1,428	3.4	-5.4	25	1.0
1000	31	162				
950	31	589				
900	31	1,034				
850	31	1,501	7.0	-7.4	26	1.1
800	31	2,003	8.5	-6.9	26	3.2
750	31	2,534	6.4	-8.0	25	5.9
700	31	3,098	3.7	-13.0	26	8.4
650	31	3,696	.6	-17.3	26	9.1
600	31	4,334	-3.4	-21.5	26	9.8
550	31	5,016	-8.1	-24.7	26	11.0
500	31	5,749	-13.0	-28.3	26	13.2
450	31	6,544	-18.3	-33.3	26	15.7
400	31	7,412	-24.8	-38.7	26	17.1
350	31	8,373	-31.9	-43.8	26	19.8
300	31	9,440	-40.6	-49.6	25	20.6
250	31	10,656	-50.0		25	21.6
200	31	12,086	-58.0		25	20.0
175	31	12,923	-60.4		25	19.9
150	31	13,879	-62.6		26	17.3
125	30	14,999	-65.8		26	14.5
100	24	16,342	-69.5		27	11.8
80	22	17,669	-69.8		28	10.3
70	22	18,465	-69.5		28	9.0
60	20	19,385	-68.8		28	8.5
50	20	20,486	-65.7		27	8.1
40	20	21,846	-64.1		27	8.9
30	20	23,625	-60.9		26	7.2
25	19	24,756	-59.7		25	9.3
20	16	26,158	-56.7		26	12.5
15	12	27,990	-54.0			

* COLD BAY, ALASKA — 1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	30	-4.8	-7.2	33	1.6
1000	28	127	-5.6	-11.2	02	1.3
950	28	528	-7.4	-11.5	36	2.9
900	28	949	-8.6	-14.8	36	3.2
850	28	1,390	-9.9	-18.2	35	3.7
800	28	1,857	-11.4	-20.3	34	4.1
750	28	2,350	-13.3	-22.6	33	4.3
700	28	2,873	-15.4	-25.1	32	5.3
650	28	3,430	-17.8	-28.1	32	7.0
600	28	4,026	-20.9	-31.0	30	7.9
550	28	4,664	-24.3	-34.0	27	10.2
500	28	5,354	-28.4	-36.8	27	10.7
450	28	6,102	-33.1	-40.4	27	12.1
400	28	6,920	-38.8	-42.3	27	11.0
350	28	7,828	-44.6		27	10.0
300	28	8,844	-49.8		26	10.6
250	28	10,026	-53.5		26	11.7
200	28	11,464	-52.3		26	9.7
175	27	12,328	-51.7		26	9.1
150	27	13,330	-50.7		25	8.2
125	27	14,516	-51.5		25	6.8
100	25	15,973	-51.4		25	7.6
80	23	17,424	-51.9		25	5.9
70	22	18,291	-51.8		24	4.5
60	22	19,291	-51.7		23	3.8
50	21	20,472	-51.4		19	3.0
40	19	21,930	-51.4		16	2.4
30	19	23,800	-50.9		12	3.2
25	18	24,999	-50.6		11	4.0
20	18	26,455	-49.9		10	5.4
15	18	28,341	-48.8		09	7.4
10	16	30,999	-46.6		07	9.9
7	12	33,406	-44.3			

DAYTON, OHIO — 982 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	299	-6.6	-10.4	28	2.4
1000	31	151				
950	31	553	-6.7	-11.1	27	4.9
900	31	975	-7.3	-14.4	28	8.6
850	31	1,420	-7.4	-18.3	28	[illegible]
800	31	1,891	-8.9	-19.5	28	14.4
750	31	2,390	-10.3	-21.0	28	16.7
700	31	2,919	-12.4	-23.4	28	[illegible]
650	31	3,483	-14.6	-24.8	28	23.0
600	31	4,086	-17.4	-28.3	27	25.2
550	31	4,733	-21.1	-32.0	27	27.9
500	31	5,431	-25.4	-36.1	27	32.2
450	31	6,188	-30.1	-38.5	27	36.3
400	31	7,018	-35.1	-42.7	27	41.3
350	31	7,940	-41.1	-48.2	27	43.3
300	31	8,971	-47.3		27	47.3
250	30	10,169	-53.7		27	48.9
200	30	11,595	-56.1		27	47.3
175	30	12,446	-55.0		27	44.6
150	30	13,430	-56.1		27	40.4
125	30	14,581	-59.0		27	38.5
100	30	15,975	-61.1		27	34.8
80	30	17,359	-61.6		27	29.2
70	29	18,188	-61.5		27	26.5
60	29	19,143	-62.0		27	23.3
50	28	20,274	-60.6		27	19.7
40	27	21,678	-59.5		27	16.7
30	26	23,486	-57.4		26	12.5
25	25	24,651	-55.9		26	11.2
20	25	26,079	-53.8		25	7.4
15	20	27,951	-52.6		26	3.0
10	14	30,599	-51.4		29	3.5

DEL RIO, TEXAS — 980 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	314	8.6	2.2	06	1.3
1000	29	147				
950	29	575	11.2	1.7	15	2.0
900	29	1,027	11.4	-1.4	21	3.0
850	29	1,504	10.3	-4.3	26	4.3
800	29	2,007	8.4	-7.6	27	5.7
750	29	2,537	5.9	-9.9	27	7.0
700	29	3,100	3.7	-14.6	26	10.8
650	29	3,698	.3	-17.5	26	11.7
600	29	4,334	-3.9	-19.8	26	14.2
550	29	5,015	-8.7	-24.5	26	15.4
500	29	5,746	-13.7	-29.5	26	17.2
450	29	6,539	-19.0	-34.0	26	20.0
400	29	7,405	-25.2	-39.7	26	23.3
350	29	8,364	-32.2	-44.9	26	26.8
300	29	9,430	-40.8	-51.3	26	30.0
250	29	10,644	-50.6		26	33.3
200	29	12,069	-58.3		26	32.9
175	29	12,905	-60.6		26	30.7
150	29	13,858	-63.3		26	27.2
125	29	14,968	-67.1		26	25.3
100	28	16,304	-70.4		27	19.3
80	27	17,620	-71.8		27	14.7
70	26	18,409	-70.5		28	10.5
60	25	19,328	-68.5		27	8.2
50	25	20,427	-66.6		27	8.3
40	24	21,788	-63.7		28	8.3
30	23	23,576	-60.5		27	7.3
25	23	24,717	-58.2		27	7.7
20	21	26,133	-55.7		29	5.1
15	18	27,989	-52.9		29	4.7
10	12	30,618	-48.9			

DENVER, COLO. — 834 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	1,611	-3.0	-10.0	25	2.3
1000	31	150				
950	31	568				
900	31	1,004				
850	31	1,461				
800	31	1,946	.4	-12.8	28	5.7
750	31	2,461	-2.4	-15.8	29	7.7
700	31	3,005	-6.1	-18.1	29	9.2
650	31	3,581	-9.7	-20.7	30	12.3
600	31	4,195	-13.4	-23.9	30	15.6
550	31	4,853	-17.2	-27.6	30	17.9
500	31	5,561	-21.6	-31.9	30	21.6
450	31	6,330	-26.8	-36.5	30	22.2
400	31	7,168	-33.3	-41.3	30	24.6
350	31	8,095	-40.4	-45.5	30	26.2
300	30	9,127	-47.3		29	28.2
250	30	10,315	-54.1		29	29.8
200	30	11,728	-58.6		28	29.1
175	29	12,560	-58.6		28	28.5
150	29	13,528	-59.4		28	28.8
125	28	14,660	-60.4		28	25.6
100	26	16,047	-62.1		28	20.7
80	25	17,423	-62.2		29	15.3
70	24	18,248	-61.7		28	12.5
60	22	19,205	-61.3		29	9.3
50	22	20,335	-62.0		30	7.5
40	22	21,716	-61.9		31	7.1
30	20	23,505	-60.2		34	5.9
25	19	24,635	-59.2		35	4.6
20	17	26,042	-57.8		34	2.9
15	16	27,869	-54.6		33	4.6
10	5	30,469	-50.0			

DODGE CITY, KANS. — 925 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	791	-6.6	-10.1	32	1.5
1000	30	172				
950	30	577				
900	30	1,004	-1.3	-9.2	31	3.1
850	30	1,463	1.8	-11.6	32	5.6
800	30	1,951	1.0	-14.2	31	7.6
750	30	2,467	-2.0	-15.9	29	10.2
700	30	3,012	-5.4	-18.0	29	12.3
650	30	3,590	-8.7	-20.7	29	15.2
600	30	4,206	-12.2	-24.0	28	17.5
550	30	4,867	-16.4	-27.9	29	20.1
500	30	5,577	-21.0	-33.2	29	23.4
450	30	6,348	-26.0	-38.5	28	26.2
400	30	7,190	-32.1	-42.5	28	29.3
350	30	8,123	-38.5	-47.2	28	33.7
300	30	9,164	-45.7		28	35.8
250	30	10,359	-53.2		28	38.2
200	30	11,774	-59.4		28	40.1
175	29	12,610	-60.0		28	40.3
150	28	13,569	-59.9		27	37.8
125	28	14,704	-61.7		27	34.1
100	27	16,078	-63.5		27	28.6
80	25	17,446	-64.3		28	21.6
70	22	18,252	-65.4		28	18.1
60	22	19,192	-65.2		28	16.4
50	21	20,299	-64.9		28	15.4
40	20	21,671	-63.7		28	12.4
30	19	23,447	-61.2		27	11.2
25	16	24,560	-60.7		27	16.8
20	9	25,929	-58.4			
15	5	27,790	-54.0			

EL PASO, TEXAS — 883 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	1,193	1.9	-9.0	34	1.1
1000	31	178				
950	31	600				
900	31	1,041				
850	31	1,508	7.4	-6.0	31	2.6
800	31	2,005	5.3	-7.5	28	5.8
750	31	2,530	2.7	-10.0	28	9.6
700	31	3,085	.1	-12.6	27	10.8
650	31	3,676	-2.5	-16.3	27	11.6
600	31	4,307	-6.5	-20.5	27	13.3
550	31	4,982	-10.8	-24.9	27	14.5
500	31	5,707	-15.9	-29.0	27	16.4
450	31	6,493	-21.4	-34.1	27	17.5
400	31	7,350	-27.8	-40.0	26	20.5
350	31	8,300	-34.6	-45.1	26	22.9
300	31	9,356	-42.6	-48.9	26	28.7
250	31	10,564	-51.2		25	32.3
200	31	11,992	-57.9		26	31.0
175	31	12,830	-60.1		26	30.4
150	31	13,788	-62.0		26	29.1
125	31	14,910	-64.3		26	25.2
100	31	16,263	-67.8		27	21.3
80	30	17,599	-68.6		26	18.4
70	28	18,402	-67.8		27	15.3
60	28	19,333	-66.3		27	11.6
50	26	20,447	-63.8		28	7.6
40	24	21,818	-63.4		28	6.1
30	21	23,599	-61.0		27	7.5
25	21	24,738	-58.8		27	7.5
20	20	26,151	-56.4		27	7.5
15	16	28,016	-52.2		28	4.4
10	7	30,693	-47.8			

ELY, NEV. — 810 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	1,908	-8.4	-12.6	20	3.9
1000	31	241				
950	31	651				
900	31	1,079				
850	31	1,529				
800	31	2,003	-2.4	-7.6	21	2.9
750	31	2,516	-3.0	-10.4	31	2.6
700	31	3,060	-5.7	-13.7	31	6.0
650	31	3,639	-8.5	-16.7	31	9.7
600	31	4,257	-11.4	-21.0	30	13.3
550	31	4,920	-15.1	-23.9	30	15.2
500	31	5,634	-19.8	-28.6	30	16.5
450	31	6,408	-25.1	-33.9	30	17.7
400	31	7,253	-31.2	-38.6	30	19.5
350	31	8,189	-38.3	-42.5	30	20.8
300	31	9,228	-46.5		30	21.9
250	31	10,417	-54.5		30	22.1
200	31	11,824	-60.0		29	23.9
175	31	12,659	-59.5		29	25.2
150	29	13,640	-59.7		29	23.5
125	29	14,775	-61.6		29	21.6
100	27	16,159	-63.4		29	16.9
80	27	17,525	-64.9		29	12.4
70	26	18,337	-65.6		29	9.4
60	24	19,270	-63.9		30	6.9
50	24	20,391	-62.9		31	5.4
40	22	21,763	-63.5		34	4.3
30	20	23,537	-62.5		36	5.1
25	19	24,664	-60.4		36	4.8
20	16	26,022	-60.2		35	4.5
15	12	27,793	-57.6			
10	9	30,273	-50.4			

EMPALME, MEXICO — 1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	12	10.2	.3	32	2.6
1000	30	133	14.4	-.4	33	3.0
950	30	568	16.4	-2.4	35	3.4
900	30	1,028	15.1	-5.9	33	1.9
850	30	1,509	12.9	-8.7	25	1.9
800	30	2,016	10.6	-11.5	24	2.9
750	30	2,550	7.6	-14.7	26	4.0
700	30	3,114	4.2	-16.8	26	5.5
650	30	3,712	.2	-19.6	26	6.2
600	30	4,348	-4.4	-22.2	26	6.6
550	30	5,027	-9.2	-26.3	25	7.8
500	30	5,757	-14.5	-30.5	25	9.7
450	30	6,547	-20.0	-35.2	25	13.1
400	30	7,409	-26.6	-39.7	25	16.7
350	30	8,363	-33.8	-45.6	25	19.6
300	30	9,422	-42.1	-51.4	25	22.3
250	30	10,630	-51.4		24	25.7
200	30	12,052	-59.0		24	24.9
175	30	12,886	-61.1		25	22.3
150	30	13,839	-63.0		25	21.0
125	30	14,952	-66.7		25	18.4
100	30	16,289	-70.2		25	16.1
80	30	17,610	-71.6		25	13.0
70	30	18,400	-71.1		26	11.6
60	28	19,318	-69.8		27	9.2
50	28	20,413	-66.5		28	8.9
40	28	21,767	-65.3		27	8.6
30	27	23,534	-62.1		27	7.2
25	26	24,668	-60.4		26	8.0
20	23	26,062	-58.2		26	11.8
15	23	27,887	-55.0		26	12.6
10	10	30,556	-49.4			

* FAIRBANKS, ALASKA — 1007 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	135	-35.8	-29.5	02	.3
1000	31	186			08	1.2
950	31	557	-24.0	-27.5	10	2.8
900	31	953	-22.1	-27.6	11	3.2
850	31	1,375	-21.1	-27.4	10	2.5
800	31	1,822	-22.3	-28.6	07	1.9
750	31	2,294	-23.9	-30.6	05	1.5
700	31	2,796	-25.9	-33.0	01	2.2
650	31	3,330	-27.9	-34.8	35	3.3
600	31	3,903	-30.3	-37.4	36	4.8
550	31	4,518	-33.5	-40.4	36	6.8
500	31	5,182	-37.0	-42.6	36	8.8
450	31	5,905	-40.5	-43.4	36	11.2
400	31	6,701	-44.6		34	10.9
350	31	7,590	-48.4		34	13.4
300	31	8,595	-51.2		33	15.0
250	31	9,779	-51.2		31	13.0
200	31	11,235	-49.5		30	13.5
175	31	12,112	-48.7		30	13.6
150	31	13,127	-48.1		29	13.2
125	31	14,329	-48.1		29	13.4
100	31	15,801	-48.2		29	12.6
80	30	17,274	-48.6		30	11.7
70	30	18,153	-48.7		30	10.5
60	26	19,184	-48.7		31	9.3
50	24	20,372	-49.0		31	10.3
40	21	21,847	-49.4		31	9.6
30	19	23,732	-49.7		33	10.0
25	16	24,926	-49.1		33	9.7
20	12	26,376	-50.1		32	6.8
15	8	28,260	-50.1			

FLINT, MICH. — 986 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	236	-8.2	-11.6	26	2.5
1000	31	124				
950	31	522	-10.0	-13.5	27	7.1
900	31	937	-11.9	-15.0	28	9.3
850	31	1,374	-12.2	-17.2	29	11.1
800	31	1,837	-13.0	-19.7	29	12.7
750	31	2,328	-14.8	-22.0	29	14.7
700	31	2,848	-17.4	-25.1	28	16.4
650	31	3,400	-20.2	-27.8	28	18.4
600	31	3,989	-23.4	-30.8	28	21.8
550	31	4,622	-26.5	-33.5	28	25.3
500	31	5,305	-30.4	-36.7	27	29.4
450	31	6,048	-34.8	-41.3	27	31.5
400	31	6,862	-39.8	-44.8	27	35.7
350	31	7,767	-44.8	-50.2	27	40.3
300	31	8,784	-49.7		28	40.9
250	31	9,968	-53.1		28	42.1
200	31	11,402	-54.1		28	37.4
175	31	12,259	-54.0		28	34.2
150	31	13,246	-55.1		28	32.1
125	30	14,412	-56.4		29	30.9
100	24	15,815	-58.9		29	28.6
80	26	17,204	-59.9		29	26.3
70	25	18,034	-60.0		28	24.8
60	25	18,997	-59.9		28	25.7
50	23	20,127	-60.3		28	20.9
40	22	21,534	-58.3		27	18.3
30	21	23,359	-55.5		26	16.3
25	19	24,546	-54.1		26	12.8
20	16	25,985	-51.9		26	11.8
15	13	27,819	-51.6		24	10.1
10	9	30,485	-49.7			

FORT WORTH, TEXAS — 997 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	180	3.3	-3.2	26	.7
1000	31	151			02	1.6
950	31	571	7.5	-2.7	23	3.8
900	31	1,017	8.2	-4.8	25	6.7
850	31	1,489	7.6	-7.1	26	8.2
800	31	1,987	5.5	-9.8	27	9.9
750	31	2,512	3.2	-11.9	27	12.3
700	31	3,068	.9	-14.7	27	14.3
650	31	3,660	-2.2	-18.0	27	15.9
600	31	4,292	-5.9	-22.2	27	18.3
550	31	4,968	-10.4	-26.5	27	20.0
500	31	5,694	-15.6	-30.6	27	21.9
450	31	6,481	-21.1	-34.7	27	25.5
400	31	7,340	-27.1	-40.5	27	28.9
350	31	8,292	-33.9	-46.5	27	32.7
300	31	9,352	-41.8	-51.8	27	37.3
250	31	10,562	-51.3		27	40.6
200	31	11,987	-57.7		27	43.7
175	31	12,826	-59.5		26	42.1
150	31	13,787	-61.5		26	41.4
125	31	14,909	-64.4		26	36.1
100	29	16,260	-67.4		27	29.4
80	29	17,601	-68.3		27	23.3
70	29	18,404	-67.5		28	18.4
60	27	19,337	-66.1		27	14.0
50	27	20,445	-64.9		27	12.7
40	26	21,818	-62.1		28	10.7
30	25	23,604	-58.9		27	10.6
25	23	24,745	-57.3		26	11.1
20	21	26,166	-55.5		27	12.2
15	15	28,009	-52.8		25	12.6
10	8	30,652	-48.6			

GLASGOW, MONT. — 934 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	696	-15.5	-19.8	35	1.6
1000	31	174				
950	31	564				
900	31	975	-13.1	-15.9	32	4.5
850	31	1,412	-11.3	-14.6	31	8.4
800	31	1,878	-11.5	-14.7	31	[illegible]
750	31	2,372	-12.2	-15.1	30	13.5
700	31	2,898	-14.1	-17.4	30	16.3
650	31	3,458	-16.9	-21.0	30	18.6
600	31	4,054	-20.7	-25.3	30	[illegible]
550	31	4,692	-25.0	-29.7	30	[illegible]
500	31	5,378	-30.0	-33.5	30	24.2
450	31	6,121	-35.0	-37.5	31	27.9
400	31	6,932	-40.8	-40.4	30	[illegible]
350	31	7,834	-45.7	-44.4	31	34.1
300	31	8,847	-50.8		31	36.4
250	31	10,024	-54.6		30	34.6
200	31	11,448	-55.3		30	[illegible]
175	31	12,302	-54.7		30	[illegible]
150	31	13,290	-54.2		29	25.0
125	31	14,457	-55.2		30	[illegible]
100	31	15,877	-56.5		30	18.2
80	[illegible]	17,293	-58.1		30	[illegible]
70	[illegible]	18,133	-58.6		30	15.4
60	[illegible]	19,089	-59.0		30	[illegible]
50	[illegible]	[illegible]	-59.5		31	[illegible]
40	[illegible]	[illegible]	-58.6		31	9.1
30	19	[illegible]	[illegible]		34	4.9
25	17	24,617	-56.1		36	[illegible]
20	12	[illegible]	-52.7			
15	[illegible]	[illegible]	-50.3			
10	[illegible]	30,498	-50.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GRAND JUNCTION, COLO. 855 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	-5.7	-10.1	12	2.6
1000	31	221				
950	31	632				
900	31	1,062				
850	31	1,513			13	3.1
800	31	1,995	-2.6	-10.4	17	2.1
750	31	2,505	-4.6	-11.7	24	3.0
700	31	3,046	-7.3	-13.8	28	7.0
650	31	3,621	-9.9	-16.4	29	9.8
600	31	4,235	-13.0	-19.4	29	11.1
550	31	4,894	-16.7	-22.8	29	15.3
500	31	5,604	-21.0	-27.8	29	18.2
450	31	6,375	-26.2	-32.3	29	20.6
400	31	7,217	-32.2	-38.1	29	22.5
350	31	8,148	-39.4	-44.1	29	24.6
300	31	9,183	-46.9		29	27.2
250	31	10,372	-53.9		29	30.1
200	31	11,736	-58.7		29	27.8
175	31	12,626	-58.3		29	28.1
150	30	13,592	-58.3		29	25.0
125	29	14,729	-59.7		28	21.6
100	28	16,116	-62.0		28	17.8
80	27	17,482	-63.5		28	12.2
70	23	18,294	-61.6		28	10.2
60	23	19,251	-61.2		28	7.9
50	20	20,393	-60.0		29	6.6
40	19	21,781	-61.0		32	3.1
30	14	23,598	-58.8		02	3.0
25	13	24,788	-56.7		05	7.3
20	12	26,211	-55.2		06	8.8
15	9	28,036	-54.0			
10						
7						

*** GREAT FALLS, MONT. 885 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,118	-10.2	-16.8	23	3.5
1000	31	168				
950	31	571				
900	31	991				
850	31	1,433	-9.5	-15.7	26	8.1
800	31	1,903	-8.4	-13.3	27	12.4
750	31	2,403	-8.6	-13.1	28	15.4
700	31	2,935	-11.8	-16.6	29	18.3
650	31	3,499	-15.4	-20.6	29	19.5
600	31	4,099	-19.6	-24.8	30	18.3
550	31	4,740	-23.7	-30.3	30	20.5
500	31	5,430	-28.6	-34.2	30	22.7
450	31	6,178	-33.4	-36.2	30	26.5
400	31	6,996	-38.5	-39.2	30	31.9
350	31	7,906	-44.2	-41.2	30	33.0
300	31	8,922	-50.6		30	35.3
250	31	10,096	-55.7		30	34.7
200	31	11,510	-57.3		29	30.6
175	31	12,356	-56.4		29	27.9
150	31	13,336	-55.9		29	24.6
125	31	14,494	-56.9		29	19.7
100	27	15,906	-56.5		29	18.2
80	27	17,322	-57.0		29	14.6
70	25	18,164	-58.0		30	13.3
60	24	19,141	-58.4		30	12.1
50	22	20,283	-58.1		31	9.8
40	18	21,668	-56.7		33	9.4
30	18	23,495	-56.2		35	7.8
25	16	24,642	-55.6		36	10.4
20	14	26,074	-54.1		03	9.7
15	12	27,886	-52.8			
10	10	30,583	-51.0			
7	5	32,967	-48.4			

GREEN BAY, WIS. 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	-15.1	-17.7	29	3.0
1000	31	127				
950	31	518	-12.5	-15.1	30	5.4
900	31	931	-13.1	-17.4	30	6.5
850	31	1,366	-13.0	-20.1	30	8.0
800	31	1,828	-13.9	-21.0	29	9.4
750	31	2,317	-15.9	-22.6	29	12.6
700	31	2,834	-18.1	-25.1	29	14.0
650	31	3,385	-20.9	-28.0	29	15.4
600	31	3,973	-24.0	-31.7	29	16.7
550	31	4,603	-27.9	-35.3	29	18.4
500	31	5,282	-32.3	-39.3	29	19.6
450	31	6,018	-36.9	-40.7	29	23.4
400	31	6,824	-42.1	-44.5	28	27.7
350	31	7,720	-46.8		28	32.1
300	31	8,732	-50.2		28	35.1
250	31	9,916	-52.2		28	34.9
200	31	11,358	-52.8		28	36.3
175	31	12,220	-52.8		28	31.9
150	31	13,213	-54.2		28	31.5
125	31	14,378	-55.9		28	29.4
100	31	15,793	-57.4		28	24.8
80	31	17,198	-58.8		28	23.1
70	31	18,036	-59.3		28	23.7
60	31	19,000	-60.0		28	20.5
50	31	20,141	-58.7		28	18.7
40	30	21,549	-58.5		28	16.8
30	26	23,385	-55.4		28	13.2
25	26	24,552	-54.0		27	12.5
20	22	25,989	-52.4		27	9.5
15	19	27,846	-51.8		26	7.0
10	7	30,428	-48.5			
7						

GREENSBORO, N. C. 984 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	-.3	-4.0	28	1.5
1000	31	144				
950	31	557	1.8	-5.8	28	4.7
900	31	993	.9	-7.3	28	8.3
850	31	1,451	-.6	-8.5	28	11.0
800	31	1,935	-1.9	-11.5	28	13.5
750	31	2,447	-3.7	-12.8	28	17.0
700	31	2,990	-5.7	-16.3	28	19.9
650	31	3,569	-7.8	-19.4	28	22.4
600	31	4,188	-11.4	-21.7	28	24.5
550	31	4,850	-15.4	-26.2	28	27.5
500	31	5,563	-20.5	-31.6	28	31.3
450	31	6,335	-25.4	-36.6	28	34.3
400	31	7,180	-31.4	-40.4	27	37.6
350	31	8,116	-37.9	-45.4	27	40.3
300	31	9,159	-44.9		27	43.9
250	31	10,357	-52.5		28	48.3
200	31	11,782	-57.0		28	50.6
175	31	12,628	-56.8		28	48.1
150	31	13,602	-58.4		28	41.9
125	31	14,741	-61.2		28	37.0
100	30	16,117	-63.4		27	31.0
80	29	17,492	-65.2		28	24.3
70	27	18,318	-64.6		27	21.0
60	26	19,256	-64.3		28	15.7
50	26	20,375	-62.7		28	14.2
40	26	21,760	-59.7		27	13.7
30	26	23,571	-56.9		27	11.2
25	26	24,730	-55.6		26	7.7
20	26	26,155	-54.8		26	6.5
15	25	28,008	-53.3		28	5.7
10	16	30,623	-50.1			
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*** GUAM, MARIANA IS. 997 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.6	22.3	08	3.2
1000	31	86				
950	31	537	22.8	20.1	08	7.5
900	31	1,007	20.0	16.3	09	7.0
850	31	1,499	17.4	11.8	10	5.8
800	31	2,016	14.7	10.3	12	4.5
750	31	2,561	12.5	4.6	14	3.9
700	31	3,138	9.7	-1.3	16	3.5
650	31	3,751	6.7	-6.3	17	3.8
600	31	4,403	2.8	-11.4	18	3.7
550	31	5,103	-1.2	-14.8	20	3.8
500	31	5,856	-5.9	-19.2	21	3.8
450	31	6,676	-9.9	-26.8	20	3.5
400	31	7,575	-15.6	-32.8	20	3.1
350	31	8,572	-22.4	-38.8	21	2.8
300	31	9,682	-31.0	-45.2	24	2.9
250	31	10,948	-41.2	-52.0	24	3.7
200	31	12,423	-53.6		23	4.6
175	31	13,269	-60.2		23	4.6
150	31	14,213	-67.8		20	3.2
125	30	15,287	-76.0		15	3.4
100	29	16,548	-84.4		13	7.8
80	28	17,777	-83.0		11	7.4
70	27	18,531	-77.1		10	7.0
60	26	19,429	-71.2		09	8.8
50	25	20,520	-67.3		09	12.9
40	25	21,883	-62.7		09	14.0
30	24	23,676	-58.4		09	6.2
25	23	24,826	-55.6		33	1.0
20	23	26,263	-51.3		28	8.2
15	22	28,145	-48.8		28	13.6
10	20	30,829	-45.2		27	15.9
7	9	33,235	-39.9			

HILO, HAWAII 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	19.6	16.5	21	1.8
1000	30	99	20.4	16.4	20	2.0
950	30	542	18.1	14.3	17	3.2
900	30	1,004	15.3	11.9	18	3.7
850	30	1,486	12.5	8.2	20	4.1
800	30	1,994	10.0	2.2	21	5.1
750	30	2,529	7.7	-4.2	23	7.1
700	30	3,095	5.3	-9.0	23	7.7
650	30	3,697	1.8	-13.5	24	7.8
600	30	4,338	-2.0	-17.3	24	9.6
550	30	5,024	-6.4	-20.5	24	10.5
500	30	5,763	-11.5	-24.2	25	10.8
450	30	6,562	-17.1	-28.2	25	12.7
400	30	7,435	-23.0	-35.7	26	14.7
350	29	8,403	-29.5	-42.3	25	18.5
300	29	9,485	-36.5	-49.7	27	21.8
250	29	10,728	-44.3		28	25.3
200	29	12,194	-53.7		28	26.9
175	29	13,043	-58.5		28	27.6
150	29	13,999	-64.1		28	22.9
125	29	15,098	-70.8		28	16.9
100	28	16,402	-75.7		28	10.4
80	27	17,690	-76.5		26	3.6
70	27	18,467	-72.3		22	1.9
60	25	19,381	-69.7		11	1.4
50	25	20,478	-66.2		10	3.1
40	24	21,839	-63.6		07	2.1
30	23	23,616	-62.4		36	2.8
25	23	24,747	-60.3		28	2.2
20	23	26,151	-56.4		28	6.1
15	22	27,999	-52.1		27	10.6
10	20	30,650	-47.6		26	19.7
7	17	33,036	-42.8			

HUNTINGTON W. VA. 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	-3.0	-5.9	25	2.3
1000	31	148				
950	31	555	-2.9	-7.6	26	4.7
900	31	983	-4.9	-9.1	27	8.6
850	31	1,431	-6.0	-13.2	27	11.1
800	31	1,905	-6.9	-14.6	28	14.0
750	31	2,408	-8.4	-15.9	28	17.6
700	31	2,942	-9.9	-18.4	27	20.3
650	31	3,511	-12.3	-20.9	28	23.3
600	31	4,119	-15.3	-23.2	27	27.0
550	31	4,772	-19.0	-27.1	28	30.5
500	31	5,476	-23.2	-31.2	27	33.9
450	31	6,241	-28.0	-34.7	27	36.9
400	31	7,077	-33.7	-39.4	27	40.6
350	31	8,004	-39.7	-43.1	27	44.8
300	31	9,141	-46.4		27	46.5
250	31	10,232	-53.2		27	48.6
200	31	11,559	-55.7		28	47.7
175	31	12,509	-55.4		28	46.1
150	31	13,489	-57.1		28	43.5
125	31	14,637	-59.5		28	38.0
100	31	16,024	-61.9		27	34.7
80	29	17,392	-62.7		27	29.9
70	29	18,215	-62.7		27	28.4
60	28	19,160	-62.0		27	25.0
50	28	20,292	-60.8		27	21.0
40	25	21,675	-59.6		26	19.6
30	22	23,493	-55.9		26	16.4
25	22	24,654	-55.2		26	14.8
20	18	26,077	-53.0		25	11.9
15	16	27,931	-51.8		23	8.6
10	8	30,590	-46.1			
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*** INTERNATIONAL FALLS, MINN. 972 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-23.0	-26.9	28	1.8
1000	31	148				
950	31	526	-20.3	-23.0	30	2.9
900	31	928	-18.5	-21.5	30	5.6
850	31	1,356	-17.9	-22.5	31	7.7
800	31	1,810	-18.0	-23.8	30	9.1
750	31	2,291	-19.2	-25.0	30	9.9
700	31	2,802	-21.2	-26.8	30	12.1
650	31	3,347	-23.5	-29.5	30	13.7
600	31	3,928	-26.7	-32.2	30	15.2
550	31	4,552	-30.4	-35.5	30	17.2
500	31	5,224	-34.6	-39.9	30	18.6
450	31	5,953	-39.3	-42.7	30	20.6
400	31	6,750	-44.9	-44.2	30	21.5
350	31	7,635	-50.0		30	24.0
300	31	8,630	-53.9		30	25.3
250	31	9,802	-53.4		29	25.7
200	30	11,238	-52.6		29	26.4
175	30	12,100	-52.7		29	26.1
150	30	13,095	-53.3		29	25.4
125	30	14,265	-54.7		29	24.3
100	30	15,686	-56.6		29	22.6
80	30	17,096	-58.1		29	22.1
70	29	17,934	-58.5		29	20.7
60	27	18,914	-58.5		30	19.1
50	26	20,077	-58.7		30	16.3
40	25	21,496	-58.3		30	13.0
30	22	23,319	-55.4		31	10.5
25	21	24,488	-54.8		32	8.3
20	17	25,872	-52.6		32	4.6
15	13	27,801	-51.1		34	3.7
10	11	30,417	-50.2			
7	6	32,803	-46.0			

JACKSON, MISS. 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	6.3	3.4	06	.6
1000	31	162			19	.2
950	31	584	6.3	1.6	27	3.3
900	31	1,029	6.9	-2.6	27	6.7
850	31	1,498	5.8	-3.5	27	9.7
800	31	1,994	4.5	-5.6	27	11.6
750	31	2,517	2.3	-9.5	27	13.6
700	31	3,073	.3	-12.8	27	16.4
650	31	3,664	-2.8	-16.8	27	18.9
600	31	4,294	-6.3	-21.3	27	21.6
550	31	4,969	-10.5	-24.6	27	23.6
500	31	5,696	-15.3	-28.9	27	26.3
450	31	6,484	-20.3	-34.1	27	29.9
400	31	7,346	-26.4	-40.6	27	34.0
350	31	8,300	-33.5	-45.7	27	36.4
300	31	9,360	-42.0	-52.4	27	38.1
250	31	10,569	-51.4		27	41.7
200	31	11,992	-58.3		27	44.8
175	31	12,831	-59.6		26	45.6
150	31	13,791	-61.6		27	44.1
125	31	14,911	-65.4		27	39.8
100	31	16,256	-69.0		27	33.1
80	31	17,589	-69.6		27	23.9
70	30	18,386	-69.2		27	20.3
60	27	19,310	-67.7		27	16.8
50	24	20,411	-65.2		27	12.3
40	23	21,774	-62.3		27	10.8
30	22	23,563	-59.2		27	10.1
25	22	24,709	-58.0		27	9.0
20	22	26,124	-55.5		26	8.9
15	21	27,971	-53.3		26	7.4
10	12	30,571	-48.8			
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JOHN F. KENNEDY INT. AP NY 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	-3.3	-9.7	30	3.2
1000	30	120	-4.1	-10.9	31	4.8
950	30	524	-6.0	-11.0	29	7.3
900	30	946	-6.9	-13.7	28	10.1
850	30	1,392	-7.9	-16.5	28	13.3
800	30	1,862	-9.0	-17.5	28	16.1
750	30	2,361	-10.7	-19.5	28	18.5
700	30	2,889	-13.2	-21.8	28	22.3
650	30	3,452	-15.1	-23.9	28	25.4
600	30	4,053	-18.3	-27.9	27	28.4
550	30	4,698	-21.9	-32.2	28	29.9
500	30	5,393	-26.4	-36.5	27	35.3
450	29	6,143	-31.1	-38.0	28	39.0
400	29	6,970	-36.2	-41.5	27	42.3
350	29	7,889	-41.5	-41.9	28	40.6
300	29	8,918	-47.8		28	43.1
250	29	10,107	-53.1		28	43.4
200	28	11,527	-54.8		28	39.6
175	28	12,381	-54.9		27	39.0
150	28	13,367	-54.9		27	36.8
125	26	14,510	-56.5		27	34.5
100	26	15,919	-58.9		27	32.7
80	26	17,320	-58.8		26	30.4
70	26	18,159	-58.8		26	29.0
60	25	19,127	-57.9		26	28.4
50	24	20,284	-57.1		26	24.6
40	24	21,702	-54.8		25	20.6
30	23	23,553	-52.7		24	16.4
25	21	24,739	-52.4		25	17.2
20	20	26,189	-52.0		25	11.7
15	18	28,055	-51.5		25	7.2
10	12	30,693	-49.7			
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JOHNSTON IS., PACIFIC AREA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	24.0	18.9	06	2.4
1000	31	96	22.9	17.6	06	2.3
950	31	541	19.4	15.8	06	2.1
900	31	1,005	16.2	13.0	05	1.3
850	31	1,489	13.1	8.7	34	1.5
800	31	1,997	10.9	2.4	31	2.3
750	31	2,535	9.9	-7.8	29	3.5
700	31	3,106	7.8	-12.0	30	4.8
650	31	3,713	4.4	-14.3	30	6.3
600	31	4,361	.9	-18.5	30	8.3
550	31	5,054	-3.4	-22.9	30	10.1
500	31	5,801	-8.3	-27.2	30	12.5
450	31	6,611	-12.7	-31.7	31	15.3
400	31	7,501	-18.2	-36.6	30	17.1
350	31	8,488	-25.0	-42.1	30	19.0
300	31	9,587	-33.2	-48.8	30	22.1
250	31	10,843	-43.0		31	25.5
200	31	12,314	-53.2		31	25.6
175	30	13,164	-59.0		31	24.5
150	30	14,115	-66.1		31	21.7
125	28	15,205	-72.9		31	18.5
100	28	16,493	-78.5		31	11.8
80	26	17,759	-78.7		33	4.1
70	26	18,527	-74.8		08	3.0
60	26	19,436	-69.2		10	5.9
50	26	20,538	-65.3		09	8.8
40	25	21,904	-62.1		09	9.2
30	25	23,691	-60.8		08	4.3
25	24	24,833	-57.7		30	2.0
20	25	26,255	-53.6		28	7.5
15	23	28,126	-49.7		27	14.1
10	22	30,805	-46.4		27	16.6
7	11	33,141	-43.1			
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KEY WEST, FLA. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	3	20.3	17.3	07	2.4
1000	27	152	20.0	15.3	07	2.7
950	27	590	17.1	11.7	11	2.3
900	27	1,054	14.2	7.6	14	1.4
850	27	1,535	12.4	.9	27	1.0
800	27	2,042	10.2	-5.3	26	2.5
750	27	2,577	8.8	-11.3	28	4.1
700	27	3,146	6.5	-14.6	28	6.0
650	27	3,749	3.3	-19.3	28	7.4
600	27	4,395	-.3	-23.3	27	9.1
550	27	5,080	-4.5	-26.5	27	11.2
500	27	5,829	-9.7	-30.6	27	12.7
450	27	6,627	-15.9	-34.2	27	14.4
400	27	7,510	-22.9	-39.9	27	16.2
350	27	8,474	-30.3	-47.1	27	18.8
300	27	9,551	-38.9	-53.5	27	22.4
250	27	10,780	-46.7		26	27.9
200	27	12,231	-55.3		26	32.0
175	27	13,074	-59.9		26	30.7
150	27	14,025	-65.3		26	28.9
125	27	15,119	-70.9		26	24.0
100	25	16,418	-75.5		25	18.6
80	23	17,706	-76.6		26	11.7
70	23	18,476	-74.8		26	7.6
60	23	19,383	-69.2		26	4.8
50	23	20,486	-64.1		30	3.1
40	22	21,857	-62.0		29	5.0
30	21	23,653	-58.7		28	3.6
25	20	24,812	-56.7		29	1.9
20	19	26,229	-54.5		28	1.7
15	17	28,098	-50.2		29	6.3
10	14	30,774	-45.2		28	11.6
7	6	33,107	-42.5			
5	4	35,400	-38.0			

KING SALMON, ALASKA 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-20.2	-25.4	01	2.4
1000	31	115			01	3.5
950	31	504	-13.7	-21.1	04	3.6
900	31	916	-12.3	-20.9	01	2.8
850	31	1,354	-12.0	-22.5	34	2.9
800	31	1,816	-13.5	-24.8	33	4.2
750	31	2,306	-15.6	-27.2	32	5.1
700	31	2,824	-17.9	-29.6	31	5.3
650	31	3,375	-20.9	-31.5	31	5.8
600	31	3,962	-24.3	-34.3	31	6.5
550	31	4,592	-27.7	-37.8	31	7.7
500	31	5,272	-31.5	-39.8	31	8.2
450	31	6,012	-35.8	-41.9	31	9.1
400	31	6,822	-40.6	-45.0	31	9.8
350	31	7,725	-45.5		30	10.8
300	31	8,740	-49.5		31	12.1
250	31	9,929	-51.4		30	12.1
200	31	11,382	-49.8		29	12.1
175	31	12,257	-49.3		28	11.5
150	31	13,269	-48.9		28	10.5
125	31	14,466	-49.3		28	10.2
100	31	15,928	-49.5		28	7.7
80	30	17,387	-50.0		29	6.0
70	30	18,259	-50.4		29	4.4
60	30	19,265	-50.6		29	3.7
50	28	20,458	-49.9		32	3.1
40	27	21,917	-49.9		35	3.4
30	25	23,796	-50.1		02	3.5
25	23	24,971	-50.5		03	3.0
20	21	26,409	-51.5		04	5.8
15	12	28,323	-49.8		06	7.3
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+ KOROR, CAROLINE IS. 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	26.9	24.2	04	2.3
1000	31	78	26.5	22.6	04	2.7
950	31	531	23.5	19.3	05	4.7
900	31	1,002	20.5	15.5	05	4.5
850	31	1,495	17.6	11.9	06	3.5
800	31	2,012	15.3	7.7	06	2.5
750	31	2,558	12.9	2.7	08	2.0
700	31	3,135	10.0	-1.7	10	2.6
650	31	3,748	6.9	-5.2	10	3.7
600	31	4,402	3.1	-9.3	09	4.5
550	31	5,102	-.9	-13.6	09	5.1
500	31	5,857	-5.1	-17.8	10	5.1
450	31	6,678	-9.6	-23.7	11	5.3
400	31	7,579	-15.1	-29.4	11	5.5
350	31	8,578	-21.9	-36.5	11	5.3
300	31	9,691	-30.4	-44.3	11	4.6
250	31	10,960	-40.9	-51.1	12	6.1
200	31	12,437	-53.4		13	8.1
175	31	13,283	-60.2		13	9.2
150	31	14,227	-68.0		12	10.9
125	30	15,301	-76.2		11	12.5
100	30	16,559	-83.9		10	16.1
80	31	17,802	-80.1		09	9.4
70	29	18,569	-75.5		08	6.5
60	29	19,472	-71.3		09	9.6
50	29	20,561	-67.5		09	19.6
40	28	21,924	-62.0		09	24.4
30	26	23,739	-54.4		10	9.9
25	26	24,913	-52.4		23	1.5
20	26	26,367	-49.4		27	10.1
15	25	28,258	-47.7		26	18.1
10	20	30,956	-44.3		26	17.7
7	15	33,353	-40.7			
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KOTZEBUE, ALASKA 1025 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-25.6	-29.3	09	4.7
1000	31	183	-20.7	-28.6	10	4.1
950	31	564	-19.2	-26.1	09	1.7
900	31	967	-19.0	-25.8	03	1.3
850	31	1,392	-19.7	-25.9	36	2.1
800	31	1,841	-20.3	-25.4	36	3.4
750	31	2,319	-21.4	-26.3	35	4.1
700	31	2,826	-23.3	-29.0	34	5.3
650	31	3,366	-25.5	-32.2	34	5.5
600	31	3,943	-28.4	-34.6	33	5.9
550	31	4,563	-31.6	-35.8	32	7.0
500	31	5,233	-35.1	-37.3	31	7.1
450	31	5,961	-39.0	-40.7	29	8.0
400	31	6,761	-43.7	-41.3	28	8.7
350	31	7,653	-47.7		27	8.2
300	31	8,661	-50.9		27	11.4
250	31	9,842	-52.5		27	12.8
200	31	11,288	-51.2		26	13.5
175	31	12,159	-49.8		26	13.2
150	31	13,171	-48.6		26	13.1
125	31	14,371	-48.4		26	13.6
100	31	15,840	-48.3		25	13.7
80	31	17,311	-47.9		25	13.8
70	31	18,192	-48.1		25	11.7
60	31	19,208	-48.4		26	11.3
50	31	20,409	-47.9		26	10.4
40	31	21,880	-48.4		26	9.5
30	30	23,769	-49.0		26	8.7
25	28	24,973	-48.9		27	8.0
20	28	26,440	-48.4		26	10.2
15	21	28,342	-48.3			
10	6	30,969	-48.1			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS. 1009 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.4	22.7	07	6.0
1000	31	79	25.9	22.0	07	6.9
950	31	530	22.4	19.5	07	8.4
900	31	1,000	19.3	15.7	07	8.1
850	31	1,491	17.6	10.1	08	7.2
800	31	2,008	15.5	4.9	08	6.1
750	31	2,554	13.5	-1.3	08	5.5
700	31	3,133	10.8	-5.8	08	6.0
650	31	3,747	7.3	-11.9	08	6.5
600	31	4,401	3.6	-16.0	08	7.5
550	31	5,101	-.7	-20.1	08	7.9
500	31	5,856	-5.1	-24.5	08	8.3
450	31	6,677	-9.7	-28.8	07	8.3
400	31	7,576	-15.4	-33.1	06	7.6
350	31	8,572	-22.2	-40.2	06	5.6
300	31	9,685	-30.9	-46.7	04	4.6
250	31	10,952	-40.9	-54.5	07	3.2
200	31	12,430	-53.3	-64.4	08	2.3
175	31	13,276	-60.2	-66.9	10	1.6
150	31	14,220	-67.7		07	2.3
125	31	15,295	-76.0		06	5.1
100	28	16,558	-83.8		07	8.9
80	27	17,787	-83.9		09	10.8
70	27	18,538	-78.4		09	8.6
60	27	19,432	-72.7		09	11.1
50	27	20,515	-68.2		09	18.2
40	27	21,871	-63.3		09	21.4
30	27	23,667	-57.0		08	10.4
25	27	24,828	-54.1		31	1.9
20	24	26,277	-50.9		27	11.0
15	23	28,162	-47.2		26	17.5
10	21	30,872	-43.8		26	16.2
7	18	33,286	-41.4		26	11.6
5	13	35,569	-39.2		27	4.4

LAKE CHARLES, LA. 1018 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	9.9	8.0	06	1.3
1000	31	154	11.0	7.2	11	.7
950	31	583	10.7	5.0	23	3.4
900	31	1,034	10.2	1.2	25	5.6
850	31	1,509	3.6	-2.6	26	7.0
800	31	2,009	6.9	-5.5	26	8.7
750	31	2,537	4.7	-10.6	27	10.8
700	31	3,097	2.7	-16.8	27	13.6
650	31	3,694	-.2	-19.0	27	15.2
600	31	4,329	-4.2	-21.3	27	17.4
550	31	5,010	-8.7	-24.9	27	18.9
500	31	5,741	-13.5	-29.5	27	21.1
450	31	6,534	-18.8	-34.9	27	23.6
400	30	7,400	-25.3	-40.1	26	26.5
350	30	8,359	-32.4	-45.7	26	29.9
300	30	9,425	-40.7	-49.9	27	32.6
250	30	10,640	-50.2		26	36.2
200	30	12,071	-57.7		26	39.8
175	30	12,910	-59.8		26	40.2
150	30	13,867	-62.5		26	39.1
125	30	14,982	-66.7		26	33.8
100	30	16,317	-70.8		26	28.7
80	29	17,635	-72.0		26	19.7
70	29	18,423	-71.3		27	15.8
60	29	19,342	-68.5		27	13.3
50	28	20,443	-65.6		27	10.0
40	26	21,822	-62.9		26	9.6
30	24	23,600	-60.3		26	8.9
25	24	24,743	-58.2		26	7.7
20	22	26,156	-55.6		28	8.1
15	16	27,988	-53.3		26	9.0
10	5	30,571	-49.4			
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LANDER, WYO. 825 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,697	-5.9	-12.3	26	2.3
1000	31	166				
950	31	579				
900	31	1,011				
850	31	1,463				
800	31	1,942	-2.9	-13.2	27	2.0
750	31	2,452	-4.8	-15.3	29	5.5
700	31	2,991	-8.3	-18.4	30	10.5
650	31	3,562	-12.2	-21.4	30	15.0
600	31	4,170	-15.5	-24.4	30	19.3
550	31	4,822	-19.1	-28.5	30	20.7
500	31	5,525	-23.6	-32.3	30	22.8
450	31	6,288	-28.7	-35.8	29	25.3
400	31	7,120	-34.8	-41.9	29	27.7
350	31	8,043	-41.3	-44.5	29	31.0
300	31	9,070	-48.8		29	33.0
250	31	10,251	-54.9		29	34.1
200	31	11,663	-58.6		29	29.3
175	31	12,504	-57.8		29	28.8
150	31	13,478	-57.0		29	26.0
125	31	14,629	-58.7		29	22.4
100	30	16,023	-60.7		29	18.4
80	29	17,403	-60.8		29	14.1
70	29	18,234	-61.2		29	11.5
60	26	19,188	-61.2		29	10.4
50	26	20,317	-61.5		30	9.2
40	22	21,704	-61.8		32	8.8
30	19	23,483	-59.9		34	7.5
25	18	24,611	-59.2		35	4.6
20	14	26,029	-56.4		32	3.7
15	11	27,986	-53.5			
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* LIHUE KAUAI, HAWAII 1007 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	19.2	15.6	26	2.4
1000	31	97	20.1	15.7	27	1.7
950	31	538	17.3	14.1	24	1.4
900	31	998	14.2	11.3	24	2.7
850	31	1,479	11.5	7.7	23	5.5
800	31	1,985	9.2	1.7	23	6.4
750	31	2,517	6.5	-4.3	23	6.9
700	31	3,081	3.4	-7.8	24	7.9
650	31	3,679	.4	-12.2	24	8.9
600	31	4,317	-3.0	-17.3	25	10.6
550	31	5,002	-7.1	-20.0	25	12.1
500	31	5,737	-12.4	-25.5	25	13.5
450	31	6,534	-18.0	-30.6	26	14.9
400	31	7,403	-24.6	-36.7	27	16.8
350	31	8,366	-31.0	-43.4	27	18.9
300	31	9,441	-37.6	-49.0	28	24.3
250	31	10,684	-43.6	-55.3	28	30.1
200	31	12,157	-51.8		29	30.8
175	31	13,014	-56.4		29	28.9
150	31	13,980	-61.8		28	26.1
125	31	15,091	-68.2		28	21.2
100	31	16,409	-73.7		28	14.7
80	29	17,716	-73.4		26	6.2
70	29	18,502	-70.8		25	3.1
60	28	19,422	-68.1		24	1.4
50	28	20,524	-65.6		26	.3
40	28	21,889	-63.1		32	2.0
30	27	23,668	-61.2		31	3.0
25	26	24,807	-58.8		29	3.6
20	23	26,219	-55.4		28	5.8
15	22	28,065	-52.3		27	8.6
10	22	30,727	-46.0		25	13.7
7	18	33,124	-41.5		25	16.4
5	6	35,411	-38.8			

LITTLE ROCK, ARK. 1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	1.5	[illegible]	01	.7
1000	31	157	.4	-4.3	33	.9
950	31	574	1.7	-4.0	26	3.8
900	31	1,014	2.2	-7.0	27	6.8
850	31	1,479	2.8	-9.5	28	9.7
800	31	1,971	1.3	-11.3	28	11.5
750	31	2,491	-.7	-13.4	27	14.3
700	31	3,041	-2.8	[illegible]	27	[illegible]
650	25	3,612	-5.4	-18.2	27	[illegible]
600	25	4,237	-8.8	-22.2	27	[illegible]
550	25	4,905	-12.8	-25.6	27	26.3
500	25	5,626	-17.4	-30.2	27	28.2
450	25	6,407	-22.8	-34.8	27	[illegible]
400	25	7,261	-28.6	-40.4	27	33.9
350	25	8,208	-35.1	-44.9	27	37.7
300	25	9,263	-42.9	-49.0	27	41.8
250	25	10,469	-51.9		27	44.1
200	25	11,889	-58.4		27	49.2
175	25	12,728	-59.7		27	49.2
150	25	13,689	-60.7		27	47.4
125	25	14,816	-63.6		27	[illegible]
100	24	16,177	-66.2		27	34.1
80	23	17,526	-67.2		27	26.9
70	[illegible]	18,329	-66.9		27	[illegible]
60	22	19,262	-66.3		28	19.1
50	20	20,371	-63.6		28	15.5
40	19	21,747	-62.7		28	12.3
30	16	23,527	-60.1		27	11.8
25	16	24,673	-57.7		27	11.8
20	14	26,101	-56.2		27	[illegible]
15	7	27,950	-53.5			

MCGRATH, ALASKA 1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	103	-35.0	-29.7	06	.2
1000	29	160			03	1.6
950	29	532	-23.8	-28.4	05	4.3
900	29	930	-20.2	-26.3	06	6.7
850	29	1,356	-18.3	-25.8	05	6.0
800	29	1,808	-18.9	-27.0	04	5.3
750	29	2,288	-19.6	-27.8	02	4.8
700	29	2,799	-21.2	-28.8	36	5.0
650	29	3,343	-23.7	-31.4	35	5.7
600	29	3,925	-26.5	-32.6	35	6.7
550	29	4,550	-29.7	-36.3	34	7.5
500	29	5,223	-33.9	-39.6	33	7.6
450	29	5,956	-38.0	-42.3	33	8.0
400	29	6,759	-42.6	-43.7	33	9.7
350	29	7,655	-46.8		31	9.5
300	29	8,667	-49.9		30	11.3
250	28	9,860	-50.8		29	11.5
200	28	11,318	-49.7		28	11.8
175	28	12,194	-48.3		27	12.9
150	28	13,211	-47.7		27	12.5
125	28	14,416	-47.3		27	12.4
100	28	15,888	-48.3		27	10.2
80	27	17,355	-48.7		27	10.0
70	26	18,229	-48.6		27	8.2
60	25	19,237	-48.7		27	6.4
50	23	20,439	-49.0		27	5.7
40	21	21,889	-49.9		27	3.3
30	17	23,784	-49.6		26	4.6
25	16	24,989	-49.5		25	5.5
20	14	26,434	-50.6			
15	9	28,302	-50.4			
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+ MAJURO, MARSHALL IS. 1009 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.2	23.2	07	4.7
1000	31	85	26.6	19.1	07	5.7
950	31	536	22.9	17.6	07	7.0
900	31	1,006	20.3	13.3	08	6.4
850	31	1,497	17.6	9.1	08	6.1
800	31	2,015	15.8	4.2	09	5.6
750	31	2,561	13.6	-2.0	09	5.7
700	31	3,140	10.9	-5.9	08	5.9
650	31	3,755	7.6	-9.7	09	6.6
600	31	4,410	4.0	-14.5	08	8.1
550	31	5,111	.0	-17.8	07	9.2
500	31	5,868	-4.5	-23.0	08	9.6
450	31	6,691	-9.0	-28.3	07	9.7
400	31	7,594	-14.3	-32.3	06	8.2
350	31	8,596	-21.2	-38.6	06	6.2
300	31	9,712	-29.5	-45.2	04	4.5
250	31	10,987	-39.7	-53.0	05	3.1
200	31	12,472	-52.1		09	1.6
175	31	13,324	-58.9		11	1.9
150	31	14,274	-66.6		09	1.9
125	31	15,356	-74.4		05	4.8
100	30	16,627	-82.1		06	8.3
80	30	17,870	-81.7		08	8.5
70	30	18,631	-75.8		08	8.1
60	30	19,537	-69.7		09	11.8
50	30	20,636	-64.9		09	19.5
40	29	22,016	-59.3		09	21.2
30	27	23,849	-52.9		09	5.4
25	26	25,031	-50.6		27	5.0
20	25	26,490	-47.9		27	12.3
15	22	28,396	-45.6		27	18.0
10	17	31,127	-42.2		27	14.7
7	7	33,555	-37.9			
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* MEDFORD, OREG. 976 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	.4	-1.2	17	.3
1000	31	203				
950	31	616	1.1	-.9	20	.4
900	31	1,052	1.6	-3.1	21	1.5
850	31	1,513	1.3	-6.5	25	3.6
800	31	2,000	-.7	-9.2	27	5.1
750	31	2,513	-3.2	-13.3	28	7.9
700	31	3,057	-5.8	-16.6	28	11.0
650	31	3,634	-8.8	-19.5	29	13.7
600	31	4,250	-12.2	-21.8	28	16.1
550	31	4,911	-16.0	-26.0	29	18.0
500	31	5,622	-20.9	-31.7	29	20.0
450	31	6,393	-26.0	-35.5	29	21.2
400	31	7,236	-31.9	-40.6	29	23.1
350	31	8,168	-39.0	-43.8	29	24.2
300	31	9,206	-46.6		29	26.4
250	31	10,393	-55.0		29	28.7
200	31	11,794	-61.9		29	25.0
175	30	12,624	-60.7		29	25.2
150	30	13,588	-58.9		29	22.7
125	30	14,728	-60.6		29	19.9
100	30	16,112	-62.3		29	17.0
80	29	17,489	-63.3		30	12.9
70	29	18,311	-62.8		31	10.4
60	29	19,262	-62.3		32	8.2
50	29	20,390	-61.7		34	5.5
40	29	21,774	-61.6		01	5.1
30	29	23,560	-60.8		03	7.4
25	27	24,697	-60.3		04	9.2
20	27	26,092	-59.0		05	10.8
15	23	27,905	-56.6		06	11.7
10	19	30,462	-51.8		06	11.1
7	19	32,809	-45.9		08	9.5
5	11	35,102	-41.6			

MERIDA, MEXICO 1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	17.7	16.6	10	.9
1000	31	140	20.9	18.0	10	4.3
950	31	584	18.9	14.8	11	5.6
900	31	1,048	16.7	10.2	11	3.9
850	31	1,533	14.1	5.9	13	1.9
800	31	2,043	11.9	.6	16	1.6
750	31	2,582	10.3	-7.1	16	.5
700	31	3,154	7.8	-11.5	31	1.1
650	31	3,761	4.7	-14.8	31	2.2
600	31	4,409	1.0	-19.4	29	3.5
550	30	5,103	-3.5	-23.8	27	3.0
500	30	5,849	-8.4	-28.3	25	4.4
450	30	6,657	-14.2	-33.0	26	6.5
400	30	7,539	-21.1	-37.4	25	8.4
350	29	8,512	-28.5	-43.3	25	10.0
300	29	9,595	-36.8	-50.3	25	13.8
250	29	10,833	-45.9		23	18.3
200	29	12,291	-54.2		23	21.4
175	28	13,137	-59.0		23	20.8
150	28	14,093	-64.1		23	19.5
125	28	15,194	-70.0		24	16.0
100	27	16,499	-76.7		23	8.9
80	26	17,774	-77.4		23	5.6
70	26	18,544	-75.6		24	4.2
60	26	19,450	-69.7		27	1.2
50	26	20,551	-64.9		07	1.2
40	25	21,922	-62.4		09	.6
30	25	23,710	-59.5		30	2.3
25	25	24,860	-57.0		34	1.6
20	23	26,275	-54.2		30	3.1
15	14	28,142	-50.2		28	7.7

MIAMI, FLA. 1018 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	16.3	13.9	36	.7
1000	31	158	17.9	12.7	06	.8
950	31	597	15.8	10.5	11	1.4
900	31	1,055	13.0	7.0	20	.6
850	31	1,534	11.1	.7	25	2.1
800	31	2,039	9.2	-5.5	28	3.4
750	31	2,572	7.9	-11.0	28	5.3
700	31	3,139	5.3	-13.9	28	6.5
650	31	3,740	2.4	-17.8	28	8.9
600	31	4,383	-1.2	-21.2	28	10.8
550	31	5,071	-5.5	-25.0	27	12.7
500	31	5,811	-10.6	-29.6	27	15.0
450	31	6,613	-16.1	-34.1	28	17.8
400	31	7,488	-22.7	-38.7	28	19.2
350	31	8,457	-30.0	-45.0	28	22.0
300	31	9,532	-38.4	-51.3	27	24.6
250	31	10,764	-46.2		26	29.2
200	31	12,221	-54.0		26	33.6
175	30	13,068	-58.3		26	33.0
150	29	14,026	-63.7		26	30.5
125	29	15,129	-69.3		26	26.7
100	29	16,445	-74.1		26	20.8
80	28	17,737	-74.9		26	14.8
70	28	18,516	-73.3		26	10.6
60	28	19,430	-68.2		26	7.1
50	27	20,540	-63.4		27	6.9
40	25	21,924	-61.0		27	5.9
30	25	23,724	-58.0		29	5.4
25	25	24,878	-56.1		28	3.7
20	24	26,302	-54.3		28	3.1
15	19	28,153	-50.8		29	7.8
10	11	30,814	-46.4			

MIDLAND, TEXAS 917 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	1.6	-7.8	30	1.3
1000	31	165				
950	31	584				
900	31	1,024	7.0	-5.5	28	2.5
850	31	1,496	9.0	-9.5	28	6.1
800	31	1,997	6.8	-11.6	28	8.6
750	31	2,524	3.8	-13.5	28	10.2
700	31	3,081	1.4	-15.9	27	11.5
650	31	3,675	-1.5	-18.4	26	13.7
600	31	4,307	-5.6	-23.3	26	16.4
550	31	4,983	-10.2	-26.9	26	18.4
500	31	5,710	-15.3	-30.6	26	19.9
450	31	6,498	-20.6	-35.6	26	22.2
400	31	7,359	-27.0	-41.7	26	24.9
350	31	8,311	-33.7	-47.4	26	29.6
300	31	9,371	-41.7	-52.9	26	35.2
250	31	10,582	-51.3		26	36.3
200	31	12,005	-58.6		26	34.8
175	31	12,841	-60.3		26	33.2
150	31	13,799	-62.1		26	31.6
125	31	14,917	-65.4		26	29.3
100	29	16,271	-68.5		27	25.3
80	29	17,603	-69.6		27	20.2
70	29	18,399	-69.3		27	16.1
60	27	19,320	-67.7		28	13.8
50	27	20,422	-66.0		27	11.2
40	27	21,783	-64.1		28	11.2
30	27	23,561	-60.9		26	9.9
25	27	24,700	-58.6		26	11.0
20	24	26,104	-57.0		26	10.1
15	21	27,926	-55.0		25	12.9
10	7	30,521	-48.8			
7						

MONETT, MO. 966 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	438	-2.4	-5.5	11	.3
1000	31	159				
950	31	568	-2.2	-7.3	27	1.4
900	30	1,000	-.2	-11.2	27	5.8
850	30	1,458	.2	-13.6	28	8.3
800	30	1,943	-1.3	-14.1	28	10.3
750	30	2,455	-3.6	-16.3	28	12.1
700	30	2,998	-6.1	-19.2	28	14.7
650	30	3,575	-8.8	-21.5	28	18.0
600	30	4,191	-12.1	-25.4	28	22.3
550	30	4,852	-15.8	-29.2	28	26.7
500	30	5,565	-20.1	-33.1	27	30.3
450	30	6,339	-24.9	-38.6	28	32.2
400	30	7,185	-31.2	-43.6	28	35.0
350	30	8,120	-38.0	-46.7	28	40.0
300	30	9,161	-46.1		27	44.1
250	30	10,351	-54.4		27	47.9
200	29	11,765	-59.0		27	47.4
175	29	12,604	-58.4		27	47.2
150	29	13,571	-59.6		27	45.6
125	27	14,714	-62.3		27	41.7
100	26	16,090	-64.2		27	37.2
80	26	17,453	-64.7		27	24.8
70	25	18,269	-64.6		28	21.5
60	26	19,211	-64.5		27	17.7
50	23	20,330	-62.8		28	15.2
40	[illegible]	21,712	-61.7		28	11.7
30	19	23,506	-59.0		28	9.9
25	14	24,645	-57.9		27	9.5
20	13	26,048	-55.9		26	9.7
15	12	27,877	-52.8		25	7.7
10	8	30,458	-47.1			
7						

MONTGOMERY, ALA. 1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	57	5.5	2.2	32	1.1
1000	31	162	6.9	1.8	30	2.1
950	31	585	6.9	.3	29	4.8
900	31	1,029	6.4	-3.1	29	7.5
850	31	1,498	5.7	-5.1	28	9.5
800	31	1,992	4.1	-6.2	27	12.1
750	31	2,516	1.9	-7.8	27	14.4
700	31	3,070	-.4	-11.6	27	17.5
650	31	3,660	-3.3	-15.8	27	20.1
600	31	4,289	-6.9	-20.2	27	22.3
550	31	4,962	-11.2	-22.5	27	24.0
500	31	5,688	-15.4	-28.7	27	27.6
450	31	6,475	-20.8	-32.6	27	31.2
400	31	7,336	-26.7	-38.8	27	34.4
350	31	8,289	-33.8	-44.6	27	37.8
300	31	9,348	-42.0	-48.9	27	40.8
250	31	10,558	-51.2		27	44.2
200	31	11,985	-57.0		27	47.2
175	31	12,827	-58.8		27	47.8
150	31	13,792	-60.9		27	44.8
125	31	14,915	-64.9		27	42.0
100	31	16,262	-68.4		27	32.7
80	29	17,594	-69.5		27	24.6
70	29	18,392	-69.2		27	20.5
60	29	19,318	-67.1		27	16.6
50	29	20,426	-64.5		27	14.0
40	29	21,800	-61.7		27	13.1
30	29	23,597	-58.2		26	10.4
25	29	24,751	-56.1		26	8.9
20	29	26,178	-53.5		26	5.5
15	26	28,025	-52.7		26	5.0
10	21	30,672	-49.0		28	5.1
7	17	33,030	-45.8			

NASHVILLE, TENN. 998 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	.4	-3.5	31	1.2
1000	31	162			35	2.7
950	31	573	-1.0	-5.4	28	3.6
900	31	1,004	-1.7	-8.9	28	6.8
850	31	1,459	-1.5	-12.4	28	10.3
800	31	1,942	-2.4	-12.8	28	13.5
750	31	2,453	-3.8	-15.0	28	17.1
700	31	2,996	-5.7	-17.0	28	19.9
650	31	3,574	-8.5	-19.6	28	23.7
600	31	4,191	-11.6	-22.8	27	26.6
550	31	4,853	-15.7	-27.0	27	29.8
500	31	5,565	-20.4	-30.9	27	33.2
450	31	6,338	-25.1	-34.5	27	36.4
400	31	7,184	-31.0	-38.6	27	39.2
350	31	8,121	-37.7	-43.6	27	42.4
300	31	9,164	-45.5		27	46.1
250	30	10,354	-53.4		27	49.7
200	30	11,775	-57.1		27	51.0
175	30	12,619	-57.4		27	52.2
150	30	13,590	-59.1		27	48.2
125	30	14,726	-61.9		27	43.2
100	30	16,100	-64.0		27	36.1
80	30	17,460	-65.7		27	29.6
70	29	18,281	-65.8		27	25.2
60	29	19,220	-64.6		27	20.4
50	28	20,339	-63.6		27	16.5
40	27	21,707	-62.4		27	14.4
30	27	23,500	-58.1		27	13.1
25	26	24,655	-56.7		26	10.9
20	25	26,083	-54.9		26	8.8
15	24	27,929	-52.6		25	7.1
10	20	30,560	-49.5		26	7.2
7	13	32,915	-47.6			

* NOME, ALASKA 1023 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	-21.3	-25.5	05	2.9
1000	31	173	-16.9	-22.9	06	3.6
950	31	558	-16.7	-23.0	04	2.2
900	31	964	-16.7	-23.7	01	2.2
850	31	1,393	-17.0	-24.8	36	3.3
800	31	1,847	-17.8	-26.0	35	4.6
750	31	2,329	-19.1	-27.6	34	6.2
700	31	2,840	-21.3	-29.0	33	7.1
650	31	3,385	-23.9	-31.8	33	8.0
600	31	3,966	-26.8	-34.5	32	9.4
550	31	4,590	-29.9	-36.4	32	9.1
500	31	5,263	-34.0	-38.7	32	8.7
450	31	5,994	-38.4	-41.9	31	[illegible]
400	31	6,796	-42.9	-42.8	32	[illegible]
350	31	7,690	-47.6		31	9.9
300	31	8,698	-51.1		31	[illegible]
250	31	9,878	-52.6		29	[illegible]
200	31	11,322	-51.7		28	[illegible]
175	31	12,191	-50.5		28	[illegible]
150	31	13,201	-49.1		28	[illegible]
125	31	14,398	-48.8		27	[illegible]
100	30	15,862	-48.8		27	8.5
80	30	17,329	-48.6		27	7.3
70	[illegible]	[illegible]	-48.7		27	[illegible]
60	29	[illegible]	-48.6		27	6.7
50	[illegible]	20,417	-48.7		28	5.2
40	27	21,684	-48.8		27	[illegible]
30	27	23,772	-49.8		28	3.0
25	27	24,965	-49.6		27	3.1
20	26	26,429	-49.3		29	3.9
15	22	28,335	-47.6		31	2.4
10	16	31,045	-44.9		29	[illegible]
7	9	33,422	-43.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NORTH PLATTE, NEBR. 916 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	847	-9.4	-12.2	35	1.0
1000	31	166				
950	31	567				
900	31	987	-7.1	-12.2	31	3.9
850	31	1,437	-3.0	-11.2	31	11.1
800	31	1,917	-4.0	-12.5	30	13.0
750	31	2,424	-6.3	-14.6	30	14.8
700	31	2,961	-9.1	-17.2	30	16.7
650	31	3,531	-12.6	-20.5	30	18.2
600	31	4,138	-15.9	-24.3	29	20.0
550	31	4,789	-19.8	-28.4	30	22.0
500	31	5,490	-24.1	-33.0	29	24.8
450	31	6,252	-29.0	-38.7	29	26.8
400	31	7,084	-34.8	-43.5	29	29.4
350	31	8,007	-41.1	-44.8	29	32.4
300	31	9,036	-48.0		29	34.1
250	31	10,222	-54.0		29	36.8
200	31	11,639	-57.7		29	38.7
175	31	12,483	-57.0		28	36.9
150	31	13,458	-57.3		28	33.2
125	31	14,608	-58.8		28	30.2
100	31	16,005	-60.2		28	26.4
80	31	17,392	-61.6		28	21.2
70	30	18,228	-61.4		29	17.6
60	27	19,193	-60.8		28	14.7
50	23	20,329	-60.2		29	10.3
40	[illegible]	21,717	-60.7		29	8.4
30	[illegible]	23,514	-59.3		31	6.4
25	18	24,697	-57.4		36	4.3
20	17	26,132	-55.9		03	4.7
15	13	28,034	-52.8		05	10.4
10	5	30,746	-50.0			
7						
5						

OAKLAND, CALIF. 1021 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	6	6.9	4.6	36	.3
1000	31	180	9.0	2.6	36	.8
950	31	605	9.2	-.7	35	2.5
900	31	1,054	8.9	-3.9	34	4.5
850	31	1,525	7.1	-7.5	33	5.0
800	31	2,022	4.9	-10.4	32	5.6
750	31	2,545	2.2	-13.5	31	6.7
700	31	3,099	-.6	-16.2	31	8.7
650	30	3,688	-3.9	-19.9	31	10.2
600	30	4,315	-8.0	-23.6	31	11.7
550	30	4,985	-12.5	-27.9	30	12.9
500	30	5,706	-17.5	-31.0	30	14.0
450	30	6,486	-23.2	-36.3	30	15.9
400	30	7,338	-29.5	-41.7	30	18.2
350	30	8,280	-36.8	-47.0	30	17.1
300	30	9,325	-45.3		30	16.9
250	30	10,518	-54.3		30	17.5
200	30	11,920	-61.4		30	19.8
175	30	12,749	-60.7		29	20.8
150	29	13,716	-60.6		29	19.1
125	27	14,842	-62.4		29	17.4
100	27	16,210	-65.0		30	14.3
80	27	17,567	-66.2		30	11.0
70	27	18,377	-66.2		30	9.0
60	27	19,313	-65.4		30	7.0
50	26	20,423	-64.2		32	5.3
40	26	21,791	-63.5		34	3.6
30	25	23,573	-61.6		03	4.1
25	24	24,720	-60.8		04	4.0
20	24	26,112	-59.4		06	5.7
15	23	27,928	-56.6		05	4.2
10	[illegible]	30,541	-50.8		05	5.5
7	8	33,120	-47.1			

OMAHA, NEBR. 969 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	403	-11.0	-14.6	31	1.3
1000	31	157				
950	31	553	-9.9	-13.1	30	3.1
900	31	973	-6.8	-12.6	30	7.3
850	31	1,421	-5.5	-14.5	30	9.9
800	31	1,896	-6.2	-14.8	29	12.7
750	31	2,400	-8.2	-15.9	29	14.2
700	31	2,933	-10.9	-18.9	29	16.3
650	31	3,499	-13.7	-20.3	29	19.1
600	31	4,105	-16.7	-23.8	29	22.8
550	31	4,753	-20.8	-27.7	29	24.4
500	31	5,451	-25.6	-32.1	29	26.7
450	31	6,208	-30.5	-37.1	28	29.4
400	31	7,035	-36.2	-41.9	29	32.6
350	31	7,952	-42.2	-44.2	29	36.5
300	31	8,978	-48.4		28	40.0
250	31	10,162	-54.1		28	41.9
200	31	11,585	-56.0		28	36.0
175	31	12,437	-55.4		28	34.5
150	31	13,419	-56.0		28	31.1
125	31	14,575	-57.3		27	25.9
100	30	15,979	-59.3		28	22.4
80	29	17,375	-60.6		29	19.9
70	29	18,206	-60.9		29	16.5
60	29	19,164	-61.0		30	12.0
50	27	20,306	-60.9		30	12.5
40	25	21,679	-60.5		30	11.7
30	23	23,482	-59.4		30	10.3
25	22	24,625	-58.2		32	9.3
20	17	26,069	-55.3		33	6.2
15	11	27,916	-50.6			

PAGO PAGO, AMERICAN SAMOA + 1008 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	5	28.7	24.3	07	1.8
1000	31	79	27.4	20.9	06	2.3
950	31	533	23.9	18.5	04	2.9
900	31	1,004	20.6	15.1	03	2.8
850	31	1,496	17.6	11.2	03	2.9
800	31	2,013	15.4	6.8	03	2.5
750	31	2,559	12.8	2.7	02	2.0
700	31	3,136	9.7	-.9	03	1.5
650	31	3,748	6.7	-4.9	03	1.2
600	31	4,401	3.1	-9.0	04	1.0
550	31	5,102	-.6	-14.1	01	.6
500	31	5,858	-4.7	-18.2	35	.8
450	31	6,680	-9.7	-23.8	33	1.1
400	31	7,579	-15.5	-29.8	33	1.1
350	31	8,577	-22.4	-36.9	26	1.5
300	31	9,687	-31.0	-44.7	24	1.8
250	31	10,953	-41.3	-52.9	21	2.4
200	31	12,428	-53.6		20	2.9
175	31	13,274	-60.1		20	2.5
150	31	14,221	-66.8		25	3.6
125	31	15,305	-73.6		25	3.7
100	31	16,587	-79.7		11	2.2
80	31	17,855	-77.4		09	10.3
70	31	18,628	-73.7		09	15.3
60	30	19,538	-69.6		09	18.7
50	29	20,636	-64.5		09	22.8
40	29	22,017	-59.6		09	25.0
30	27	23,837	-55.1		09	25.1
25	27	25,006	-53.6		09	23.3
20	26	26,453	-50.2		09	22.0
15	25	28,342	-45.8		09	16.9
10	19	31,059	-43.1		09	19.8
7	10	33,453	-40.3			

PEORIA, ILL. * 994 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	200	-9.8	-12.9	27	1.8
1000	31	154				
950	31	551	-8.8	-13.4	27	5.1
900	31	971	-7.6	-15.5	29	7.9
850	31	1,416	-7.7	-16.5	29	10.3
800	31	1,887	-8.4	-19.4	29	12.7
750	31	2,386	-10.3	-21.2	29	15.0
700	31	2,915	-12.5	-21.8	29	18.0
650	31	3,478	-15.2	-23.5	29	21.8
600	31	4,079	-18.6	-26.5	28	23.8
550	31	4,723	-22.4	-29.4	28	27.5
500	31	5,418	-26.4	-34.3	28	32.1
450	31	6,172	-30.9	-38.6	28	36.2
400	31	6,999	-36.4	-42.8	28	41.6
350	31	7,915	-42.6	-45.4	27	44.7
300	31	8,939	-49.1		27	48.1
250	31	10,120	-54.5		27	48.7
200	31	11,545	-55.2		28	45.6
175	31	12,397	-55.4		28	43.9
150	31	13,379	-56.3		28	39.9
125	31	14,531	-58.5		27	36.5
100	31	15,928	-59.9		28	31.3
80	31	17,315	-61.6		28	25.7
70	31	18,142	-61.7		28	23.4
60	31	19,096	-62.3		28	20.4
50	31	20,223	-62.1		28	18.8
40	30	21,612	-61.0		28	16.6
30	30	23,409	-58.4		27	13.1
25	30	24,561	-56.6		27	11.9
20	30	25,983	-54.7		26	9.0
15	29	27,830	-53.5		26	7.0
10	25	30,463	-50.1		28	4.4
7	23	32,825	-46.0		30	7.4
5	16	35,044	-42.9			

PITTSBURGH, PA. * 972 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	359	-6.2	-10.1	25	3.0
1000	31	137				
950	31	5[illegible]	-6.5	-10.2	26	5.9
900	31	96[illegible]	-8.0	-12.0	27	9.5
850	31	1,404	-9.3	-17.4	27	12.2
800	31	1,872	-10.6	-19.2	28	15.6
750	31	2,367	-12.1	-21.7	28	18.3
700	31	2,893	-13.9	-25.5	28	20.7
650	31	3,455	-15.9	-26.7	28	24.2
600	31	4,054	-18.9	-29.5	27	26.0
550	31	4,698	-22.6	-32.4	27	28.6
500	31	5,392	-26.5	-36.6	27	31.5
450	31	6,146	-31.0	-39.9	27	37.1
400	31	6,972	-36.4	-43.9	27	41.8
350	31	7,890	-42.0	-46.9	27	45.7
300	31	8,917	-48.0		27	50.4
250	31	10,104	-53.6		27	49.8
200	31	11,532	-55.4		27	49.1
175	31	12,386	-54.9		28	45.7
150	31	13,367	-56.7		27	43.5
125	30	14,511	-58.6		27	42.3
100	30	15,906	-60.6		27	36.9
80	30	17,295	-61.0		27	33.7
70	29	18,122	-60.0		27	30.4
60	27	19,093	-58.8		27	26.4
50	25	20,244	-60.0		26	23.4
40	23	21,645	-58.8		26	22.3
30	23	23,471	-54.2		26	16.9
25	23	24,642	-53.6		25	13.7
20	21	26,078	-53.0		24	13.1
15	21	27,938	-52.3		24	8.2
10	19	30,562	-50.3		24	8.4
7	17	32,903	-46.3		28	10.5
5	5	35,144	-43.6			

PONAPE, CAROLINE IS. + 1004 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	39	28.3	23.5	06	2.7
1000	31	73	27.4	21.0	07	3.4
950	31	527	24.0	18.3	08	6.9
900	31	998	20.7	14.7	08	7.2
850	31	1,490	17.6	10.1	09	7.9
800	31	2,008	15.6	5.1	09	6.7
750	31	2,554	13.2	-.6	09	6.6
700	31	3,132	10.3	-6.7	09	6.5
650	31	3,744	7.0	-10.2	09	7.5
600	31	4,398	3.2	-13.9	09	7.8
550	31	5,098	-.4	-19.1	09	9.6
500	31	5,854	-4.9	-22.7	09	8.7
450	31	6,676	-9.5	-26.6	09	9.4
400	31	7,577	-14.7	-32.7	08	8.5
350	31	8,578	-21.4	-38.8	08	7.8
300	31	9,693	-29.7	-45.9	09	5.6
250	31	10,965	-40.3	-52.8	09	5.4
200	31	12,448	-52.5		09	5.4
175	31	13,298	-59.2		09	5.9
150	31	14,246	-66.9		09	6.8
125	31	15,327	-74.8		09	8.4
100	30	16,598	-82.8		09	11.6
80	29	17,836	-82.8		09	12.3
70	28	18,593	-76.1		09	9.6
60	27	19,497	-71.2		09	11.4
50	27	20,584	-67.6		09	19.3
40	27	21,949	-61.2		09	23.1
30	26	23,768	-53.9		10	10.4
25	26	24,943	-52.4		23	1.7
20	24	26,397	-49.6		27	10.8
15	20	28,284	-47.3		27	17.3
10	18	30,982	-45.1		27	17.1
7	10	33,416	-40.0			
5	5	35,661	-39.3			

PORTLAND, MAINE 1009 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	20	-12.5	-17.1	27	2.4
1000	31	89			29	2.5
950	31	486	-9.4	-14.9	27	5.4
900	31	903	-10.9	-17.1	27	7.5
850	31	1,340	-12.8	-19.8	27	9.8
800	31	1,802	-13.5	-22.3	27	11.5
750	31	2,292	-15.1	-25.1	27	13.5
700	31	2,812	-16.8	-26.1	27	15.9
650	31	3,366	-19.3	-28.7	27	19.8
600	31	3,958	-22.4	-32.0	27	23.1
550	31	4,592	-25.8	-35.9	27	26.1
500	31	5,277	-30.0	-39.2	27	28.5
450	31	6,021	-34.6	-41.3	27	31.0
400	31	6,835	-39.7	-44.5	27	31.9
350	31	7,741	-44.3		27	34.0
300	31	8,760	-49.4		27	35.2
250	31	9,945	-53.1		27	33.2
200	31	11,383	-52.9		27	29.2
175	31	12,245	-52.9		26	28.4
150	31	13,238	-53.3		26	26.9
125	31	14,408	-55.0		26	26.3
100	31	15,829	-56.6		26	26.0
80	31	17,243	-56.8		25	23.6
70	30	18,088	-56.9		25	23.4
60	30	19,067	-56.1		25	23.8
50	29	20,219	-55.1		25	18.7
40	29	21,649	-53.9		24	15.5
30	28	23,504	-52.7		23	13.7
25	27	24,681	-52.9		24	12.5
20	23	26,118	-53.9		26	7.3
15	21	27,961	-53.7		29	4.7
10	13	30,596	-52.5			

QUILLAYUTE, WASH. * 1011 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	58	3.9	2.7	21	1.6
1000	31	145			22	2.5
950	31	561	1.8	.3	24	5.5
900	31	996	-.3	-1.6	26	7.8
850	31	1,452	-2.4	-5.4	26	9.2
800	31	1,931	-4.4	-9.1	26	11.6
750	31	2,438	-7.0	-11.4	27	13.2
700	31	2,973	-10.1	-15.2	27	14.6
650	31	3,541	-13.4	-18.6	27	17.7
600	31	4,146	-17.2	-22.9	27	19.3
550	31	4,793	-21.4	-28.9	28	20.4
500	31	5,490	-26.0	-32.2	28	22.7
450	31	6,245	-30.5	-36.3	28	25.8
400	31	7,073	-35.9	-41.3	28	27.0
350	31	7,992	-41.8	-46.6	28	29.4
300	31	9,019	-48.4		29	29.9
250	31	10,201	-55.5		29	28.9
200	31	11,605	-60.0		30	26.6
175	30	12,447	-58.2		30	25.6
150	30	13,422	-57.0		30	23.3
125	30	14,574	-58.1		30	19.7
100	28	15,982	-58.9		30	16.1
80	27	17,380	-59.1		31	11.5
70	27	18,215	-60.0		32	10.8
60	23	19,168	-59.7		33	7.5
50	22	20,319	-58.6		34	6.4
40	20	21,768	-56.7		36	6.7
30	17	23,620	-55.9		04	7.6
25	16	24,786	-56.6		04	8.0
20	15	26,192	-56.3		05	12.6
15	12	28,115	-53.8		06	14.5
10	9	30,710	-53.0			
7	5	33,066	-50.7			

RAPID CITY, S. DAK. 903 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	966	-9.9	-15.8	34	1.9
1000	31	165				
950	31	567				
900	31	987			34	1.9
850	31	1,433	-6.1	-13.3	31	8.1
800	31	1,907	-6.4	-13.1	31	11.1
750	31	2,411	-8.7	-15.0	31	14.0
700	31	2,942	-12.0	-18.3	30	17.1
650	31	3,506	-15.3	-21.2	30	19.3
600	31	4,106	-19.2	-25.8	30	20.8
550	31	4,748	-23.0	-29.6	30	22.9
500	31	5,441	-27.3	-33.3	30	25.3
450	31	6,192	-32.0	-36.9	30	28.8
400	31	7,015	-37.3	-43.0	30	33.0
350	31	7,928	-43.7	-43.2	30	35.9
300	31	8,946	-50.5		30	37.6
250	31	10,122	-54.9		30	37.9
200	31	11,540	-56.9		30	34.4
175	31	12,387	-56.0		29	30.7
150	30	13,365	-56.2		29	29.2
125	30	14,520	-57.8		29	26.2
100	30	15,925	-59.2		29	23.0
80	29	17,314	-60.9		29	18.2
70	28	18,144	-60.6		29	18.8
60	27	19,101	-60.8		30	16.2
50	24	20,235	-61.1		29	11.1
40	22	21,639	-60.6		30	8.6
30	19	23,471	-58.0		32	6.3
25	18	24,654	-55.6		36	4.5
20	13	26,137	-53.9		03	7.5
15	8	28,006	-52.4			

ST CLOUD, MINN. 979 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	316	-17.7	-22.1	30	1.2
1000	31	155				
950	31	541	-16.7	-20.0	32	3.3
900	31	950	-14.1	-17.0	30	5.7
850	31	1,385	-12.7	-17.7	30	8.3
800	31	1,847	-13.5	-18.6	30	10.0
750	31	2,337	-15.4	-21.3	30	11.6
700	31	2,856	-17.2	-23.2	30	14.3
650	31	3,409	-20.3	-26.3	30	15.8
600	31	3,998	-23.7	-29.8	30	17.5
550	31	4,629	-27.6	-33.1	30	19.6
500	31	5,308	-31.8	-38.3	30	22.9
450	31	6,046	-36.6	-41.5	30	25.2
400	31	6,853	-42.1	-43.8	29	28.9
350	31	7,748	-47.9		29	31.9
300	31	8,752	-51.7		29	33.9
250	31	9,929	-53.3		29	35.3
200	31	11,366	-53.2		29	34.6
175	31	12,226	-53.4		29	32.8
150	31	13,219	-53.7		29	30.5
125	31	14,386	-55.6		29	29.2
100	31	15,806	-57.4		29	25.5
80	[illegible]	17,215	-58.1		29	22.6
70	27	18,067	-57.9		29	20.6
60	[illegible]	19,052	-58.8		29	17.0
50	[illegible]	20,215	-58.4		29	14.3
40	[illegible]	21,627	-58.5		29	13.3
30	[illegible]	23,443	-57.5		31	8.2
25	19	24,622	-56.7		33	6.9
20	18	26,052	-55.1		36	6.2
15	[illegible]	27,875	-53.9			
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ST PAUL IS., ALASKA * 1018 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	10	-4.6	-7.0	02	3.9
1000	31	148	-5.0	-8.1	05	3.9
950	31	550	-6.9	-10.7	03	3.9
900	31	971	-8.2	-13.5	01	4.0
850	31	1,413	-9.6	-17.7	36	4.6
800	31	1,880	-11.7	-20.2	36	5.1
750	31	2,372	-13.9	-22.8	36	5.3
700	31	2,894	-16.2	-25.8	35	5.7
650	31	3,449	-19.0	-28.6	34	6.8
600	31	4,042	-22.1	-31.2	33	8.2
550	31	4,677	-25.6	-33.7	33	9.1
500	31	5,363	-29.4	-37.6	32	9.3
450	31	6,108	-34.2	-40.6	33	8.5
400	31	6,923	-39.6	-41.4	33	6.7
350	31	7,828	-45.4	-47.3	32	7.1
300	30	8,839	-50.9		31	8.2
250	30	10,016	-53.6		29	7.2
200	30	11,455	-52.7		26	5.8
175	30	12,320	-51.3		26	5.9
150	30	13,326	-50.3		25	4.9
125	30	14,516	-50.6		25	4.9
100	30	15,972	-50.4		24	5.1
80	30	17,427	-50.6		23	3.6
70	30	18,299	-50.2		23	3.3
60	[illegible]	19,306	-50.0		21	3.0
50	30	20,498	-50.2		18	2.6
40	30	21,958	-49.9		14	2.2
30	30	23,841	-49.4		11	3.3
25	30	25,036	-49.5		10	4.4
20	29	26,492	-49.7		09	5.1
15	25	28,390	-48.5		10	6.0
10	15	31,132	-45.2		09	6.8
7	8	33,540	-43.6			

SALEM, ILL. 998 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	174	-5.5	-9.5	33	1.7
1000	31	155			34	3.2
950	31	558	-5.7	-11.2	29	3.8
900	31	983	-4.8	-14.5	29	7.5
850	31	1,432	-4.9	-17.8	29	9.7
800	31	1,909	-5.6	-20.5	28	12.1
750	31	2,413	-7.7	-21.3	28	14.6
700	31	2,948	-9.7	-21.0	28	18.4
650	31	3,517	-11.9	-22.8	28	20.4
600	31	4,127	-14.6	-25.4	28	23.9
550	31	4,782	-18.3	-29.3	28	28.6
500	31	5,487	-22.8	-33.4	27	31.2
450	31	6,252	-27.7	-39.1	27	34.6
400	31	7,089	-33.6	-43.6	27	38.9
350	30	8,011	-40.5	-47.5	27	39.4
300	30	9,041	-48.0		28	37.9
250	30	10,225	-54.4		29	41.7
200	30	11,644	-56.7			
175	30	12,491	-56.3			
150	29	13,467	-57.1			
125	28	14,619	-59.8			
100	27	16,013	-61.8			
80	27	17,389	-63.0			
70	27	18,211	-63.2			
60	26	19,155	-63.7			
50	26	20,276	-62.7			
40	26	21,656	-61.3			
30	24	23,447	-58.9			
25	22	24,601	-57.2			
20	22	26,018	-55.4			
15	20	27,877	-52.6			
10	[illegible]	30,504	-51.1		32	7.0
7	13	32,837	-48.0			

SALEM, OREG. 1015 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	61	3.2	.8	19	3.6
1000	31	180			20	3.5
950	31	596	2.8	.7	22	6.5
900	31	1,033	1.6	-3.1	25	8.1
850	31	1,493	-.1	-5.7	26	9.6
800	31	1,977	-2.3	-8.6	27	10.4
750	31	2,486	-5.2	-11.8	28	11.3
700	31	3,026	-8.0	-14.3	29	12.6
650	31	3,599	-11.2	-18.1	29	14.7
600	31	4,209	-14.7	-22.4	29	16.9
550	31	4,863	-18.6	-26.9	29	18.7
500	31	5,567	-23.0	-30.9	29	22.2
450	31	6,332	-28.1	-33.2	29	25.6
400	31	7,168	-33.6	-38.1	29	28.3
350	31	8,095	-40.2	-42.3	29	31.0
300	31	9,128	-47.5		29	31.4
250	31	10,313	-54.7		30	32.1
200	31	11,722	-59.5		30	26.6
175	31	12,558	-58.8		30	25.1
150	31	13,528	-58.5		30	19.8
125	31	14,672	-59.7		30	20.0
100	29	16,059	-59.9		30	18.1
80	28	17,451	-60.2		31	11.2
70	28	18,283	-60.6		31	9.6
60	27	19,242	-60.2		33	7.5
50	25	20,401	-58.6		35	5.6
40	23	21,799	-58.9		36	6.1
30	21	23,610	-58.6		03	9.5
25	20	24,761	-58.1		04	11.5
20	13	26,175	-57.3		05	15.4
15	10	28,063	-51.9			

SALT LAKE CITY, UTAH 874 MB

Standard pressure surface mb	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	1,288	-1.5	-6.0	15	2.3
1000	31	201				
950	31	618				
900	31	1,054				
850	31	1,512	.0	-7.1	17	3.6
800	31	1,997	-1.7	-9.2	22	2.9
750	31	2,508	-5.1	-11.4	27	5.2
700	31	3,047	-8.2	-13.8	29	9.0
650	31	3,619	-11.2	-15.9	29	11.3
600	31	4,230	-14.4	-21.0	30	14.0
550	31	4,885	-18.2	-24.7	30	17.4
500	31	5,591	-22.3	-28.6	30	19.6
450	31	6,358	-27.5	-32.5	29	20.5
400	31	7,195	-33.3	-37.6	29	22.4
350	31	8,123	-40.0	-42.8	29	24.4
300	31	9,156	-47.6		29	26.1
250	31	10,341	-54.8		29	27.5
200	30	11,738	-58.9		29	28.2
175	30	12,577	-58.3		29	27.4
150	30	13,548	-58.5		29	25.3
125	29	14,689	-60.3		29	21.7
100	29	16,074	-62.1		29	19.8
80	27	17,450	-62.8		29	16.4
70	24	18,262	-61.3		29	12.4
60	24	19,218	-61.6		29	9.7
50	24	20,348	-61.7		30	7.6
40	24	21,731	-61.6		32	4.5
30	21	23,515	-61.4		34	3.3
25	19	24,626	-61.1		36	3.8
20	15	26,074	-57.7		04	6.8
15	11	27,921	-57.1		07	11.4
10	5	30,375	-50.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SAN DIEGO, CALIF. 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	124	7.9	3.4	03	1.3
1000	31	156			03	1.8
950	31	586	12.4	-1.8	01	1.7
900	31	1,039	11.2	-5.5	35	2.1
850	31	1,514	9.5	-8.9	33	2.7
800	31	2,014	7.1	-12.4	32	3.9
750	31	2,542	4.5	-15.2	31	4.4
700	31	3,101	1.7	-17.3	31	5.9
650	31	3,694	-1.8	-20.9	30	7.1
600	31	4,326	-5.7	-24.2	30	8.5
550	31	5,002	-10.4	-27.8	30	9.5
500	31	5,728	-16.0	-32.9	30	10.6
450	31	6,512	-22.1	-36.6	29	11.2
400	31	7,367	-28.7	-41.8	30	9.8
350	31	8,312	-36.1	-46.4	29	10.9
300	31	9,360	-44.4	-51.2	29	12.5
250	31	10,558	-53.3		29	14.1
200	31	11,971	-59.0		28	15.0
175	31	12,806	-60.2		27	16.9
150	31	13,766	-61.4		28	15.3
125	31	14,890	-64.1		27	15.0
100	31	16,246	-67.0		28	13.6
80	31	17,589	-68.2		28	11.6
70	31	18,392	-67.6		28	10.0
60	31	19,322	-66.7		28	8.7
50	30	20,426	-65.3		29	6.6
40	28	21,791	-63.8		29	4.8
30	27	23,563	-61.4		28	3.7
25	26	24,693	-60.6		27	5.4
20	24	26,085	-58.1		26	5.8
15	19	27,919	-55.8		25	8.8
10	7	30,558	-50.3			
7						
5						
4						

SAN JUAN, P. R. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	22.9	19.1	09	2.0
1000	31	146	23.1	19.4	08	5.2
950	31	592	19.9	16.7	08	7.5
900	31	1,057	16.9	12.3	09	7.1
850	31	1,542	13.5	8.6	09	6.7
800	31	2,051	11.1	3.0	09	6.9
750	31	2,588	9.0	-4.1	09	5.4
700	31	3,158	7.1	-11.3	09	4.4
650	31	3,764	4.5	-16.3	08	4.2
600	31	4,412	1.1	-20.7	07	3.5
550	31	5,106	-3.2	-24.6	05	3.5
500	31	5,853	-8.2	-29.0	04	3.4
450	31	6,662	-13.7	-33.6	02	2.2
400	31	7,546	-20.3	-38.7	34	4.6
350	31	8,526	-26.5	-43.0	31	7.6
300	31	9,619	-34.4	-49.3	30	11.3
250	31	10,869	-43.6		29	14.5
200	31	12,336	-53.9		28	14.6
175	31	13,183	-59.1		29	13.8
150	31	14,136	-65.3		29	11.3
125	31	15,229	-71.3		29	5.8
100	31	16,527	-77.4		31	.3
80	31	17,797	-79.4		08	2.6
70	31	18,557	-77.7		08	4.5
60	30	19,454	-71.3		08	5.2
50	30	20,549	-65.6		08	5.9
40	30	21,921	-61.4		08	7.5
30	28	23,721	-59.0		08	9.1
25	28	24,870	-57.0		08	8.3
20	27	26,296	-53.9		09	2.1
15	26	28,162	-49.9		26	8.0
10	17	30,841	-45.8		27	18.6
7						
5						
4						

*** SAULT STE MARIE, MICH. 985 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	221	-14.0	-17.5	01	1.2
1000	31	103				
950	31	493	-13.7	-16.7	31	3.2
900	31	903	-15.1	-17.1	31	6.1
850	31	1,335	-16.2	-19.7	30	8.6
800	31	1,790	-17.3	-22.5	30	10.8
750	31	2,273	-18.4	-24.3	30	12.5
700	31	2,787	-20.0	-26.4	30	13.7
650	31	3,334	-22.5	-28.9	29	14.5
600	31	3,918	-25.8	-31.7	29	15.5
550	31	4,544	-29.5	-36.3	29	16.9
500	31	5,218	-34.0	-40.5	29	17.4
450	31	5,949	-38.5	-41.7	28	18.9
400	31	6,750	-44.0	-46.4	28	20.7
350	31	7,639	-48.8		28	24.5
300	31	8,641	-51.8		28	28.9
250	31	9,820	-53.1		28	30.8
200	31	11,259	-52.9		28	29.5
175	31	12,121	-52.8		28	28.8
150	31	13,114	-53.6		28	28.6
125	30	14,289	-55.0		28	26.9
100	29	15,701	-56.6		28	29.7
80	29	17,110	-58.6		28	23.6
70	28	17,935	-58.9		28	24.3
60	28	18,903	-58.8		28	21.6
50	28	20,049	-58.1		28	20.2
40	28	21,461	-56.5		27	16.7
30	28	23,300	-53.3		26	14.1
25	28	24,479	-51.3		25	12.9
20	28	25,936	-49.7		24	9.2
15	25	27,814	-49.0		23	6.8
10	24	30,495	-48.2		28	4.5
7	17	32,859	-45.1		29	8.1
5	6	35,062	-47.5			
4						

*** SHEMYA, ALASKA 1012 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	38	-.6	-5.4	12	2.9
1000	31	131			12	4.5
950	31	538	-4.0	-6.3	12	4.2
900	31	963	-6.4	-9.2	13	4.0
850	31	1,408	-8.0	-12.9	14	4.3
800	31	1,878	-9.3	-18.1	16	3.9
750	31	2,375	-11.2	-20.9	17	3.8
700	31	2,903	-13.3	-22.9	18	4.7
650	31	3,464	-16.3	-25.9	20	5.7
600	31	4,062	-19.8	-29.2	20	6.8
550	31	4,703	-23.8	-33.2	20	8.3
500	31	5,393	-28.5	-36.8	21	8.4
450	31	6,140	-33.6	-40.5	22	9.1
400	31	6,956	-39.7	-44.8	22	10.1
350	31	7,859	-46.1		21	11.3
300	31	8,866	-53.1		21	12.8
250	31	10,027	-57.9		21	12.9
200	31	11,440	-54.7		22	10.8
175	31	12,301	-51.8		22	10.4
150	31	13,303	-50.7		22	10.2
125	31	14,492	-50.7		22	8.2
100	30	15,944	-51.1		22	7.5
80	30	17,395	-51.1		21	6.0
70	30	18,264	-50.8		21	5.1
60	30	19,269	-50.7		19	4.8
50	30	20,457	-50.8		17	3.9
40	28	21,912	-50.7		14	4.6
30	28	23,789	-50.2		12	6.3
25	27	24,979	-50.3		11	7.1
20	26	26,435	-50.1		10	8.8
15	25	28,325	-49.1		10	9.6
10	18	30,967	-48.8		10	12.7
7	10	33,227	-50.3			
5						
4						

*** SHREVEPORT, LA. 1009 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	6.4	3.6	11	.9
1000	31	153	6.0	2.1	14	.6
950	31	576	7.0	.8	22	3.6
900	31	1,021	7.0	-2.7	25	5.8
850	31	1,490	6.2	-4.8	27	8.5
800	31	1,986	4.6	-7.2	27	10.6
750	31	2,510	2.7	-10.1	27	12.9
700	31	3,066	.1	-12.3	27	15.6
650	31	3,657	-3.0	-16.9	27	18.3
600	31	4,287	-6.3	-20.8	27	20.9
550	31	4,961	-10.9	-24.1	27	22.3
500	31	5,687	-15.5	-28.9	27	25.6
450	31	6,474	-20.8	-33.6	27	29.0
400	31	7,334	-27.2	-39.7	27	31.5
350	31	8,285	-34.1	-45.2	27	34.7
300	31	9,343	-42.4	-50.9	27	35.7
250	31	10,551	-51.5		27	39.5
200	31	11,973	-58.6		27	42.6
175	31	12,809	-60.4		27	43.5
150	31	13,766	-62.6		27	39.1
125	31	14,883	-65.5		27	35.4
100	31	16,229	-68.8		27	29.2
80	31	17,559	-70.1		28	22.1
70	31	18,355	-69.5		28	18.6
60	31	19,278	-68.0		28	14.1
50	31	20,380	-65.4		27	13.8
40	31	21,744	-63.4		27	12.7
30	31	23,524	-60.6		27	8.6
25	29	24,670	-59.0		27	8.7
20	28	26,085	-56.4		27	5.7
15	27	27,918	-54.2		27	6.0
10	25	30,534	-49.6		28	9.6
7	21	32,912	-43.2		27	13.5
5	13	35,189	-38.4			
4	6	36,747	-35.5			

SPOKANE, WASH. 931 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	720	-1.1	-3.9	21	4.3
1000	31	140				
950	31	554				
900	31	987	-.7	-3.8	21	8.9
850	31	1,443	-1.6	-6.4	24	11.8
800	31	1,925	-3.7	-8.5	25	11.7
750	31	2,432	-6.6	-11.0	27	12.4
700	31	2,968	-9.8	-14.0	28	14.2
650	31	3,537	-13.3	-16.9	28	16.7
600	31	4,142	-16.9	-21.4	29	18.5
550	31	4,790	-20.9	-26.7	29	19.8
500	31	5,488	-25.6	-30.6	29	21.7
450	31	6,244	-30.6	-34.0	29	25.1
400	31	7,071	-36.5	-39.3	29	28.9
350	31	7,988	-42.4	-42.3	29	31.8
300	31	9,013	-48.9		29	35.5
250	31	10,193	-55.4		29	36.6
200	30	11,596	-57.5		30	33.7
175	29	12,446	-56.0		30	29.5
150	28	13,427	-55.3		30	24.6
125	28	14,589	-56.1		30	22.1
100	28	16,003	-57.6		30	19.1
80	27	17,407	-58.2		30	15.2
70	27	18,249	-58.0		31	13.5
60	26	19,216	-57.8		32	10.5
50	25	20,374	-57.3		33	8.5
40	25	21,787	-56.6		35	8.0
30	22	23,629	-55.7		02	10.2
25	21	24,810	-54.7		02	10.1
20	17	26,327	-53.4		03	12.0
15	13	28,235	-52.2		05	14.3
10	8	30,926	-51.7			
7						
5						

*** SWAN ISLAND, W. I. 1014 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	24.3	20.2	07	5.1
1000	31	132	23.9	19.1	06	6.1
950	31	579	20.2	17.2	07	7.1
900	31	1,044	17.0	13.0	08	6.8
850	31	1,530	13.9	8.6	08	5.8
800	31	2,040	11.8	1.8	08	4.6
750	31	2,579	9.9	-4.6	09	3.8
700	31	3,150	7.5	-10.1	09	3.8
650	31	3,757	5.2	-14.6	09	3.2
600	31	4,406	1.8	-19.0	08	2.6
550	31	5,102	-2.3	-23.2	07	2.5
500	31	5,852	-7.3	-27.3	03	1.2
450	31	6,664	-13.1	-31.6	34	1.8
400	31	7,549	-19.9	-36.8	29	3.6
350	31	8,528	-27.1	-42.2	26	7.1
300	31	9,618	-35.4	-49.2	25	12.0
250	31	10,865	-43.8		24	18.7
200	31	12,332	-53.6		24	20.9
175	31	13,180	-59.3		24	17.6
150	30	14,130	-65.5		24	14.2
125	30	15,222	-72.0		24	9.3
100	30	16,519	-77.3		20	4.5
80	30	17,793	-77.8		15	3.7
70	30	18,562	-75.1		11	3.1
60	30	19,466	-70.4		09	4.1
50	30	20,566	-64.3		09	5.3
40	30	21,941	-61.6		09	7.3
30	30	23,739	-57.8		09	7.6
25	30	24,896	-55.6		08	6.1
20	28	26,331	-51.0		02	3.8
15	27	28,223	-47.4		29	8.5
10	26	30,929	-44.4		29	16.6
7	16	33,350	-41.1		28	22.1
5	6	35,681	-35.2			

TAMPA, FLA. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	12.0	9.9	07	1.1
1000	31	161	13.8	9.0	11	.9
950	31	594	13.1	7.4	24	2.5
900	31	1,048	11.6	2.1	26	4.2
850	31	1,525	9.8	-1.5	27	5.6
800	31	2,027	8.0	-4.6	28	7.5
750	31	2,558	6.2	-9.0	27	9.9
700	31	3,121	3.6	-13.7	27	12.0
650	31	3,720	.7	-17.1	28	13.5
600	31	4,358	-3.1	-20.1	27	16.2
550	31	5,041	-7.5	-24.6	27	17.9
500	31	5,777	-11.9	-29.3	27	20.1
450	31	6,575	-17.4	-34.2	27	22.4
400	31	7,446	-23.9	-40.8	27	24.0
350	31	8,409	-31.3	-45.1	27	26.9
300	31	9,480	-39.6	-50.6	27	29.8
250	31	10,703	-48.3		27	33.5
200	31	12,150	-55.3		26	38.8
175	31	12,996	-58.6		26	39.5
150	31	13,956	-62.5		26	35.9
125	31	15,066	-68.0		26	31.3
100	31	16,391	-72.3		26	24.1
80	29	17,707	-73.8		26	15.7
70	28	18,489	-71.5		26	12.6
60	28	19,407	-68.4		27	9.2
50	27	20,510	-64.0		27	9.3
40	27	21,888	-61.2		28	6.7
30	27	23,686	-58.3		28	4.9
25	27	24,839	-56.2		28	4.1
20	26	26,266	-54.3		28	5.1
15	24	28,119	-51.8		28	6.3
10	17	30,784	-47.2		28	14.4
7						
5						

TOPEKA, KANS. 987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	268	-6.9	-9.9	33	1.6
1000	31	162				
950	31	563	-6.3	-11.7	30	2.4
900	31	989	-3.3	-12.0	30	5.4
850	31	1,443	-2.2	-11.5	30	8.5
800	31	1,924	-3.4	-12.8	30	12.1
750	31	2,432	-5.6	-15.3	29	14.1
700	31	2,971	-8.1	-18.0	29	15.9
650	31	3,544	-10.9	-19.3	29	18.6
600	31	4,155	-14.5	-23.4	29	21.2
550	31	4,809	-18.5	-27.9	28	23.6
500	31	5,514	-22.9	-32.7	28	26.1
450	31	6,279	-28.0	-36.9	28	28.3
400	31	7,115	-33.6	-42.7	28	33.0
350	31	8,043	-39.7	-44.7	28	36.8
300	31	9,078	-46.8		28	39.6
250	31	10,268	-54.1		28	43.1
200	31	11,685	-57.6		27	40.5
175	31	12,528	-57.5		28	41.1
150	31	13,503	-58.0		28	37.5
125	30	14,647	-60.0		28	34.3
100	30	16,035	-61.7		28	28.8
80	29	17,410	-63.4		28	22.8
70	29	18,231	-63.0		28	19.8
60	28	19,184	-62.6		28	18.9
50	26	20,299	-62.6		28	16.0
40	24	21,694	-61.6		28	10.8
30	20	23,508	-59.0		28	9.0
25	19	24,653	-57.6		30	5.8
20	18	26,076	-55.9		27	5.9
15	15	27,950	-53.8		29	4.0
10						
7						
5						

*** TRUK, CAROLINE IS. 1009 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2	28.6	23.9	06	3.5
1000	31	82	27.8	21.3	07	4.1
950	31	536	24.2	18.5	08	6.3
900	31	1,008	21.4	14.1	09	6.6
850	31	1,501	18.5	10.0	10	6.4
800	31	2,020	16.1	4.9	10	5.9
750	31	2,567	13.8	-.4	09	6.3
700	31	3,146	10.7	-5.5	10	6.6
650	31	3,759	7.2	-8.5	10	7.1
600	31	4,413	3.5	-11.8	10	8.0
550	31	5,115	-.4	-16.8	10	8.1
500	31	5,871	-4.6	-20.9	10	8.6
450	31	6,694	-9.0	-25.0	10	9.0
400	31	7,596	-14.6	-31.8	10	6.8
350	31	8,598	-21.2	-38.6	10	5.9
300	31	9,714	-29.5	-45.7	10	4.9
250	31	10,987	-39.9	-54.3	11	5.8
200	31	12,471	-52.3		12	6.2
175	31	13,322	-59.2		12	6.7
150	31	14,271	-66.8		10	6.6
125	31	15,351	-75.1		09	9.0
100	31	16,618	-83.2		10	13.9
80	31	17,851	-81.7		10	11.9
70	31	18,613	-75.1		09	8.4
60	31	19,520	-70.5		09	11.5
50	31	20,611	-66.9		09	19.0
40	29	21,978	-61.1		09	22.9
30	25	23,800	-53.3		09	8.5
25	24	24,977	-51.2		25	2.3
20	23	26,434	-49.1		27	8.7
15	22	28,334	-46.1		27	15.1
10	22	31,045	-43.2		27	17.7
7	19	33,463	-40.0		27	14.0
5	9	35,753	-37.8			

*** TUCSON, ARIZ. 927 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	789	3.8	-5.8	15	2.9
1000	31	166				
950	31	588				
900	31	1,032	9.8	-5.1	14	2.3
850	31	1,506	9.0	-7.8	19	1.1
800	31	2,006	6.3	-10.4	25	2.1
750	31	2,532	3.5	-14.0	27	4.1
700	31	3,089	.8	-17.8	28	6.3
650	31	3,680	-2.7	-20.5	28	7.8
600	31	4,310	-6.8	-24.0	28	8.9
550	31	4,984	-11.2	-27.7	28	10.4
500	31	5,708	-16.5	-32.1	28	11.5
450	31	6,491	-22.4	-36.2	28	11.6
400	31	7,344	-28.9	-41.1	27	12.7
350	31	8,288	-36.2	-45.9	27	14.6
300	31	9,338	-44.0	-49.0	27	18.2
250	31	10,539	-52.5		26	19.7
200	31	11,960	-58.2		26	22.7
175	31	12,798	-60.0		26	22.2
150	30	13,763	-61.7		26	20.9
125	30	14,885	-64.5		26	18.9
100	30	16,238	-68.0		27	17.2
80	29	17,571	-68.7		27	15.7
70	29	18,372	-67.7		27	14.6
60	29	19,301	-67.1		27	12.7
50	29	20,404	-65.9		28	11.0
40	29	21,766	-63.9		28	9.2
30	28	23,534	-61.7		27	9.1
25	28	24,667	-60.1		27	10.0
20	28	26,069	-57.6		26	12.1
15	26	27,893	-55.0		26	13.7
10	23	30,511	-49.4		26	14.1
7	21	32,873	-43.4		26	13.7
5						

VICTORIA, TEXAS 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	11.4	8.5	02	.6
1000	31	144	12.7	8.3	17	.7
950	31	576	12.4	5.1	20	5.2
900	31	1,029	11.6	1.1	22	4.6
850	31	1,506	10.5	-3.1	25	4.3
800	31	2,010	9.1	-7.4	26	5.7
750	31	2,543	6.9	-9.9	27	7.6
700	31	3,107	4.1	-13.9	27	9.9
650	31	3,706	1.0	-16.4	27	12.0
600	31	4,344	-3.0	-20.0	27	13.4
550	31	5,027	-7.7	-23.1	26	15.4
500	31	5,762	-12.5	-30.1	26	18.1
450	31	6,558	-17.9	-33.8	26	21.2
400	31	7,428	-24.3	-37.6	26	24.6
350	31	8,390	-31.5	-44.0	26	27.9
300	31	9,459	-40.0	-50.4	26	30.7
250	31	10,679	-49.6		26	34.7
200	31	12,110	-57.4		26	36.2
175	31	12,949	-59.8		26	36.5
150	31	13,906	-62.7		26	33.6
125	31	15,017	-67.4		26	31.2
100	31	16,347	-71.5		26	24.9
80	30	17,660	-72.7		27	17.9
70	29	18,447	-71.2		27	13.9
60	29	19,364	-68.9		27	11.1
50	29	20,461	-66.4		27	9.2
40	28	21,816	-63.9		27	9.2
30	27	23,592	-60.2		27	10.5
25	26	24,737	-58.2		26	10.3
20	26	26,149	-56.1		27	10.2
15	25	27,991	-53.5		27	10.3
10	22	30,619	-49.6		26	15.0
7	8	32,959	-46.7			
5						

*** WAKE IS., PACIFIC AREA 1012 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	24.9	20.6	07	2.9
1000	31	109	24.0	18.9	08	3.4
950	31	557	20.2	17.2	08	3.4
900	31	1,021	17.0	14.0	09	1.7
850	31	1,507	14.7	9.1	26	.2
800	31	2,020	13.5	2.1	29	2.0
750	31	2,562	11.5	-3.1	28	4.1
700	31	3,136	8.6	-7.7	28	5.4
650	31	3,746	5.7	-11.8	28	6.9
600	31	4,396	2.3	-16.1	28	8.5
550	30	5,095	-1.5	-20.8	28	9.9
500	30	5,847	-6.1	-25.1	28	11.0
450	30	6,664	-11.0	-28.6	28	13.1
400	30	7,559	-16.5	-34.7	29	15.0
350	30	8,553	-23.3	-41.6	29	16.9
300	30	9,660	-31.4	-48.5	28	17.2
250	30	10,925	-41.3		29	16.8
200	30	12,402	-52.9		29	16.2
175	30	13,250	-59.5		29	14.8
150	29	14,196	-67.0		29	13.3
125	29	15,276	-74.9		29	11.9
100	29	16,548	-81.2		28	6.4
80	28	17,798	-81.1		10	.3
70	28	18,558	-76.7		10	3.6
60	28	19,460	-69.8		09	4.7
50	28	20,561	-65.2		10	3.8
40	25	21,931	-62.0		11	2.3
30	25	23,720	-60.4		35	.5
25	25	24,864	-57.6		30	3.2
20	24	26,282	-53.8		30	5.5
15	24	28,145	-50.6		29	6.9
10	21	30,832	-44.8		26	13.8
7	8	33,221	-39.6			
5						

*** WALLOPS IS., VA. NASA 1016 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	-1.2	-4.8	30	2.1
1000	30	128	-.4	-7.2	31	2.9
950	30	538	-1.5	-8.1	28	6.7
900	30	968	-2.6	-9.6	27	10.4
850	30	1,421	-3.5	-11.9	27	11.8
800	30	1,899	-5.0	-12.9	27	13.8
750	30	2,406	-6.7	-15.3	27	15.8
700	30	2,942	-8.9	-17.5	27	18.1
650	30	3,514	-11.4	-20.4	27	21.3
600	30	4,124	-14.5	-23.0	27	24.5
550	30	4,779	-18.4	-26.3	27	26.6
500	30	5,484	-22.9	-30.7	27	30.0
450	30	6,249	-27.7	-34.9	27	33.2
400	30	7,086	-33.3	-38.1	27	36.2
350	30	8,015	-39.4	-43.3	27	38.9
300	30	9,052	-46.3		27	40.8
250	30	10,245	-52.9		27	43.7
200	30	11,670	-56.0		27	44.4
175	30	12,521	-56.0		27	42.0
150	30	13,498	-57.3		27	37.2
125	30	14,645	-59.8		27	36.2
100	30	16,030	-62.3		27	30.8
80	30	17,407	-62.8		26	25.7
70	30	18,230	-62.8		25	21.2
60	28	19,172	-61.8		26	19.0
50	27	20,307	-60.2		26	17.3
40	27	21,707	-58.0		25	12.8
30	26	23,531	-55.2		25	9.7
25	26	24,696	-54.8		25	7.9
20	25	26,119	-54.3		25	5.5
15	23	27,970	-53.4		29	2.3
10	18	30,613	-49.7			
7	12	32,958	-45.8			
5	5	35,183	-42.2			

WASHINGTON DULLES INT. AP 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	85	-5.5	-8.8	31	1.6
1000	31	132			30	2.2
950	31	539	-3.5	-8.9	29	6.4
900	31	965	-4.6	-9.7	29	8.1
850	31	1,415	-5.4	-12.9	29	11.5
800	31	1,890	-6.2	-14.9	28	15.0
750	31	2,394	-8.2	-17.2	28	17.0
700	31	2,927	-10.5	-18.3	28	20.1
650	31	3,495	-12.8	-22.4	28	22.3
600	31	4,102	-15.6	-25.7	27	25.6
550	31	4,754	-19.2	-28.8	27	29.6
500	31	5,458	-23.6	-34.3	27	34.3
450	31	6,220	-28.7	-36.5	27	36.9
400	31	7,054	-34.5	-40.4	27	40.4
350	31	7,979	-40.4	-45.3	27	44.2
300	31	9,012	-46.8		27	46.7
250	31	10,203	-53.5		27	49.7
200	31	11,626	-56.1		27	49.0
175	31	12,476	-55.7		27	44.4
150	31	13,455	-56.9		27	43.3
125	31	14,604	-58.9		27	41.7
100	31	15,998	-60.5		27	33.8
80	31	17,382	-62.1		27	30.7
70	31	18,208	-62.2		27	26.8
60	31	19,161	-61.6		26	25.7
50	30	20,295	-59.9		27	21.8
40	27	21,696	-57.6		26	18.8
30	25	23,522	-54.9		26	16.1
25	24	24,687	-53.7		26	11.8
20	23	26,128	-53.3		25	11.2
15	19	27,980	-52.5		26	10.4
10	11	30,596	-49.4			
7	5	32,943	-43.8			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JANUARY 1971

Standard pressure surface (mb)	MAYPORT, FLA. 1013 MB					WINNEMUCCA, NEV. 873 MB					WINSLOW, ARIZ. 854 MB					YAKUTAT, ALASKA 1012 MB					YAP, CAROLINE IS. + 1007 MB				
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
SURFACE	31	44	7.0	4.2	24	1.7	31	1,312	-2.6	-6.2	20	1.0	31	1,487	-7.0	-12.1	18	1.0	28	12	-9.6	-14.5	09	4.0	31	14	27.7	23.9	05	2.6
1000	31	152	8.4	3.3	26	2.1	31	221					31	235					28	103	-5.6	-13.3	10	5.0	31	73	26.5	21.1	06	3.4
950	31	377	4.6	2.4	26	5.7	31	636					31	644					28	504	-7.1	-13.9	10	7.1	31	525	23.2	18.4	06	5.5
900	31	1,025	8.2	-.8	27	8.5	31	1,070					31	1,072					28	924	-9.5	-15.1	11	4.9	31	995	20.3	14.6	07	4.8
850	31	1,497	6.7	-3.9	27	10.3	31	1,528	1.2	-5.3	21	1.9	31	1,521			17	.9	28	1,363	-12.1	-17.3	12	2.8	31	1,487	17.4	10.5	08	4.4
800	31	1,993	4.6	-6.8	27	11.9	31	2,014	-.8	-8.2	25	4.7	31	2,007	1.9	-9.3	27	2.8	28	1,825	-14.7	-21.1	13	2.5	31	2,004	15.3	6.0	09	3.9
750	31	2,517	2.5	-9.5	27	14.5	31	2,527	-3.7	-11.3	27	6.1	31	2,527	.1	-12.6	28	4.7	28	2,311	-17.7	-24.1	12	2.3	31	2,549	13.3	-.3	11	3.6
700	31	3,073	.5	-14.4	27	17.6	31	3,070	-6.5	-14.2	28	9.3	31	3,077	-2.3	-16.7	29	6.3	28	2,824	-20.9	-27.9	16	1.5	31	3,127	10.2	-4.5	12	4.3
650	31	3,665	-2.5	-17.1	27	19.7	31	3,646	-9.4	-16.5	29	12.1	31	3,662	-5.2	-20.4	29	8.4	28	3,368	-24.2	-31.5	25	1.7	31	3,740	7.0	-7.6	12	4.6
600	31	4,295	-6.3	-20.9	27	22.2	31	4,261	-12.5	-20.9	29	14.6	31	4,287	-8.7	-24.5	29	9.6	27	3,939	-28.2	-35.5	26	3.8	31	4,394	3.2	-11.1	12	5.1
550	31	4,971	-10.5	-25.0	27	24.0	31	4,921	-16.3	-26.0	30	15.8	31	4,956	-13.0	-28.1	29	11.2	27	4,559	-32.0	-38.6	27	6.0	31	5,093	-.8	-14.9	13	5.4
500	31	5,697	-15.0	-31.4	27	26.1	31	5,633	-20.5	-29.9	30	17.6	31	5,675	-17.8	-31.9	29	13.5	27	5,227	-35.8	-40.0	27	9.8	31	5,848	-5.1	-19.7	12	4.9
450	31	6,487	-19.9	-35.1	27	29.7	31	6,404	-25.8	-34.0	30	18.1	31	6,455	-23.6	-37.0	29	15.1	27	5,954	-39.1	-42.5	27	13.4	31	6,668	-9.8	-24.7	12	5.5
400	31	7,350	-26.0	-40.4	27	34.2	31	7,247	-32.3	-39.2	30	19.8	31	7,305	-29.8	-42.5	29	16.7	27	6,756	-42.7	-44.7	27	16.7	31	7,568	-15.3	-31.2	11	4.5
350	31	8,306	-33.0	-46.1	27	35.7	31	8,177	-39.5	-43.6	30	20.0	31	8,246	-37.1	-47.1	28	17.5	27	7,653	-45.9		27	20.6	31	8,567	-21.9	-37.4	10	3.9
300	31	9,389	-41.2	-51.4	27	38.7	31	9,211	-47.5		31	21.4	31	9,292	-45.1		28	19.0	27	8,669	-48.7		28	20.6	31	9,680	-30.5	-45.0	10	3.3
250	31	10,583	-50.1		27	38.8	31	10,395	-55.4		30	21.4	30	10,480	-53.2		28	20.0	27	9,867	-49.1		29	17.6	31	10,948	-40.8	-51.9	14	4.1
200	31	12,019	-56.1		27	44.8	30	11,789	-60.7		31	19.2	30	11,897	-58.5		27	23.5	27	11,334	-48.0		30	16.3	31	12,426	-53.4		14	5.9
175	31	12,864	-57.8		27	46.7	30	12,623	-59.5		30	18.8	30	12,735	-59.3		27	24.5	27	12,214	-48.2		30	16.1	31	13,272	-60.4		13	6.3
150	31	13,832	-60.4		27	44.2	30	13,590	-59.2		30	18.4	30	13,698	-60.7		27	23.3	27	13,231	-47.8		30	16.0	31	14,214	-68.2		13	7.0
125	30	14,954	-65.0		27	38.3	3	14,728	-61.1		30	16.0	29	14,823	-62.4		28	21.5	27	14,434	-48.5		31	15.2	31	15,287	-76.4		11	9.2
100	30	16,302	-68.4		27	29.5	28	16,113	-62.6		30	12.2	28	16,187	-65.0		28	19.1	27	15,900	-49.1		31	13.1	31	16,545	-84.2		10	13.1
80	28	17,634	-70.0		27	24.1	22	17,486	-62.6		32	8.4	26	17,535	-65.9		27	16.2	27	17,365	-49.0		32	13.3	31	17,783	-80.8		10	9.2
70	28	18,629	-69.0		27	17.8	19	18,327	-62.2		33	6.8	24	18,344	-65.1		28	12.0	27	18,242	-49.2		32	12.2	31	18,543	-76.0		09	6.7
60	28	19,373	-66.4		27	12.9	18	19,280	-61.3		34	6.3	23	19,288	-64.6		29	10.2	27	19,253	-49.6		33	11.4	31	19,445	-70.7		08	10.1
50	25	20,495	-63.4		27	10.7	16	20,406	-61.5		01	4.8	22	20,400	-64.3		29	7.7	27	20,446	-49.5		34	9.6	30	20,540	-66.7		09	18.0
40	21	21,869	-60.5		27	11.0	14	21,794	-60.7		05	6.4	21	21,768	-63.0		30	5.8	27	21,907	-49.8		35	8.7	29	21,907	-61.7		09	22.5
30	21	23,480	-57.4		27	7.6	13	23,622	-60.5		07	9.6	21	23,549	-60.9		28	4.9	27	23,787	-50.2		01	9.1	27	23,721	-55.4		10	11.5
25	21	24,839	-56.0		27	4.9	11	24,814	-59.4		07	11.5	21	24,687	-59.3		27	6.1	27	24,977	-50.1		01	8.5	27	24,890	-53.1		14	1.6
20	19	26,266	-54.8		26	3.5	10	26,222	-58.3				18	26,116	-57.2		28	4.6	25	26,424	-51.0		02	9.6	26	26,339	-50.2		26	6.6
15	19	28,116	-52.3		29	5.2	9	28,018	-57.9				14	27,995	-53.4		29	4.1	21	28,261	-51.1		03	11.5	24	28,229	-47.8		26	14.8
10	13	30,772	-48.0		31	2.5													12	30,938	-49.5				21	30,923	-45.1		26	19.4
7																									17	33,320	-41.4		27	18.2
5																									9	35,594	-38.6			

Standard pressure surface (mb)	YUCCA FLAT, NEV. 885 MB					YUMA, ARIZ. 1003 MB				
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
SURFACE	31	1,198	-3.1	-6.1	29	1.0	20	131	7.2	-5.2	36	1.1
1000	31	214					20	156			35	2.0
950	31	627					20	587	13.5	-4.7	36	5.2
900	31	1,059					20	1,040	11.7	-6.9	01	3.6
850	31	1,519	3.5	-6.2	35	3.0	20	1,515	8.9	-9.9	35	3.1
800	31	2,010	2.2	-8.1	34	2.0	20	2,015	6.3	-12.6	34	4.6
750	31	2,530	.5	-11.3	30	3.8	20	2,541	3.9	-16.3	33	5.6
700	31	3,081	-2.2	-14.6	30	6.1	20	3,099	1.2	-19.3	32	6.0
650	31	3,667	-5.4	-17.1	30	8.9	20	3,691	-2.3	-21.7	30	7.5
600	31	4,291	-9.1	-20.3	30	10.9	20	4,321	-6.6	-24.6	29	8.4
550	31	4,959	-13.3	-24.4	30	12.8	20	4,995	-11.5	-28.2	29	9.2
500	31	5,677	-18.3	-29.3	30	14.5	20	5,718	-17.0	-32.7	29	10.3
450	31	6,455	-23.8	-34.1	30	15.6	20	6,499	-23.0	-37.4	30	11.2
400	31	7,304	-30.6	-39.8	30	16.2	20	7,350	-29.7	-41.6	29	11.8
350	31	8,242	-37.8	-44.4	30	17.1	20	8,291	-37.3	-44.3	29	13.3
300	31	9,283	-45.7		31	17.4	20	9,336	-44.8		28	15.8
250	31	10,475	-54.4		30	18.7	20	10,532	-53.3		28	19.9
200	31	11,883	-60.1		29	21.3	15	11,918	-57.2			
175	31	12,716	-59.7		29	22.9	5	12,643	-57.8			
150	31	13,680	-60.4		29	23.0						
125	31	14,812	-62.2		29	20.0						
100	31	16,182	-64.8		29	17.3						
80	31	17,540	-65.6		29	13.5						
70	31	18,352	-65.6		29	11.3						
60	29	19,285	-64.3		29	9.2						
50	29	20,402	-63.5		29	7.0						
40	29	21,776	-62.6		31	4.4						
30	28	23,549	-61.6		33	5.0						
25	27	24,683	-60.6		33	3.1						
20	26	26,081	-57.9		31	4.0						
15	23	27,896	-56.5		29	3.1						
10	15	30,510	-50.4									

Note: All observations scheduled at 1200, G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G. C. T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

JANUARY 1957

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance: A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Jan.									
1	----	----	----	1.43	1.44	1.41	1.27	----	----
2	----	----	----	1.34	----	----	----	----	----
3	1.13	1.23	1.34	1.48	1.49	1.47	1.31	1.21	1.10
6	1.07	1.17	1.28	1.43	1.48	1.47	1.28	1.15	1.03
7	1.05	1.15	1.25	1.44	1.39	1.38	1.26	1.02	.89
8	1.05	----	----	----	1.39	1.35	1.18	1.09	1.04
9	1.05	1.15	1.26	1.39	1.40	1.34	1.19	1.05	.95
10	1.02	1.12	1.24	1.38	1.40	1.36	1.15	1.03	.91
12	----	----	----	1.39	1.41	1.32	1.11	.98	.85
13	----	----	----	1.33	1.36	1.35	1.21	1.13	1.04
14	----	----	----	----	----	1.39	----	----	.98
15	----	----	----	----	1.41	1.36	1.21	----	----
18	----	----	----	----	----	1.31	1.15	1.06	.96
19	1.01	1.12	1.19	1.35	1.39	1.35	1.17	1.09	1.00
20	----	----	----	----	----	1.31	1.18	1.07	.94
22	.91	1.05	1.16	----	----	----	----	----	----
23	1.00	1.10	1.20	1.30	----	----	----	----	----
24	1.08	1.17	1.27	1.41	1.45	1.39	1.24	1.13	1.03
25	1.08	1.17	1.27	1.37	1.41	1.37	----	----	----
26	1.07	1.17	1.25	1.37	1.40	1.37	1.24	1.14	1.05
27	1.03	1.14	1.24	1.33	1.42	1.34	1.20	1.10	1.00
28	1.01	1.13	1.22	1.38	1.40	1.34	1.21	1.12	1.03
29	1.04	1.16	1.25	1.39	1.39	1.40	1.25	1.18	1.07
31	1.02	1.11	1.22	1.35	1.37	1.34	1.20	1.08	1.00
Averages	1.04	1.14	1.24	1.38	1.41	1.37	1.21	1.10	0.99

OMAHA, NEBR.

Date	Sun's zenith distance: A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Jan.									
5	----	0.87	1.04	----	1.17	----	----	----	----
6	----	1.00	1.12	----	1.26	----	1.04	0.87	0.74
7	0.83	.93	HI .97	----	1.25	----	1.13	.95	.78
8	----	----	----	----	1.24	----	1.14	.95	.83
19	HS1.13	HS1.20	HS1.29	----	----	----	HM1.12	HS .99	----
21	1.00	1.09	----	----	1.35	----	HS1.24	HS1.10	HS .98
22	.97	1.06	1.14	----	1.33	----	1.20	1.05	.89
23	----	----	----	----	1.27	----	HS1.14	HS1.01	HS .87
24	1.01	1.12	1.21	----	1.32	----	----	----	----
25	.98	----	----	----	----	----	----	1.07	----
Averages	0.99	1.04	1.13	----	1.27	----	1.14	1.00	0.85

( ) Clouds present
HS Slight haze
HM Moderate haze
HI Intense haze

S Slight haze - indeterminable
I Intense haze - indeterminable
* Values corresponding to true solar noon

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue Vol. 8, No. 2 page 83 of this publication.

MADISON, WIS.

Date	Sun's zenith distance: A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Jan.									
2	(0.88)	S 1.00	(1.13)	----	----	----	----	----	----
5	S .88	1.00	1.13	----	1.20	----	1.14	1.00	0.85
6	S .83	S .95	S 1.13	----	S 1.21	----	S 1.08	S .94	S .81
7	S .86	S .95	S 1.10	----	S 1.20	----	S 1.12	S .99	S .91
8	----	----	I .98	----	----	----	----	----	----
15	S .93	S 1.04	S 1.15	----	S 1.26	----	S 1.17	S 1.04	----
18	S .92	S 1.05	S 1.19	----	----	----	S 1.14	S 1.02	S .92
19	S .95	S 1.03	S 1.15	----	S 1.30	----	S 1.17	S 1.05	S .95
23	S .96	S 1.05	S 1.15	----	----	----	----	----	----
24	----	----	----	----	S 1.21	----	S 1.08	S .97	S .87
26	----	----	S 1.17	----	S 1.29	----	S 1.16	S 1.05	S .94
27	S .95	S 1.05	(1.16)	----	----	----	----	----	----
30	1.00	1.12	1.21	----	1.34	----	1.20	1.08	.99
Averages	0.91	1.02	1.14	----	1.25	----	1.14	1.02	0.91

TUCSON, ARIZ.

Date	Sun's zenith distance: A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Jan.									
1	0.93	1.02	----	----	----	1.29	----	----	----
2	----	----	1.16	1.19	----	----	----	----	----
3	.98	1.08	1.20	1.35	1.39	1.33	1.15	1.03	0.93
4	.94	1.04	1.17	1.32	1.35	1.32	1.16	1.05	.95
5	.94	1.03	1.17	1.31	1.36	1.33	1.09	.97	.86
6	.94	1.06	1.16	1.34	1.39	1.32	----	----	----
7	.90	1.02	1.11	1.28	1.34	1.27	1.09	.90	.85
8	.93	.98	1.10	1.21	1.35	1.23	1.03	----	----
9	.93	1.03	1.15	1.29	1.35	1.25	1.06	.93	.84
10	.91	1.00	1.13	1.28	1.34	1.27	1.07	.94	.85
12	.95	1.04	1.14	1.31	1.35	1.30	1.14	1.03	.94
13	----	----	----	1.28	----	----	----	----	----
14	.93	1.03	1.13	1.30	1.35	1.30	1.15	1.06	0.96
15	.91	1.00	1.09	1.28	1.36	1.32	1.17	1.05	.96
16	----	1.10	1.21	1.34	----	----	----	----	----
17	.87	.97	1.09	1.24	1.26	1.18	1.01	.94	.83
18	.87	.93	1.02	1.18	1.26	1.19	.96	.83	.71
19	.87	1.00	1.09	1.25	1.31	1.22	1.01	.86	.74
20	.78	.89	1.03	1.17	1.24	1.11	.92	.76	.65
23	.83	.92	1.04	1.22	1.22	1.13	.97	.81	.73
24	.86	.96	1.09	1.25	1.33	1.19	.98	.91	.84
25	.90	1.00	1.10	1.26	1.32	1.23	1.02	.93	.85
26	.83	.92	1.06	1.23	1.31	1.25	1.07	.92	.83
27	.96	1.03	1.14	1.29	1.38	1.24	1.08	.86	----
28	.91	1.02	1.12	1.25	----	----	----	----	----
29	.88	.96	1.08	1.25	1.32	1.23	1.10	.97	.88
30	.93	1.03	1.14	1.29	1.37	1.29	1.12	1.01	.87
31	.98	1.06	1.19	1.32	1.37	----	----	----	----
Averages	0.91	1.00	1.12	1.27	1.33	1.25	1.06	0.94	0.84

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1971

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	319	180	158	[illegible]	361	348	341	331	328	326	328	332	346	333	348	316	252	321	347	324	317	352	339	362	328	329	328	285	194	342	393	330
AMES IOWA	181	92	25	142	206	224	232	174	113	157	161	167	63	214	222	169	97	153	223	152	225	201	160	227	178	207	84	175	151	114	247	167
ANNETTE ALASKA	4	65	15	15	15	24	61	67	87	62	91	91	91	84	68	27	8	59	49	45	21	23	78	91	28	63	15	181	45	44	45	51
APALACHICOLA FLORIDA	315	335	272	192	70	74	203	6	249	138	69	181	173	337	233	384	217	218	286	309	346	195	181	174	248	347	403	388	374	178	320	250
ARGONNE NAT. LAB.	38	193	16	52	226	238	239	206	126	135	81	142	35	81	260	71	122	356	259	172	180	160	245	252	188	283	204	285	117	288	271	177
ASTORIA OREGON	98	119	97	151	124	18	36	16	19	111	76	54	53	49	11	6	26	19	51	155	76	17	---	3	*	87	128	76	45	93	62	62
ATLANTA GEORGIA	333	289	116	46	208	83	296	26	136	52	97	253	130	74	150	177	146	123	322	300	334	114	144	59	65	361	486	368	328	127	204	193
BARROW ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	---	1	2	---	0
BISMARCK N.DAK.	81	186*	175	162	163	199	200	---	169	100	198	91	112	---	167	124	125	207	174	99	231	248	185	161	211	264	112	152	142	148	367	175*
BLUE HILL MASS.	12	149	128	23	21	157	161	157	130	51	134	127	165	1	34	196	181	182	179	184	92	156	49	182	90	5	123	214	213	199	117	123
BOISE IDAHO	174	230	229	241	179	92	105	85	54	62	224	86	141	76	21	71	41	192	237	165	148	156	68	147	75	218	251	221	109	167	271	145
BROOKINGS SOUTH DAK.	184	111	75	226	199	194	187	146	146	84	204	141	140	190	186	158	172	187	209	158	222	233	208	159	136	218	124	193	104	164	234	160
BROWNSVILLE TEXAS	275	180	---	---	138	46	32	130	189	283	206	357	307	223	248	---	334	396	397	39	433	417	68	346	294	325	402	138	416	447	448	284
BURLINGTON VERMONT	71	170	40	46	88	110	130	231	218	98	157	176	241	30	129	237	220	254	197	202	61	183	126	189	236	37	109	246	269	202	251	159
CAPE HATTERAS N.C.	193	275	178	125	90	49	64	77	47	103	201	224	168	256	15	205	243	169	139	351	330	30	50	47	81	274	159	191	307	161	65	168
CARIBOU MAINE	105	94	88	83	54	152	150	187	---	---	163	176	205	114	---	---	208	---	---	129	---	161	98	168	123	74	157	163	225	134	---	140
CHARLESTON S.C.	335	291	164	213	57	46	258	21	51	221	291	97	278	231	---	304	211	191	163	344	343	246	71	200	138	345	376	356	339	215	149	219
CLEVELAND OHIO	---	---	110	37	91	209	196	126	187	169	102	91	17	20	86	135	218	146	185	140	63	254	260	109	103	57	---	---	---	---	---	133
COLUMBIA MISSOURI	251	152	44	108	271	289	243	267	255	265	101	38	45	136	243	176	99	144	316	222	138	194	250	306	274	215	240	165	235	165	312	201
DAVIS CALIFORNIA	78	293	291	283	284	254	265	225	234	60	99	228	218	137	67	85	154	107	77	260	320	295	350	194	208	256	175	105	77	93	88	191
DODGE CITY KANSAS	233	29	200	306	324	298	330	316	290	170	151	239	316	200	275	209	246	110	114	254	94	316	310	316	309	316	322	323	318	318	285	252
E. LANSING MICHIGAN	147	114	59	52	192	165	213	214	171	59	103	169	43	68	171	153	245	182	234	181	47	200	267	205	225	134	253	250	92	260	244	165
EL CENTRO CALIF. NPF	290	100	312	309	312	308	309	296	288	294	290	151	284	307	311	324	304	306	302	297	304	298	330	329	328	339	331	295	362	354	200	296
EL PASO TEXAS	325	210	99	205	239	344	319	360	345	331	333	84	347	346	364	353	355	353	351	353	273	328	318	376	394	380	392	390	382	411	400	325
ELY NEVADA	211	224	303	287	296	295	184	152	153	187	145	179	200	271	150	209	204	251	319	168	355	295	266	265	289	321	328	329	337	341	330	253
EPPLEY NEWPORT R.I.	38	206	204	50	21	213	206	212	177	82	189	227	227	27	108	240	243	234	235	249	138	244	70	160	121	27	196	258	234	211	119	167
FAIRBANKS ALASKA	3	3	7	11	3	13	6	13	16	8	3	6	---	21	13	18	18	14	4	4	11	13	8	12	12	20	15	11	---	15	18	11
FLAMING GORGE UTAH	---	---	93	112	272	245	263	174	118	165	214	224	139	---	205	121	238	228	158	252	284	263	239	174	265	---	269	222	275	260	217	210
FORT WORTH TEXAS	300	49	85	322	333	319	95	---	314	322	322	158	151	326	336	309	317	260	350	331	322	393	---	---	---	358	356	349	300	357	357	285
FRESNO CALIFORNIA	181	180	290	287	248	273	267	206	246	245	200	147	198	273	217	244	242	269	123	66	168	236	272	272	264	204	83	59	92	118	78	199
GAINESVILLE FLORIDA	250	220	110	80	40	30	215	47	86	95	176	206	318	353	204	439	344	310	327	391	361	357	268	323	297	387	415	409	314	344	194	256
GENEVA NEW YORK	72	100	122	32	127	164	159	163	180	107	90	129	130	50	140	202	193	193	158	171	60	178	181	155	188	80	136	137	178	212	192	142
GLASGOW MONTANA	136	153	163	129	124	166	94	49	106	101	109	109	187	147	87	123	78	137	138	163	146	188	95	124	163	151	209	171	88	71	184	132
GRAND JUNCTION COLO.	119	61	162	287	306	327	233	140	134	183	286	113	241	203	184	186	191	101	279	212	245	304	208	248	262	300	315	304	328	268	310	227
GREAT FALLS MONTANA	137	196	162	---	183	135	112	89	114	138	170	76	217	194	114	83	132	155	120	178	119	73	66	207	89	90	185	99	93	82	74	120
GREENSBORO N.C.	291	244	201	46	135	59	243	45	81	45	255	224	60	81	101	237	135	128	246	335	249	43	238	39	239	345	371	268	291	101	169	179
INDIANAPOLIS INDIANA	---	174	68	46	238	261	261	174	192	228	59	35	22	49	223	70	109	252	230	287	67	192	209	50	94	299	292	350	99	161	324	173
INYOKERN CALIFORNIA	248	83	292	282	296	291	271	190	236	262	282	261	283	273	240	259	285	284	269	291	---	---	---	---	---	---	---	---	---	---	---	---
ITHACA NEW YORK	139	175	182	87	163	234	179	205	262	192	171	160	196	90	201	243	250	221	236	192	144	176	264	189	243	174	224	271	248	275	287	202
LAKE CHARLES LA.	323	296	48	123	358	79	36	77	240	167	145	137	---	138	308	378	310	334	390	401	212	238	184	283	199	392	406	283	382	287	131	243
LAKELAND FLORIDA	346	366	247	268	153	215	76	290	216	155	308	337	334	356	284	369	390	273	382	421	294	388	364	285	312	363	418	431	397	357	284	312
LANDER WYOMING	204	108	150	238	197	219	194	195	221	188	128	97	109	147	177	160	210	184	190	199	255	246	250	230	191	243	257	182	148	157	271	192
LARAMIE WYOMING	76	82	159	204	205	205	196	156	90	182	219	146	104	184	117	121	66	179	232	185	246	201	157	159	217	162	217	259	230	208	197	173
LAS VEGAS NEVADA	270	108	304	297	295	297	246	184	248	258	284	197	204	255	223	253	232	295	297	295	235	324	327	301	328	332	336	344	348	355	336	278
LEXINGTON KENTUCKY	248	209	195	25	65	263	---	---	---	---	---	---	---	---	156	145	94	252	238	295	37	72	298	36	187	314	320	272	141	72	343	186
LITTLE ROCK ARKANSAS	268	187	9	213	265	242	99	189	305	81	146	60	63	208	306	226	217	69	323	308	35	62	221	163	235	327	303	325	264	191	266	190
LOS ANGELES CALIF.	244	303	314	285	287	290	296	261	242	253	38	126	156	296	325	319	312	308	253	278	34	213	245	81	290	342	272	209	339	350	137	248
MADISON WISCONSIN	69	204	54	104	226	229	227	218	74	209	148	120	43	196	---	111	245	258	260	151	222	174	243	252	146	285	199	276	156	312	278	190
MANHATTAN KANSAS	218	70	57	261	260	260	260	261	258	235	115	104	215	205	269	177	100	149	287	280	203	291	241	294	295	211	175	280	261	118	268	215
MATANUSKA ALASKA	27	8	14	5	7	24	---	---	---	---	33	50	36	38	39	42	62	52	27	55	---	58	59	---	76	68	87	80	86	---	61	46
MEDFORD OREGON	55	254	209	199	193	128	159	57	71	137	156	158	104	95	12	29	35	76	73	223	121	101	73	202	62	76	49	57	95	140	132	114
MIAMI FLORIDA	329	332	241	304	363	370	391	382	341	335	320	312	242	392	381	403	373	143	338	452	224	---	258	387	263	299	444	398	405	437	357	341
MIDLAND TEXAS	316	125	270	321	328	352	336	359	359	347	353	153	352	354	366	383	339	331	362	351	331	339	156	418	400	412	439	369	---	---	366	334
NASHVILLE TENNESSEE	115	254	111	33	94	246	196	40	107	86	93	67	35	179	258	117	112	99	290	317	28	28	329	34	86	324	340	288	280	43	223	157

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JANUARY 1971

Station	Day of month																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
NEW YORK CENTRAL PRK	32	193	202	22	62	212	183	134	95	153	190	214	167	21	101	255	249	227	249	253	79	230	222	131	141	24	148	214	214	228	180	162
NORTH OMAHA NEBRASKA	267	---	60	260	267	266	261	257	221	207	243	132	166	241	167	186	101	172	289	247	291	294	266	286	289	178	176	119	212	134	318	217
OAK RIDGE TENNESSEE	272	204	170	24	86	133	230	44	103	83	97	193	73	86	199	197	150	130	296	308	184	20	299	23	105	321	345	243	272	73	181	166
OKLAHOMA CITY OKLA.	263	31	51	302	307	312	273	303	299	296	277	68	160	86	317	191	234	143	270	282	301	267	144	273	336	337	336	337	344	277	327	250
PAGE ARIZONA	55	20	67	52	52	---	51	89	128	49	50	29	52	49	42	42	43	51	---	---	---	---	---	---	---	---	---	---	---	---	---	---
PHOENIX ARIZONA	242	175	306	305	313	318	320	303	293	301	305	280	278	300	310	202	305	292	311	292	258	240	325	331	328	337	338	329	331	358	333	299
PORTLAND MAINE	36	181	178	47	59	159	187	210	197	94	194	202	218	55	130	225	216	237	234	244	142	235	63	232	205	24	---	247	236	226	186	170
PROSSER WASHINGTON	172	200	143	91	86	71	71	67	121	127	107	179	136	72	17	16	47	81	31	199	189	154	176	---	97	178	159	201	131	120	212	122
RAPID CITY S.DAK.	192	126	166	139	172	189	140	106	80	109	94	161	183	217	159	121	42	115	206	121	212	221	218	203	159	150	234	228	171	109	181	159
RENO NEVADA	109	259	265	272	264	224	163	130	184	114	200	217	188	277	109	116	99	252	220	171	279	279	287	265	266	287	291	295	302	300	275	224
RICHLAND 25 NW WASH.	176	157	152	79	62	52	71	52	121	120	105	66	121	85	65	16	46	94	46	218	149	108	168	88	151	202	136	216	110	53	239	114
RIVERSIDE CALIFORNIA	305	114	363	342	327	348	333	306	300	233	138	101	185	332	352	360	352	351	354	285	77	300	307	142	368	390	362	341	383	403	196	292
RUSTON LOUISIANA	292	207	29	---	---	---	42	103	213	136	264	134	149	151	252	281	272	143	328	326	121	137	136	100	202	320	342	319	121	241	154	197
SAINT CLOUD MINN.	100	175	46	181	200	173	201	141	98	157	213	93	72	157	224	130	195	257	276	112	203	280*	277*	246	119	258	117	162	119	281	279	179*
SALT LAKE CITY	111	151	254	266	263	259	133	87	83	59	47	47	118	222	80	160	83	69	241	61	281	268	85	232	156	---	281	287	270	170	284	170
SAN ANTONIO TEXAS	282	79	304	354	334	148	135	290	306	339	363	103	103	63	329	357	361	355	382	373	351	288	106	313	385	369	404	194	163	389	401	281
SANTA MARIA CALIF.	292	270	316	308	301	301	303	277	256	161	75	213	181	262	240	291	313	316	---	218	283	331	329	341	345	350	320	257	358	365	231	280
SAULT STE MARIE MICH	49	38	125	35	104	172	163	105	122	130	112	190	97	108	192	193	172	204	---	---	105	136	202	102	132	122	195	123	147	240	173	137
SEATTLE TACOMA WASH.	124	63	80	135	119	37	30	10	22	82	54	127	57	71	30	15	41	37	57	94	123	12	24	11	36	109	145	78	23	19	105	64
SEATTLE WASH. UNIV.	128	78	90	172	125	52	11	25	52	60	81	101	70	80	59	26	52	45	31	119	149	22	32	39	36	91	140	102	16	10	112	71

Note.--Langley is the unit used to denote one gram calorie per square centimeter. Values with an asterisk are interpolated.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (6 A. M. to 6 P. M.) AT PALMER, ALASKA

[illegible] 1971

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-31	- 5	-29	-12	-12	-28	- 6	-175	-142	-101	-88	-119	-188	-179	-189	-123	-1[illegible]	-75	-62	- 9	-74	-2[illegible]	-9[illegible]	-98	-[illegible]	- 7	-[illegible]	-[illegible]	-[illegible]	-22	-3[illegible]	-79

The measurement is made with a [illegible] net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (3900 Å) at Ames, Iowa.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	6.41	4.44	1.57	8.29	8.29	8.29	7.99	7.40	6.11	7.30	7.30	6.81	3.75	8.35	8.58	7.11	6.23	7.59	8.29	7.13	8.24	8.48	8.40	8.[illegible]	7.[illegible]	8.[illegible]	6.[illegible]	7.58	7.71	[illegible]	8.[illegible]	[illegible]

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code $\lambda s \, Q \, Q \, Q$ defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															Mean O_3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Amundsen-Scott, Antarctic	20347	20339	20333	20376	35353	35346	20363	35346	20381	35331	20345	20325	33323	20309	20321	33311	20301	20274	20302	20322	20301	20324	20314	20304	35319	20308	20294	20300	20305	20304	20281	323
Bedford, Mass.	-----	-----	-----	06360	-----	00310	00334	-----	-----	-----	00355	00309	00303	-----	-----	-----	-----	-----	00526	-----	-----	-----	-----	-----	00386	-----	-----	-----	00511	-----	-----	377
Bismarck, N. D.	35372	00385	00386	00416	00408	00399	00413	-----	35357	-----	20326	35345	-----	35421	34355	34349	35352	00318	35305	34342	00372	00443	00390	36394	-----	00398	00384	05421	-----	34443	02417	381
Boulder, Colo.	-----	-----	-----	02463	00431	-----	-----	03401	-----	-----	03337	05337	00385	03409	00326	-----	-----	0327[illegible]	00244	00256	00319	00365	-----	-----	00348	03320	00315	00314	03341	-----	-----	343
Green Bay, Wis.	-----	00363	35406	-----	-----	02442	00410	00431	34414	00324	00318	00307	06345	00394	02358	04392	00435	00476	00409	04338	00385	05434	00414	00383	-----	-----	03475	-----	-----	00439	00494	399
Huancayo, Peru	00267	00272	00282	00272	00279	05273	00270	00272	00263	00282	00275	00272	00265	00264	00260	05266	00273	00268	00242	00266	00265	00272	00269	00265	00261	00267	00260	00267	05261	00267	00273	268
Mauna Loa, Hawaii	-----	-----	-----	00247	-----	-----	-----	00270	-----	-----	-----	-----	04236	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	251
Nashville, Tenn.	04343	00347	00326	04320	04309	00279	00282	-----	04345	00331	05333	34301	35295	00273	00388	04343	04349	03408	00417	00327	04311	-----	00293	-----	05335	00377	-----	00375	-----	-----	-----	334

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded $Q \, Q \, Q$) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick. The code λs designates the type of measurement made.

DESCRIPTION OF CHARTS

CHART I. A. NORMAL DAILY AVERAGE TEMPERATURE (°F. 1931-60) FOR MONTH. B. TEMPERATURE DEPARTURE FROM 30-YEAR MEAN (°F. 1931-60) FOR MONTH. Chart I-A is reproduced from Environmental Data Service Publication "Climatic Maps of the United States". Chart I-B is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin", a publication of Environmental Data Service.

CHART II. TOTAL PRECIPITATION. Chart II is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin".

CHART III. PRECENTAGE OF NORMAL PRECIPITATION. Chart III is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin".

CHART IV. TOTAL SNOWFALL. CHART V. A. PERCENTAGE OF MEAN MONTHLY SNOWFALL. B. DEPTH OF SNOW ON GROUND. Chart IV gives the total depth in inches of unmelted snowfall as reported during the month by Weather Bureau and selected cooperative stations. This is converted in Chart V-A into a percentage of the mean monthly total amount computed for each Weather Bureau station having at least 10 years of record. The depth of snow on ground is that reported by both Weather Bureau and selected cooperative stations as of 7:00 a.m. Eastern Standard Time on the Monday nearest the end of the month. This is reported only for the months December through March. The snowfall charts are presented each month November through April.

Isolines for Charts I, II, III, IV, and V, are drawn through points of approximately equal value. Caution should be used in interpolating on these charts, particularly in mountainous areas.

CHART VI. A. PERCENTAGE OF POSSIBLE SUNSHINE. B. PERCENTAGE OF MEAN MONTHLY SUNSHINE. Chart VI-A shows the amount of sunshine received in terms of percentage of the total hours of sunshine possible during the month. In Chart VI-B this is shown as a percentage of the mean number of hours of sunshine received. Means are computed for Weather Bureau stations having at least 10 years of record.

CHART VII. A. AVERAGE DAILY VALUES OF SOLAR RADIATION LANGLEYS. B. PERCENTAGE OF MEAN DAILY SOLAR RADIATION. Shown on Chart VII-A are the monthly averages of daily total solar radiation, both direct and diffuse, in langleys (gm. cal. cm.-2) for all Weather Bureau and selected cooperative stations which record this element. The analyses include adjustments required to bring station records to approximately the same level of calibration. Adjusted numbers are in parentheses. Chart VII-B shows the percentages of the mean based on at least 5 years of record during the period 1950-1960, and corrected to the International Pyrheliometer Scale of 1956.

CHART VIII. TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

CHART IX. TRACKS OF CENTERS OF CYCLONES AT SEA LEVEL. Centers which can be identified for 24 hours or more are tracked in these charts. Semi-permanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a.m. EST positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by solid dots. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Solid squares indicate position of stationary center for period shown beside it.

CHART X. AVERAGE SEA LEVEL PRESSURE (mb.) AND RESULTANT SURFACE WIND. The average monthly sea level pressures are obtained from eight daily 3-hourly observations reported at Weather Bureau Stations. Resultant surface wind directions (to 36 points of the compass) for the month are shown by arrows. Resultant speeds are in miles per hour and are indicated by the length of arrow shafts. Constancy ratios (resultant surface wind divided by average surface wind for month) are shown to two decimal places. The inset shows the departure of the average pressure based on 30-year normals for first-order Weather Bureau Stations, other stations having at least 10 years of record; and for each 10° intersection in a diamond grid over the oceans.

CHARTS XI-XVI. AVERAGE HEIGHT, TEMPERATURE, AND RESULTANT WINDS, 850, 700, 500, 300, 200, and 100 mb. Height is given in geopotential meters and temperature in degrees Celsius. These are the averages of the 1200 GMT radiosonde reports. Wind speeds are given in meters per second; flag represents 25 m.p.s., full feather 5 m.p.s., and half feather 2 1/2 m.p.s. Directions are shown to 360° of the compass. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

CHART XVII. A. 50-MB. RESULTANT WINDS. B. 30-MB. RESULTANT WINDS. Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. Winds are based on rawins at the indicated pressure surface and at 1200 GMT.

Exact values of most of these charted elements for Weather Bureau stations are printed each month in tabular form in CLIMATOLOGICAL DATA, NATIONAL SUMMARY. Extreme values of temperature and precipitation for each state are included in the tables, Condensed Climatological Summary. Annual averages for surface elements are presented in the CDNS Annual Issue each year.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), January



B. Temperature Departure from 30 - Year Mean (°F 1931-60), January 1971

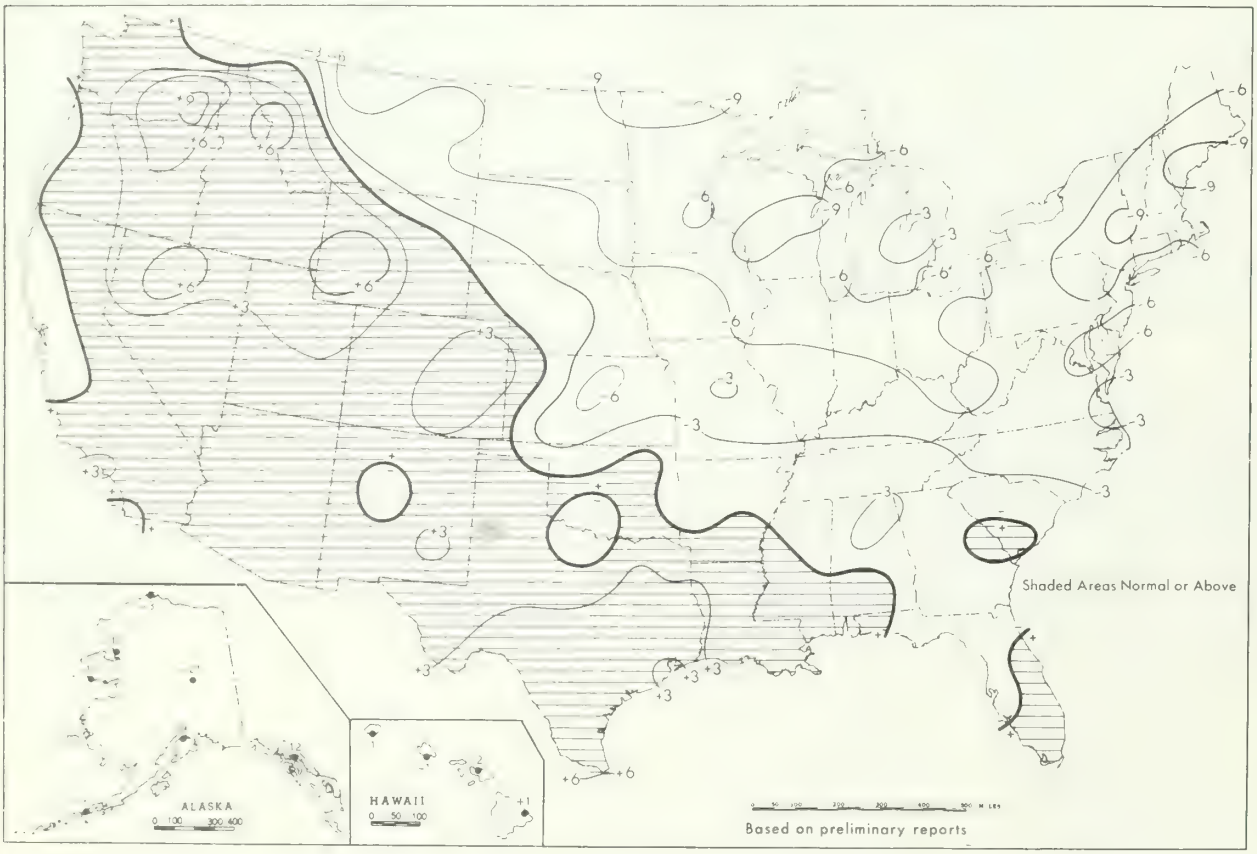


Chart II. Total Precipitation (Inches), **January 1971**

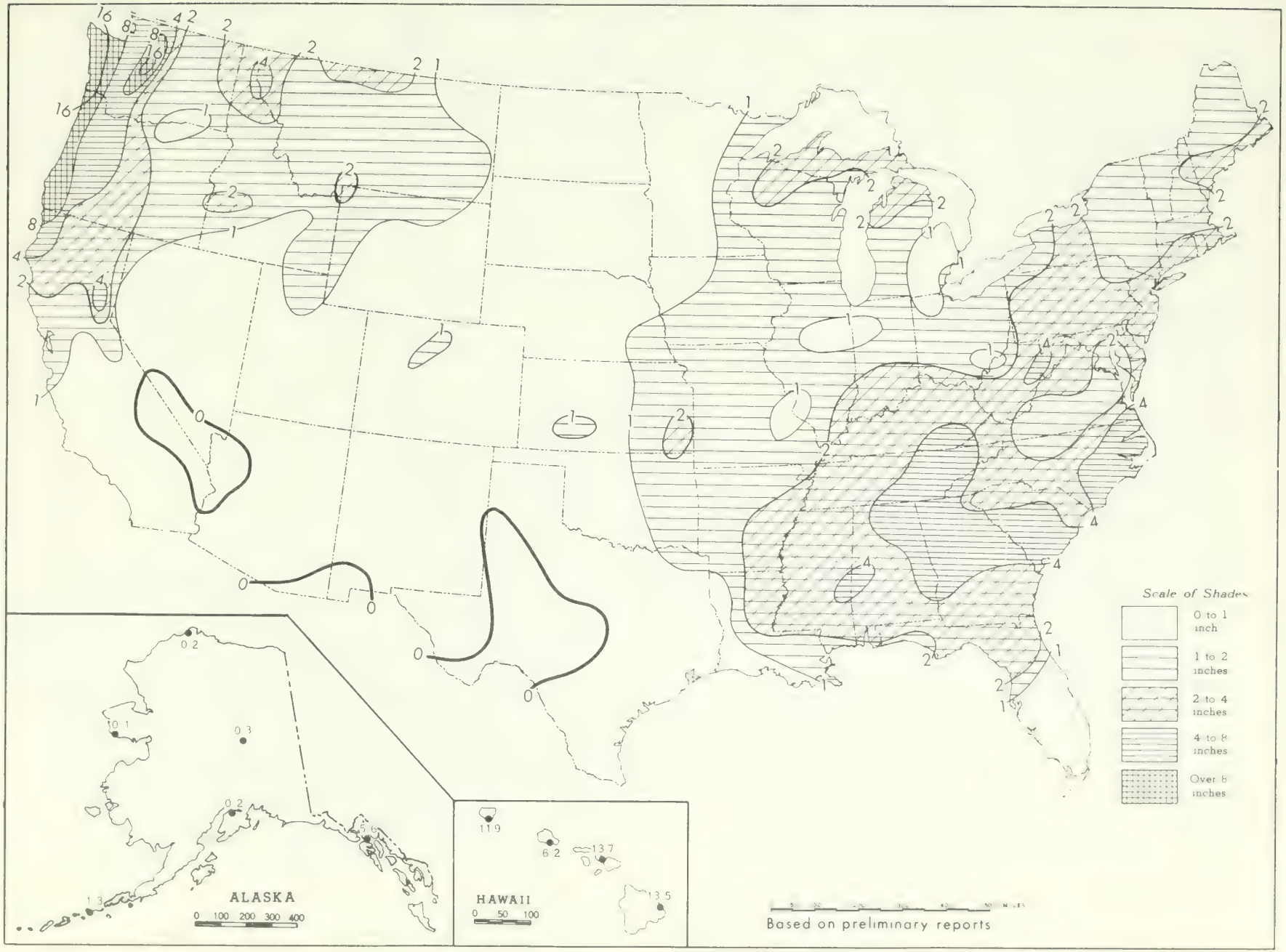


Chart III. Percentage of Normal Precipitation, January 1971

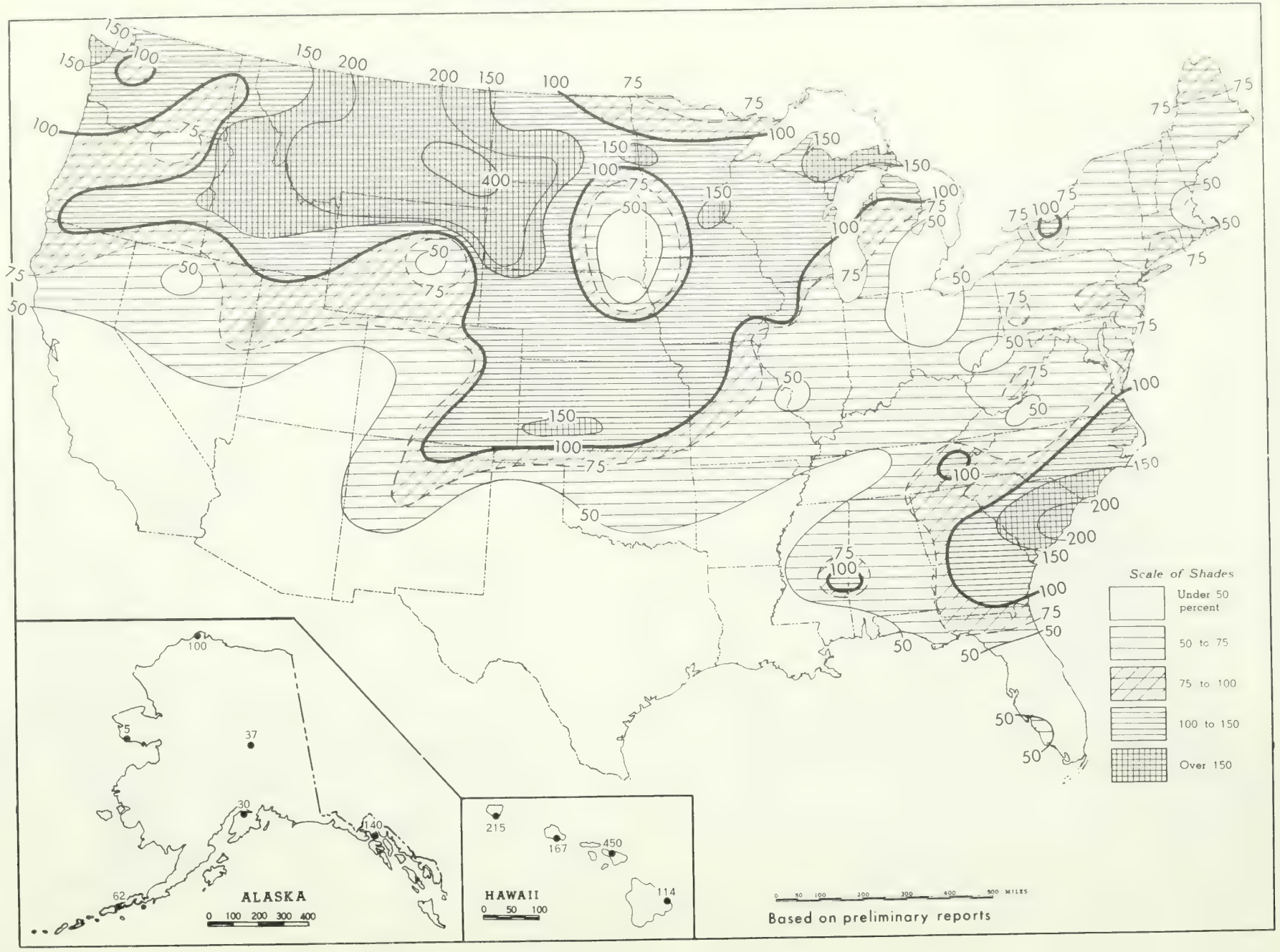
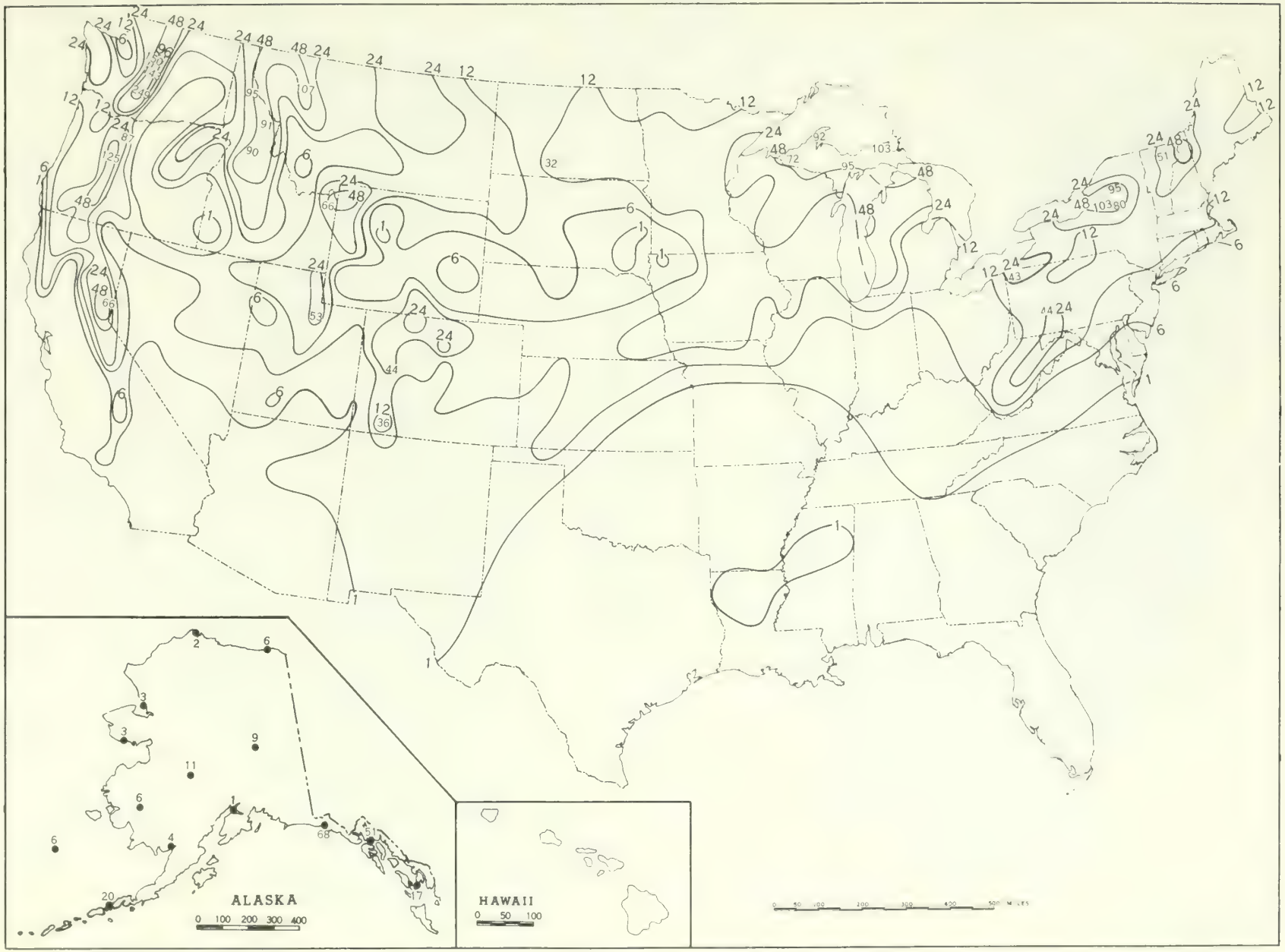
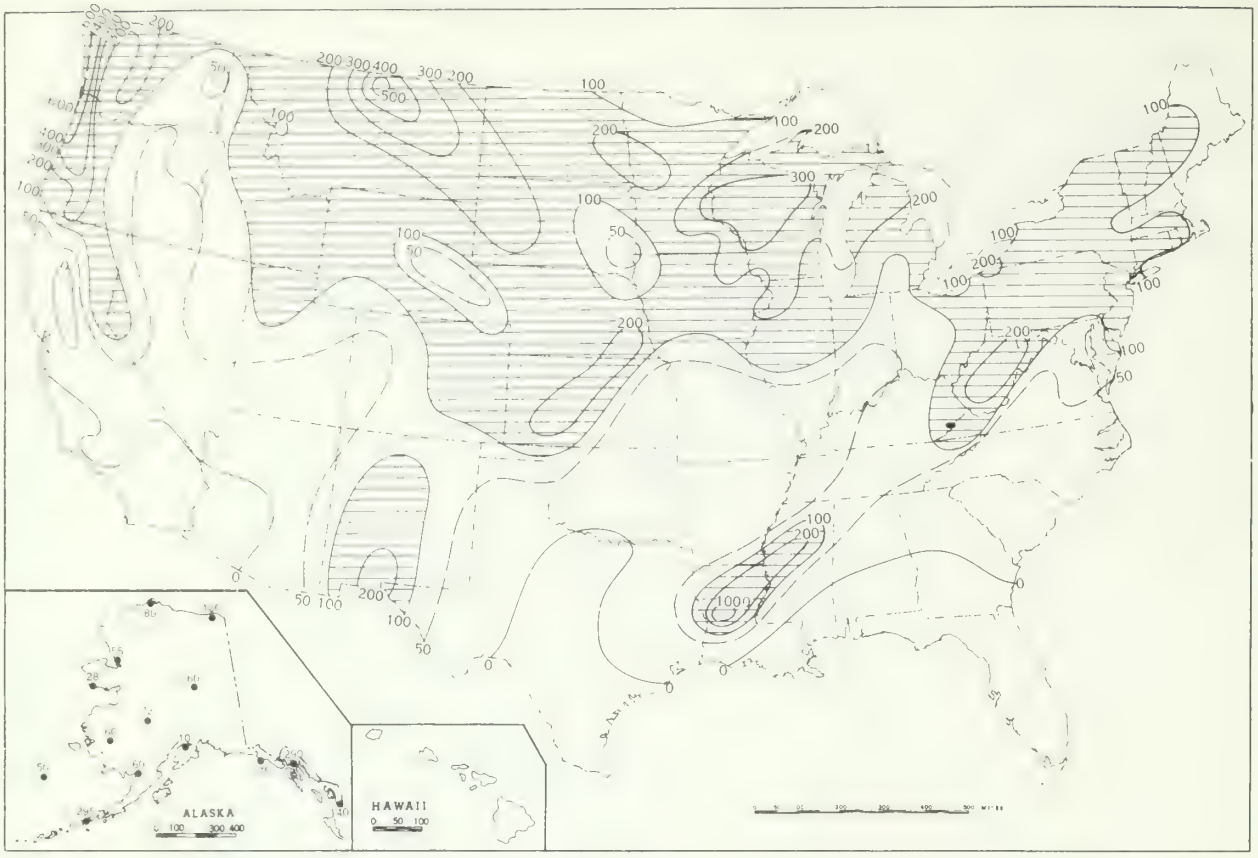


Chart IV. Total Snowfall (Inches), January 1971

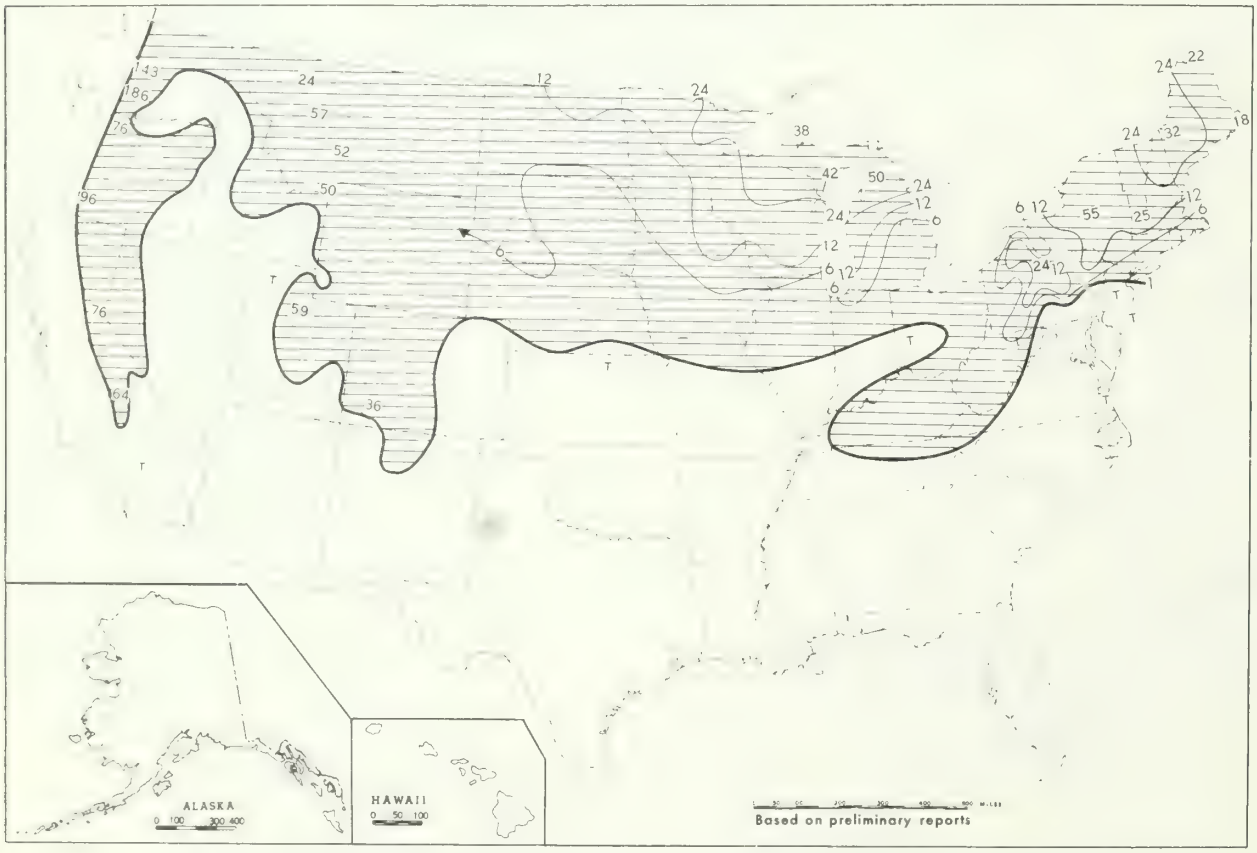


This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, January 1971

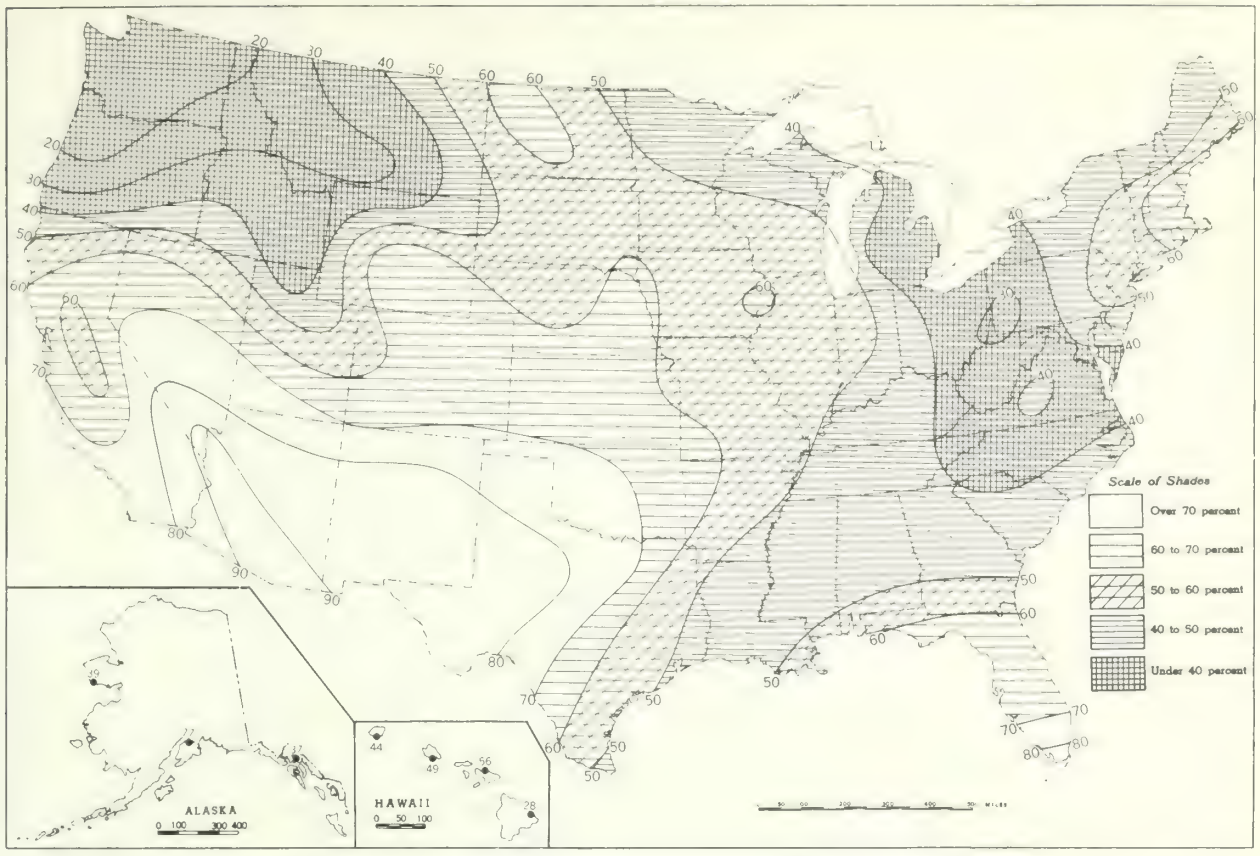


B. Depth of Snow on Ground (Inches), 7:00 a.m. E. S. T., February 1, 1971

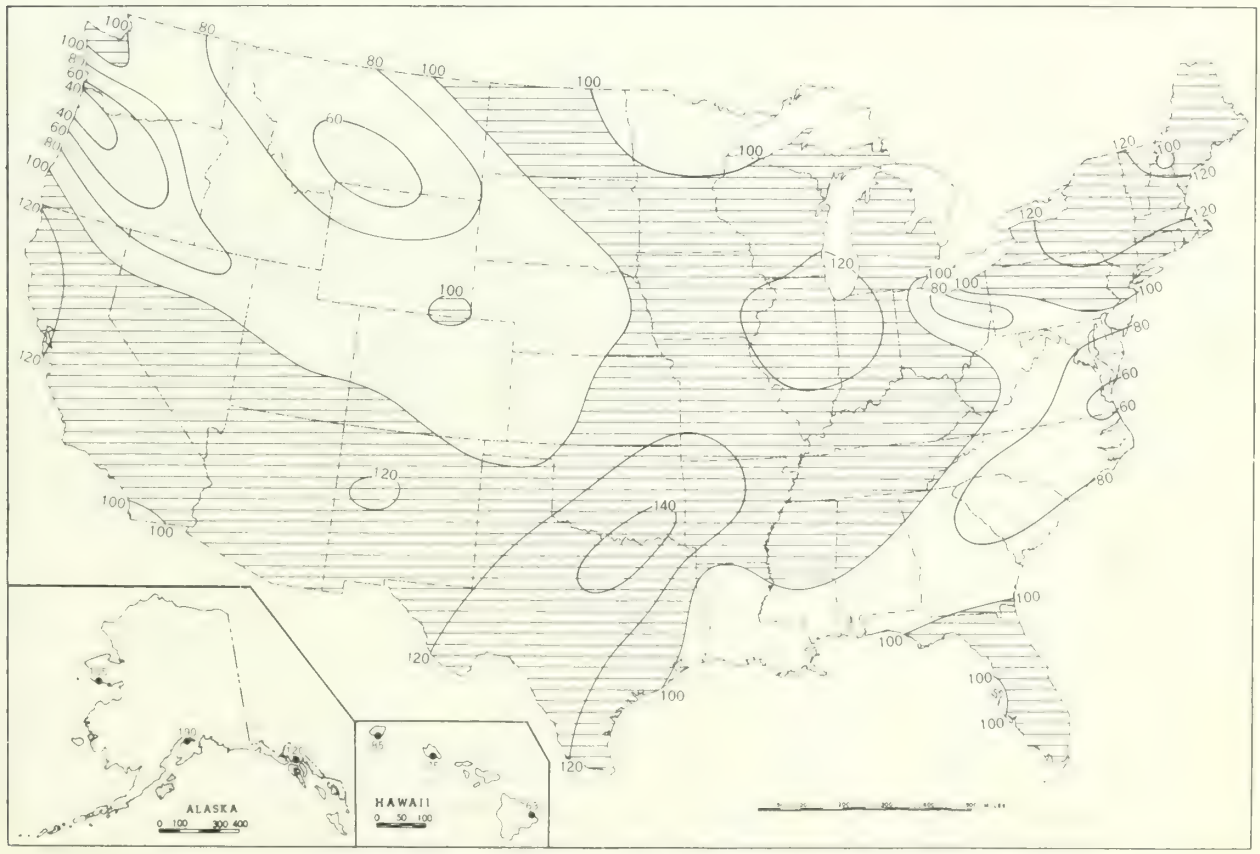


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, January 1971

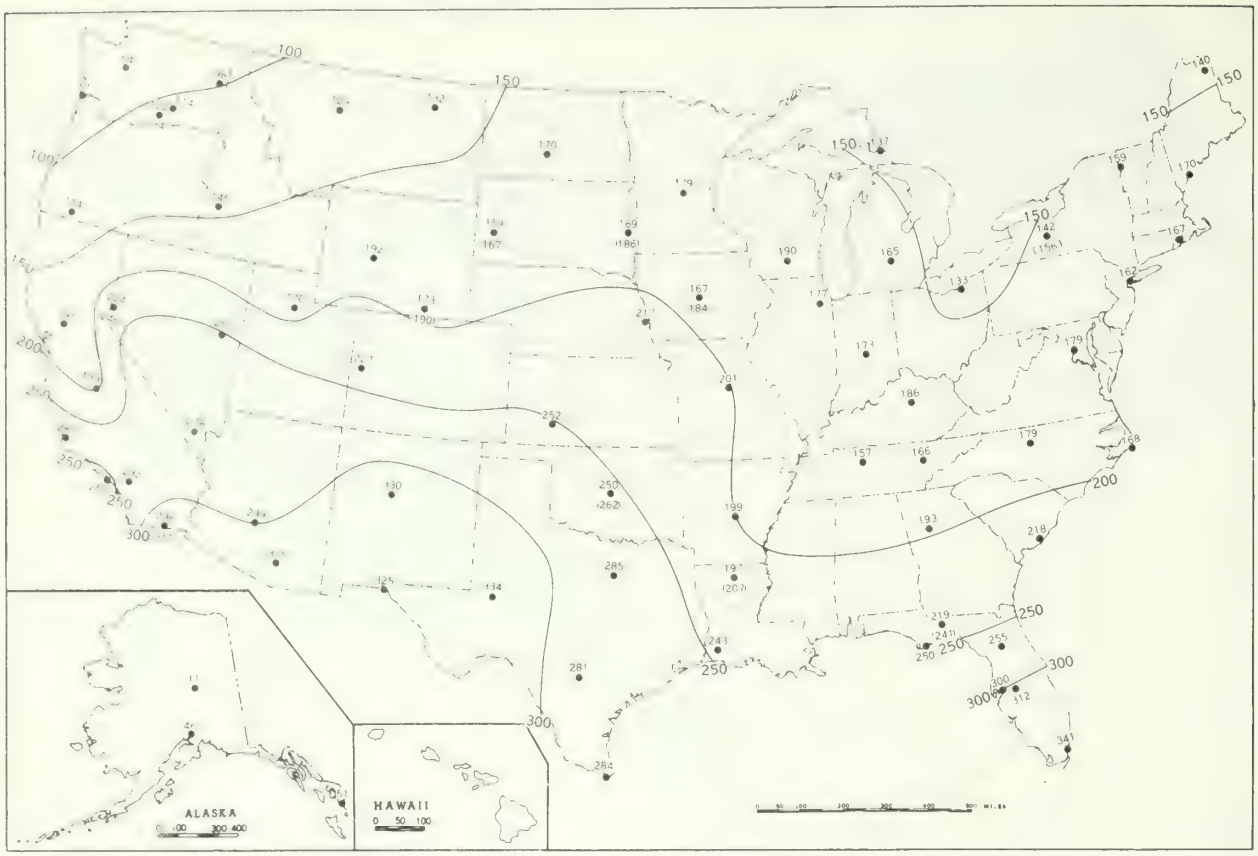


B. Percentage of Mean Monthly Sunshine, January 1971

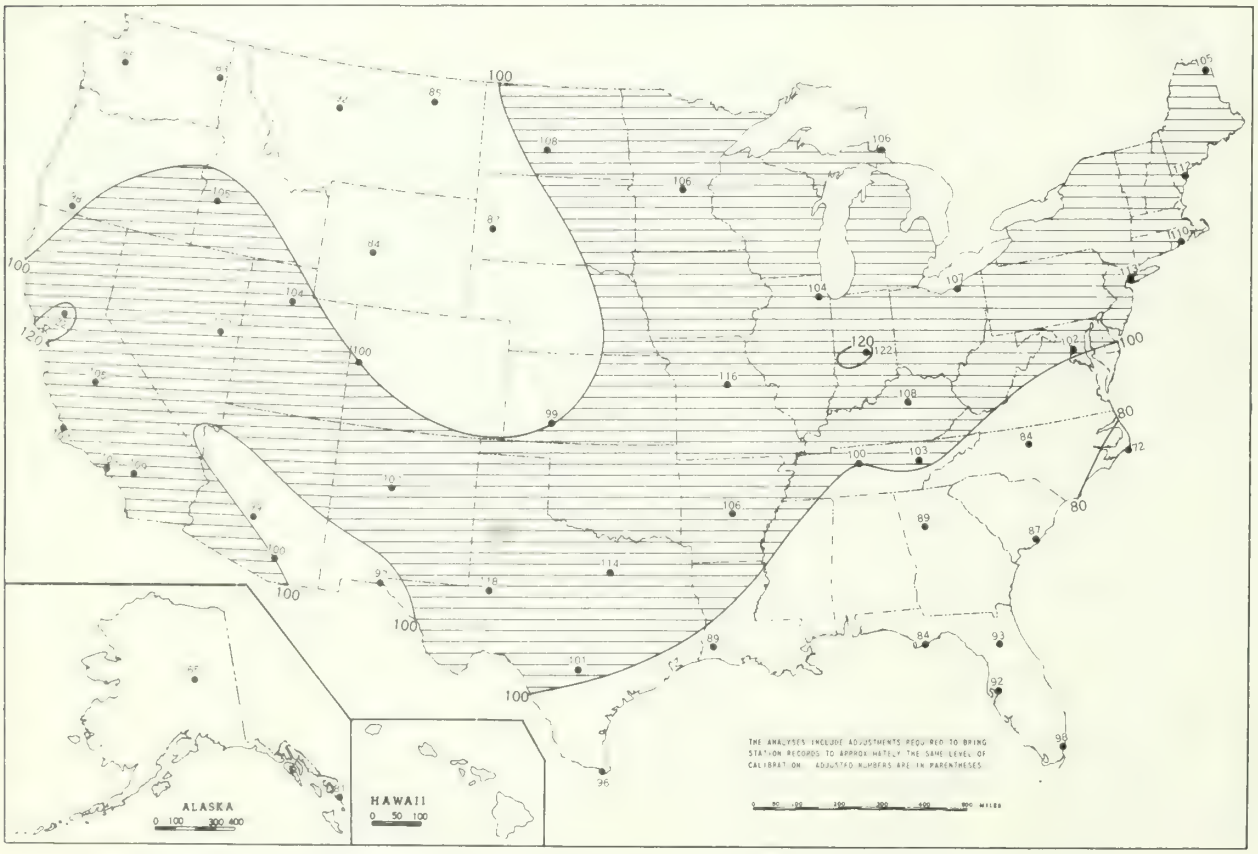


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, January 1971.

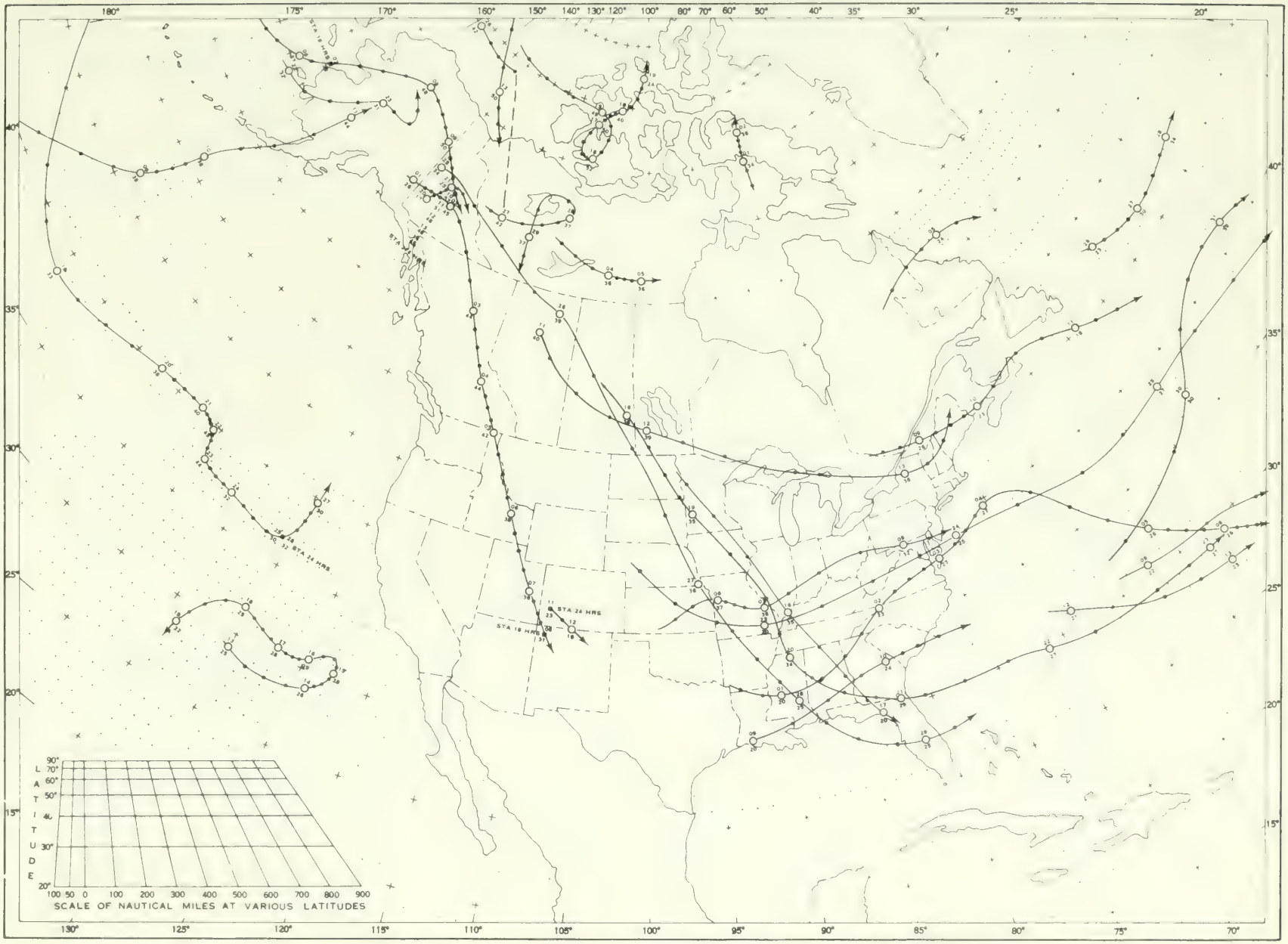


B. Percentage of Mean Daily Solar Radiation, January 1971



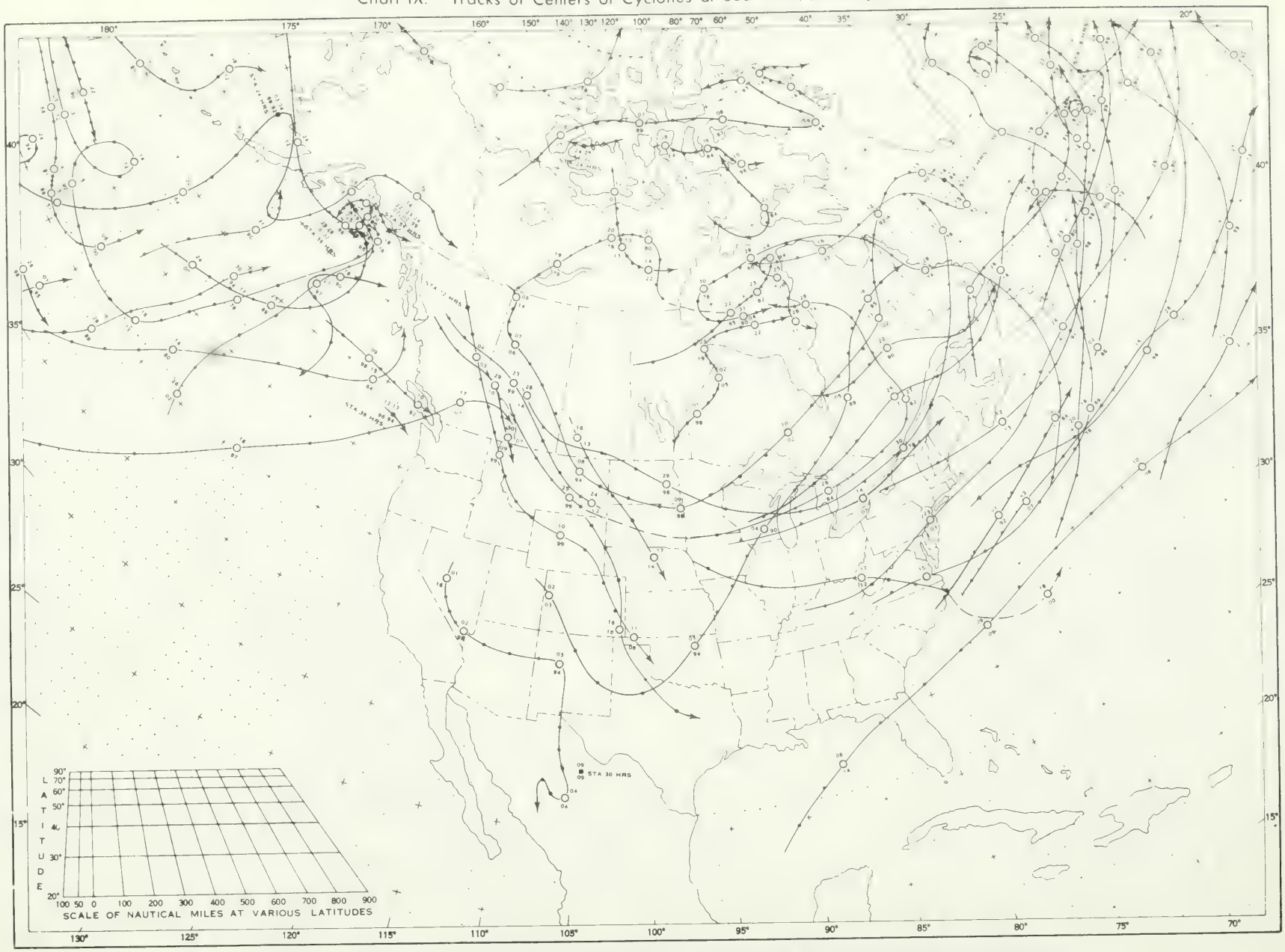
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, January 1971.



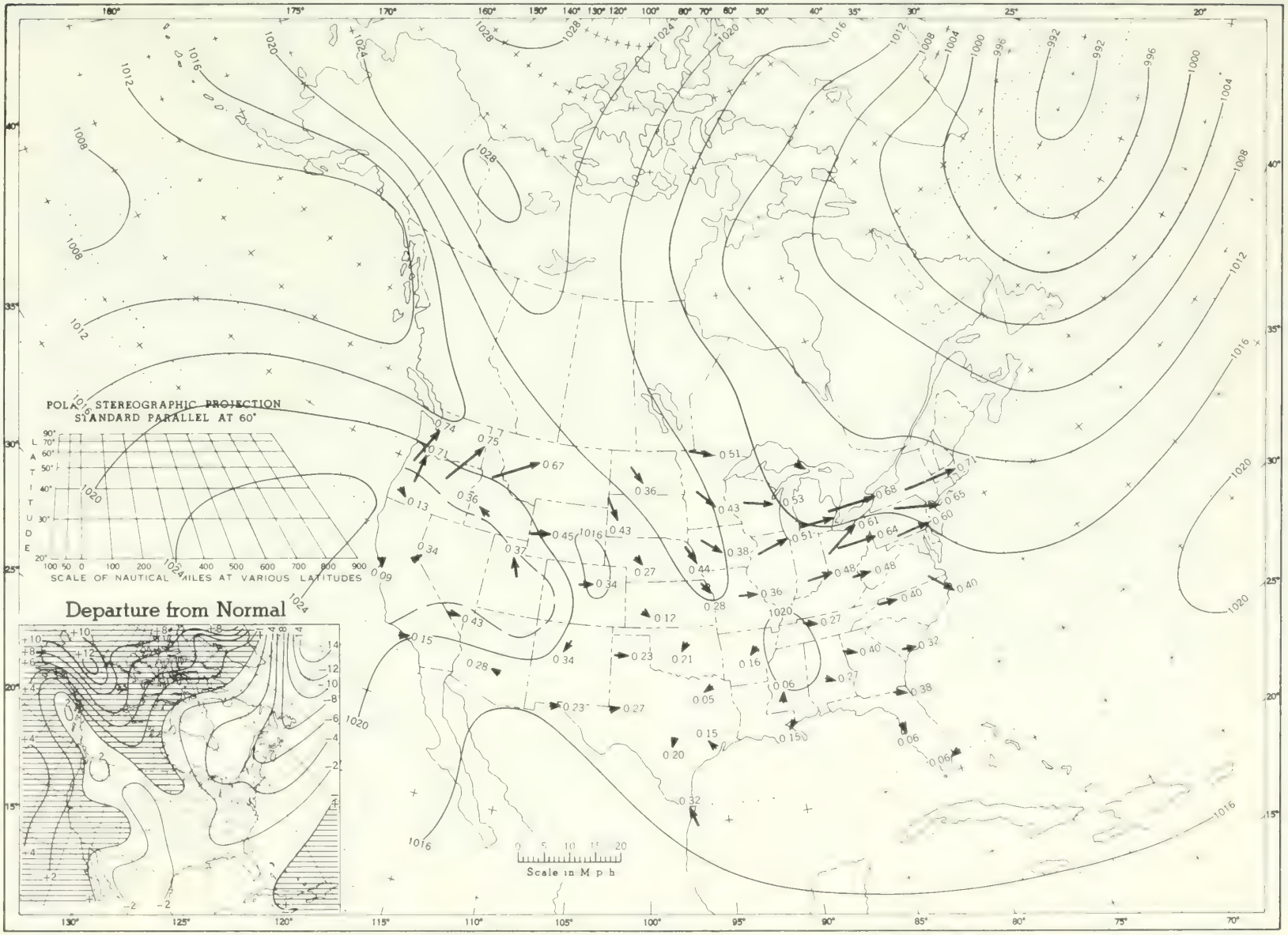
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, January 1971



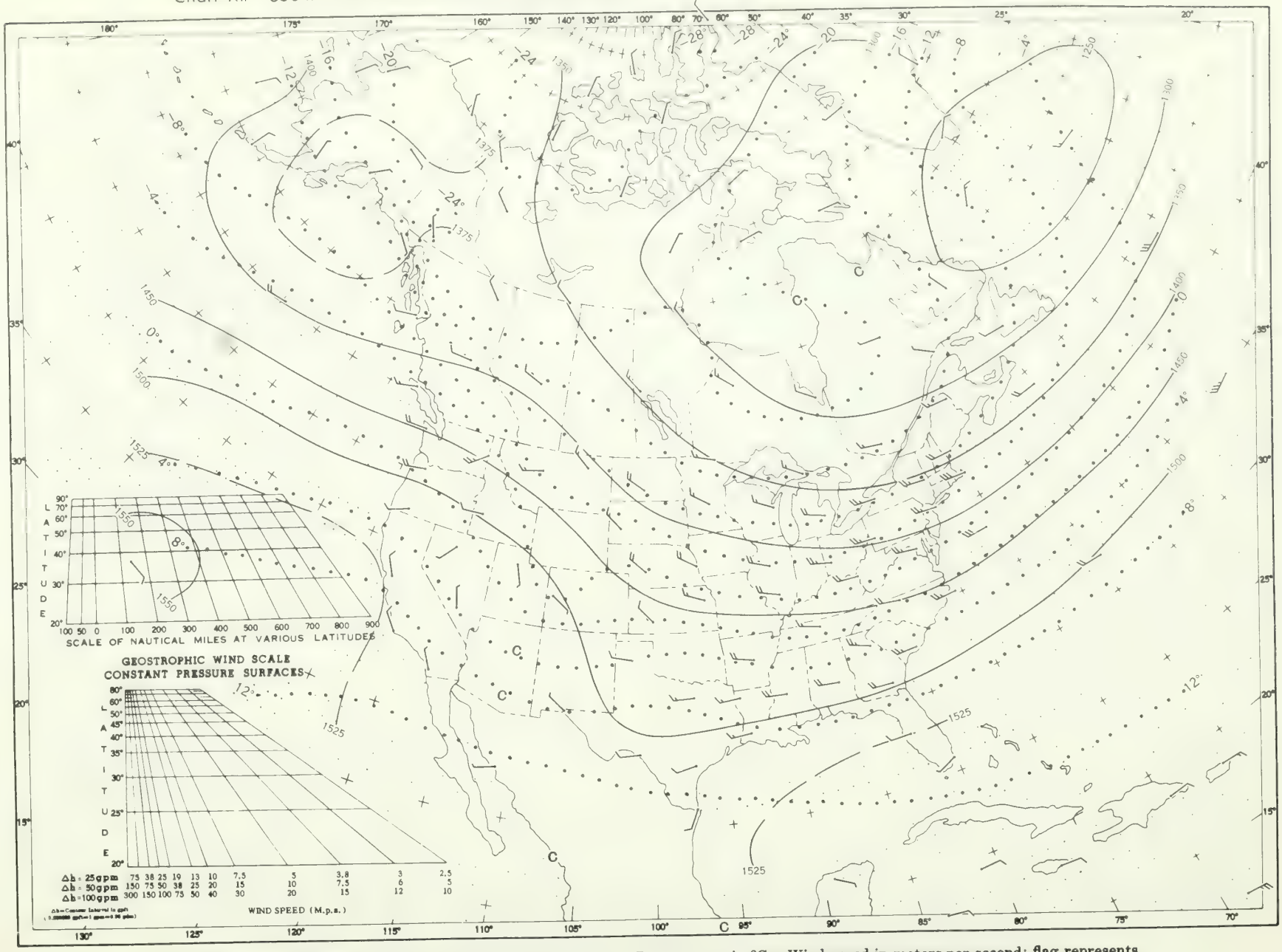
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, **January 1971** Inset. Departure of Average Pressure (mb) from Normal, **January 1971**



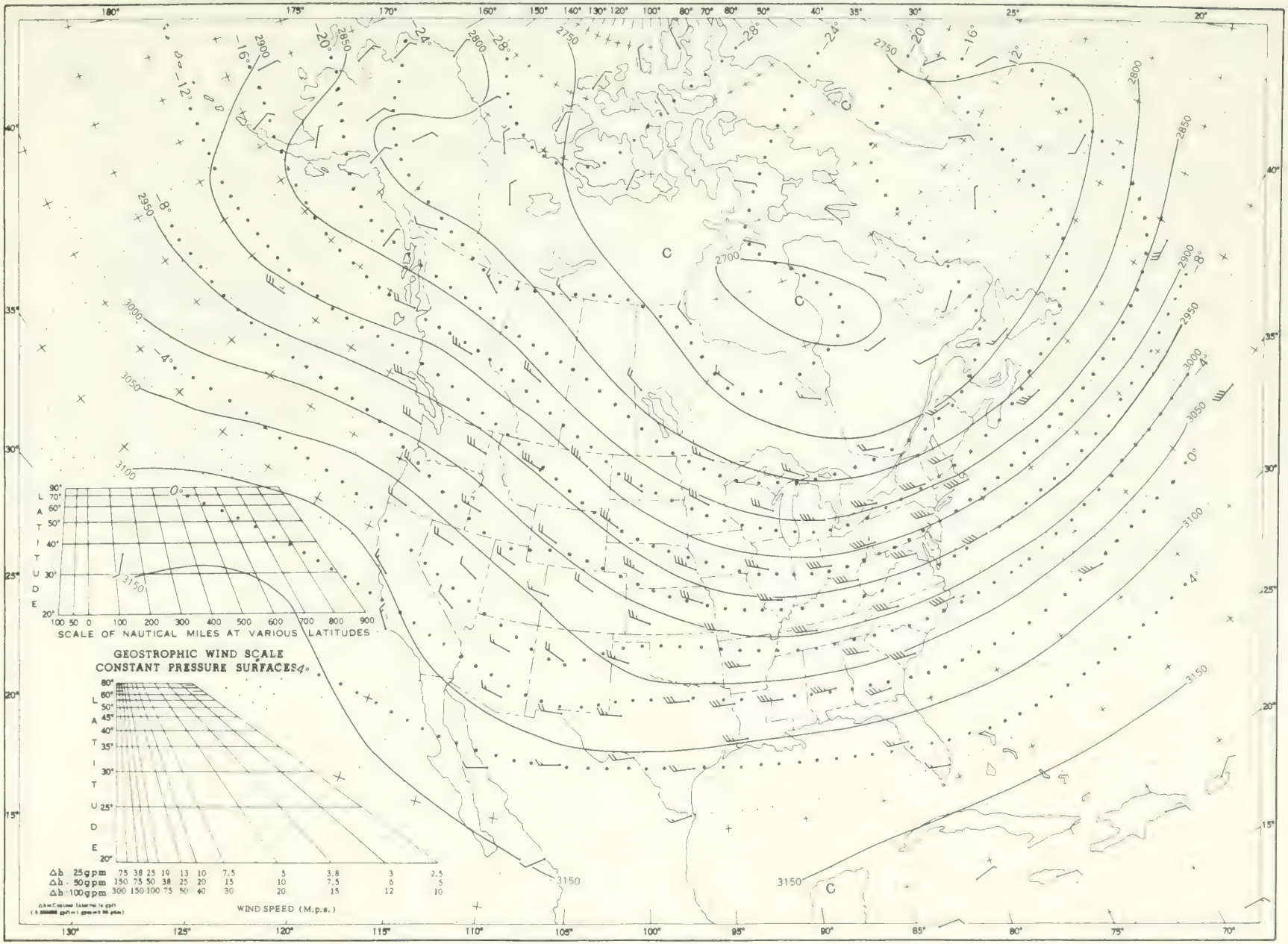
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb. Surface, 1200 GMT, **January 1971** Average Height and Temperature, and Resultant Winds



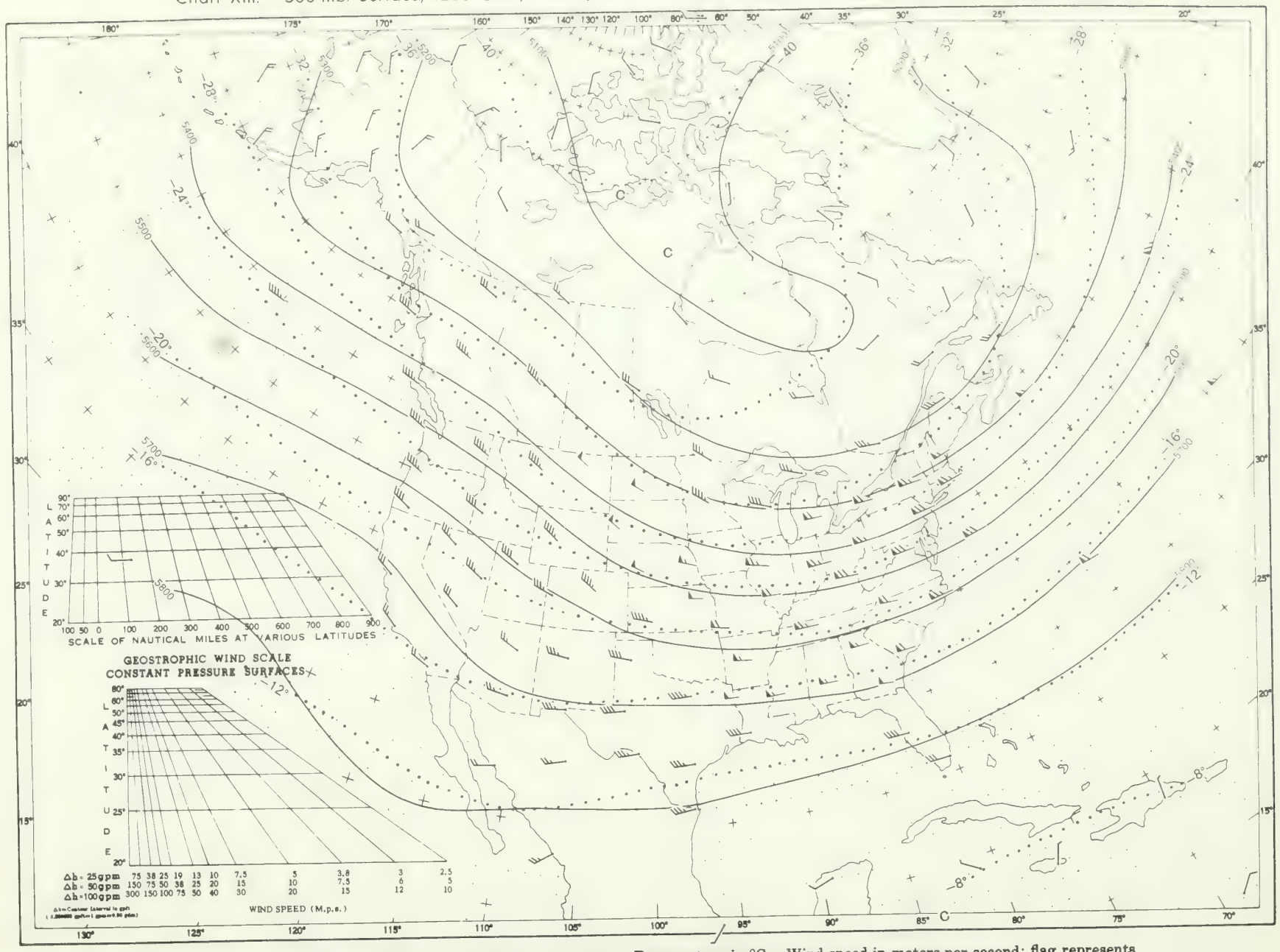
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 GMT, **January 1971**. Average Height and Temperature, and Resultant Winds



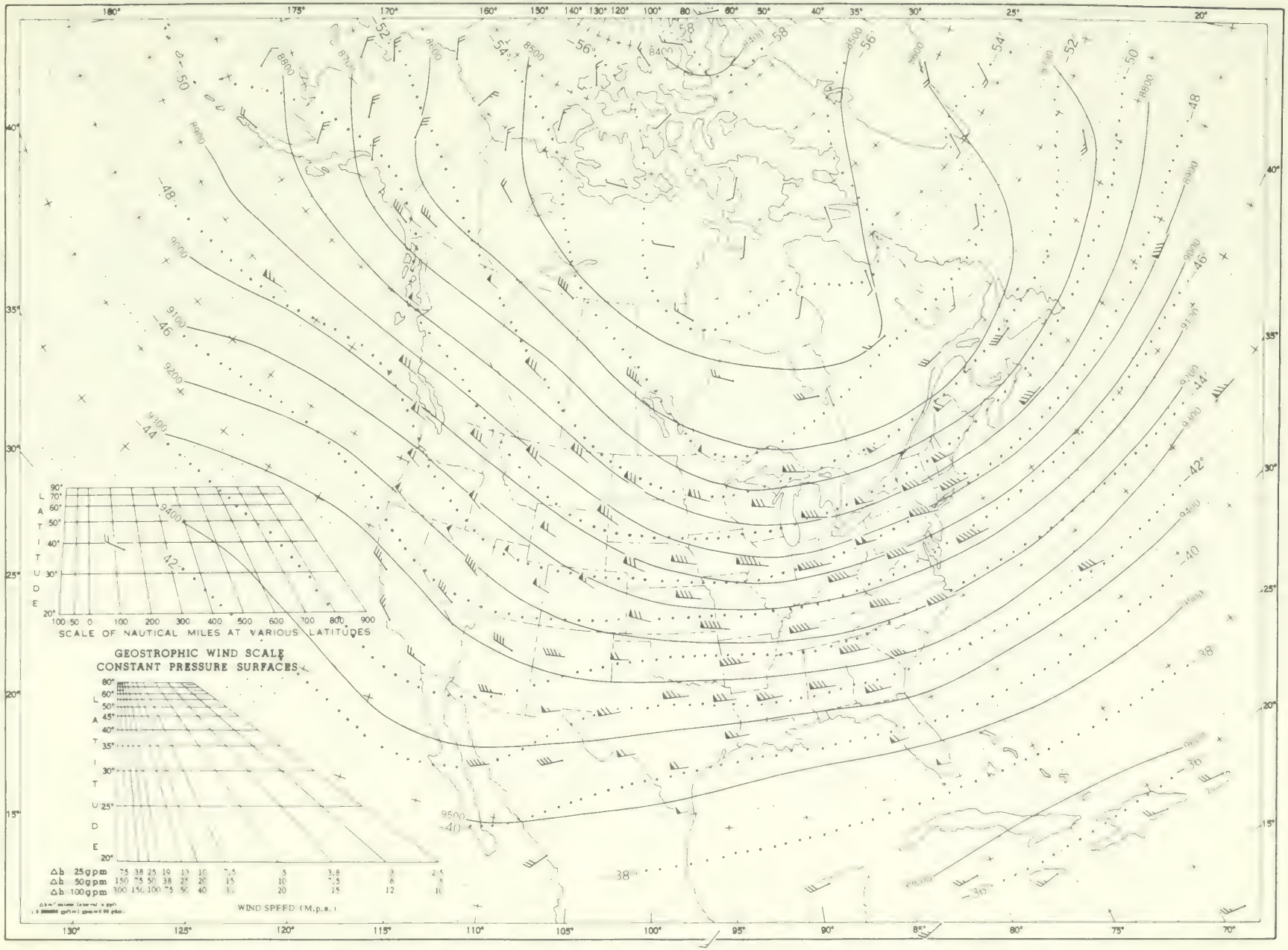
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 GMT, January 1971. Average Height and Temperature, and Resultant Winds



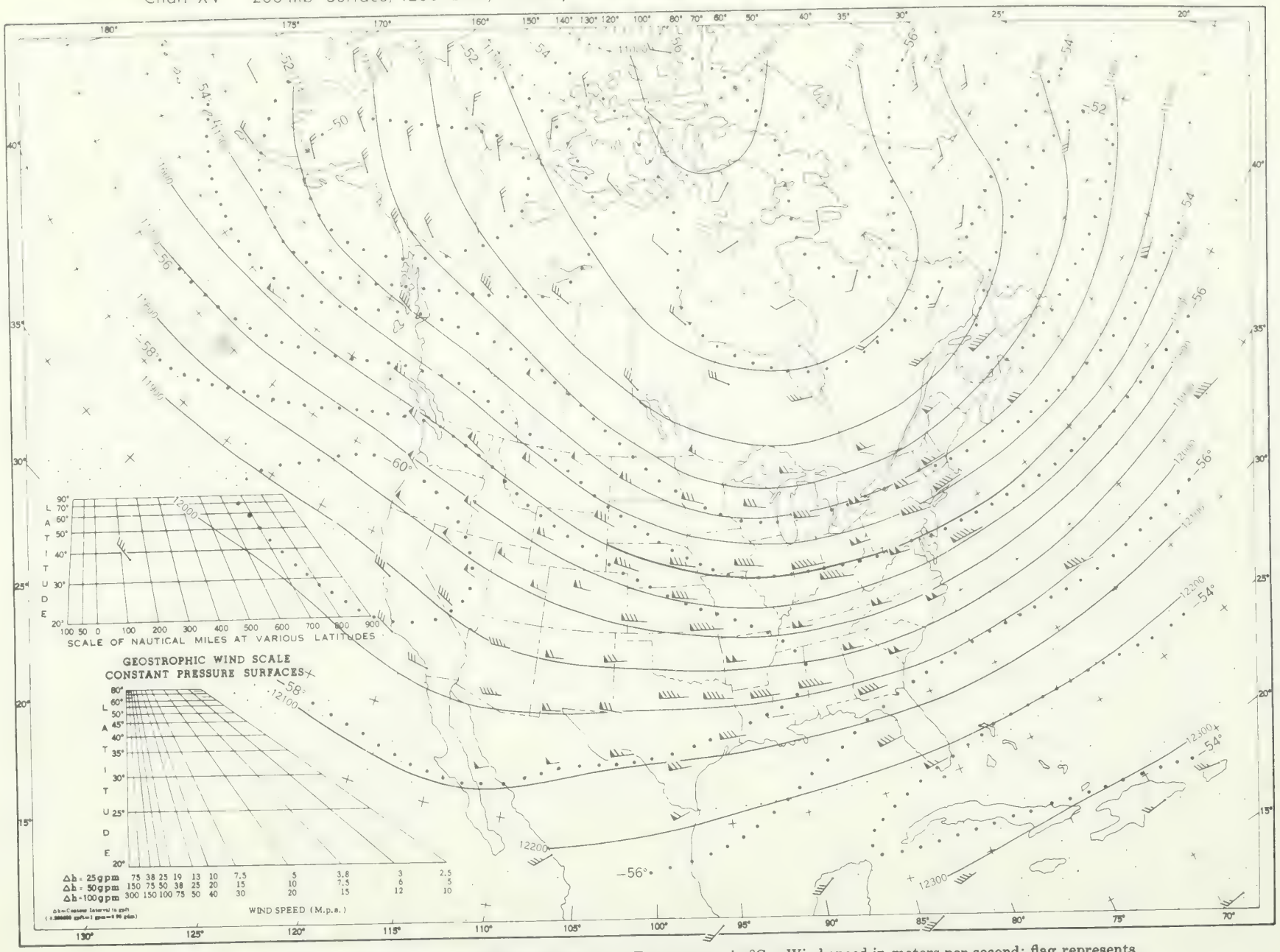
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, January 1971 Average Height and Temperature, and Resultant Winds.



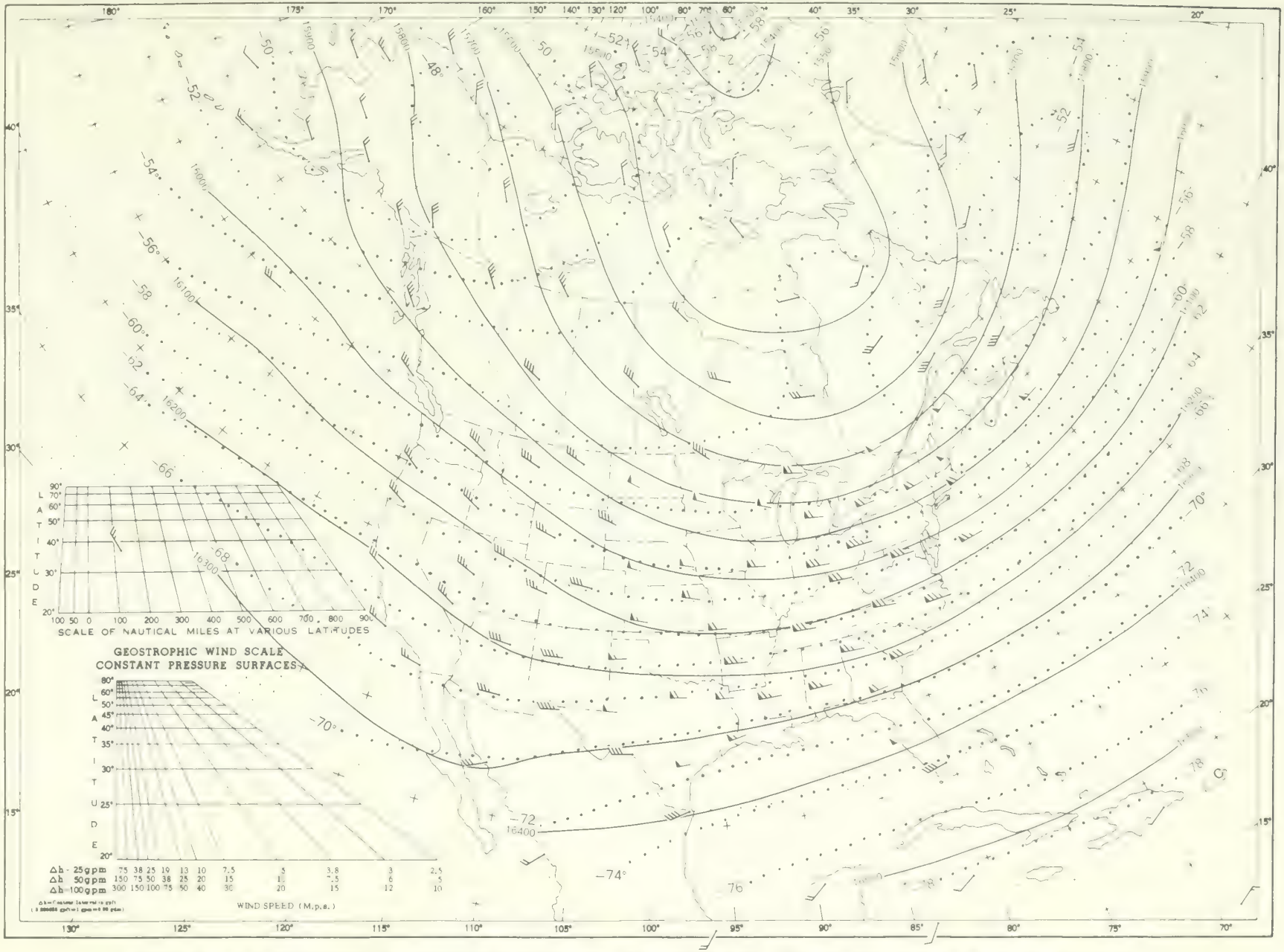
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb Surface, 1200 GMT, January 1971 Average Height and Temperature, and Resultant Winds



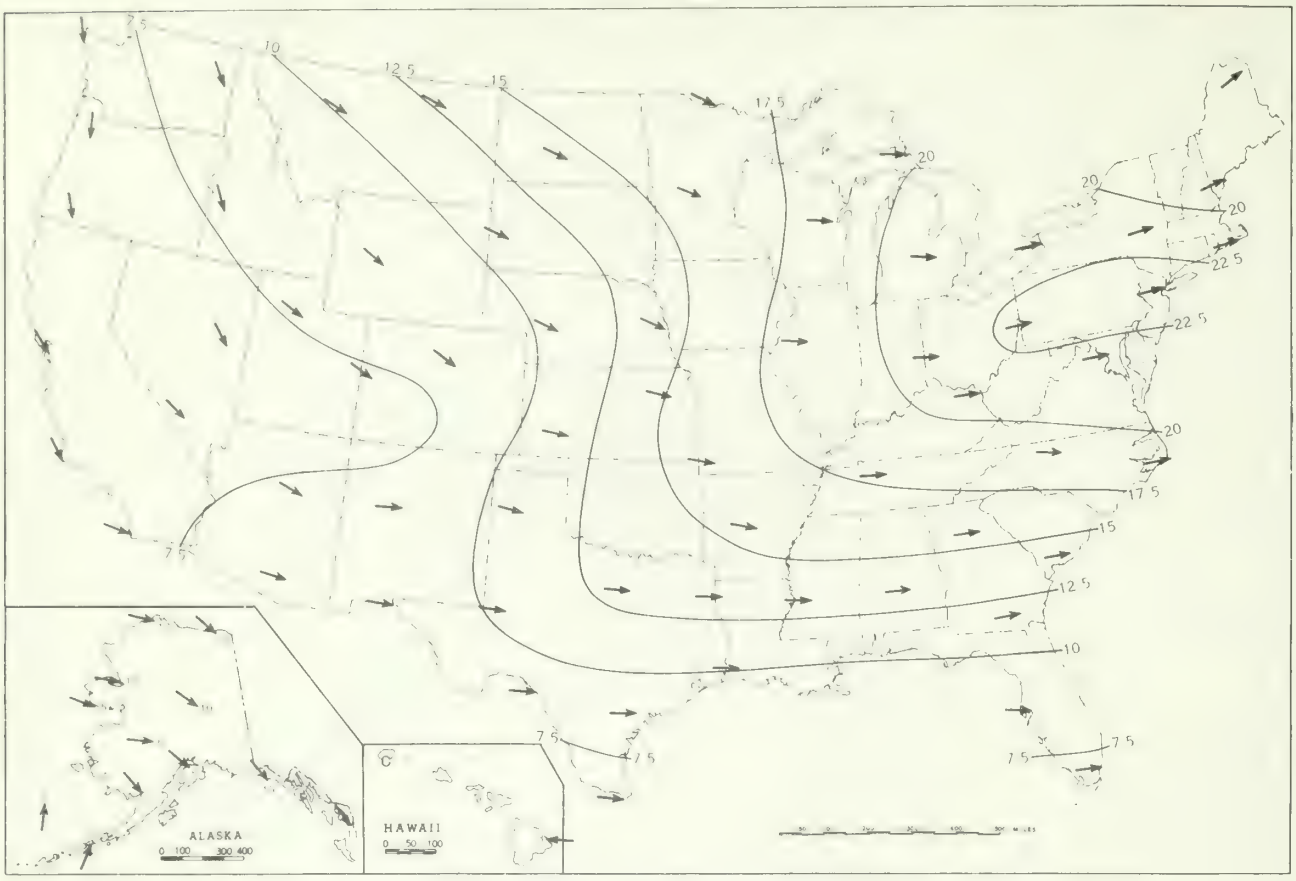
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100-mb Surface, 1200 GMT, January 1971 Average Height and Temperature, and Resultant Winds.

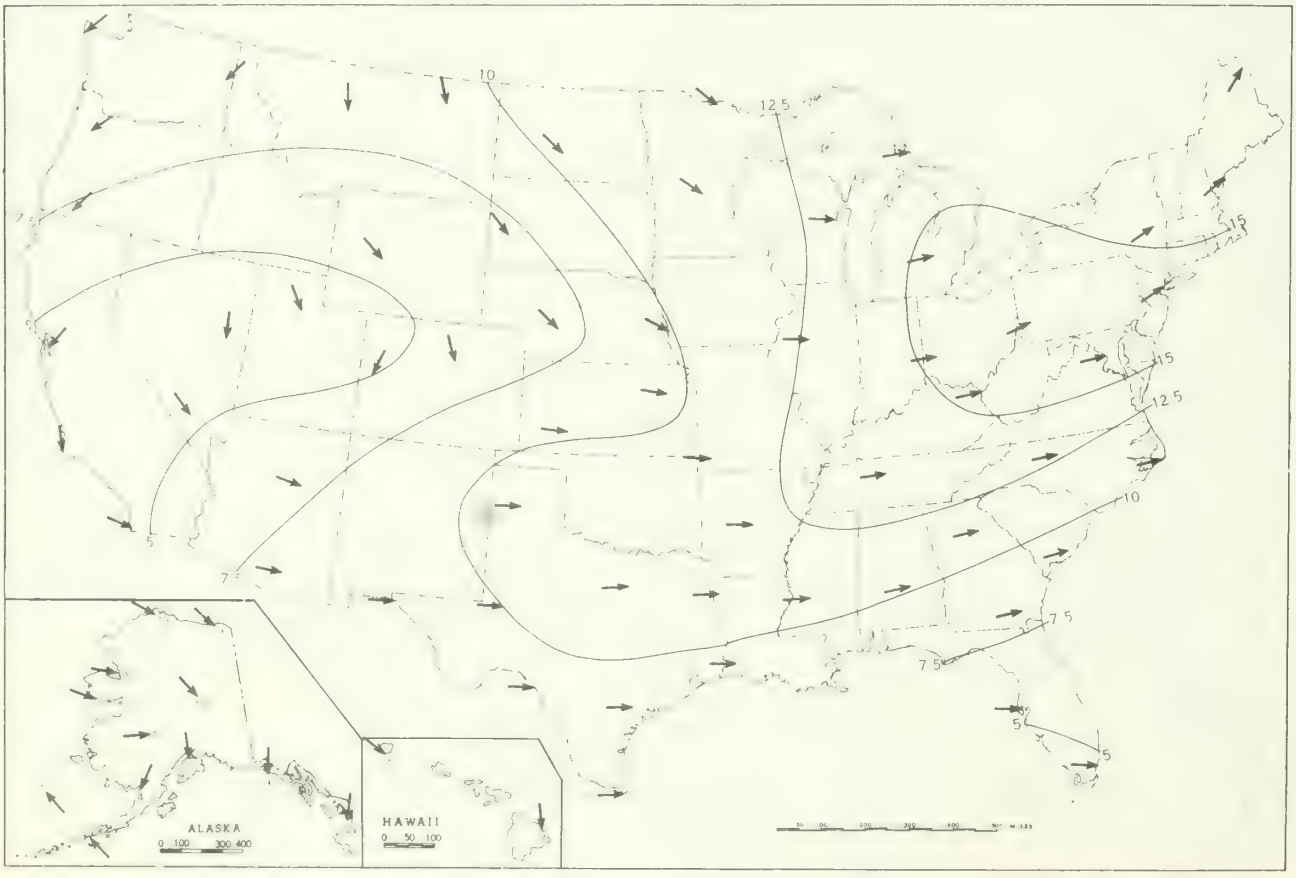


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, January 1971. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, January 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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Climatological Data

NATIONAL SUMMARY

AUG 27 1971

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
ENVIRONMENTAL DATA SERVICE

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 2 FEBRUARY 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Heavy snow fell over the northern and central portions of the Nation.
2. Heavy rains caused flooding in many streams in Nebraska, Missouri, Illinois, Pennsylvania, and parts of the Deep South.
3. Little rain fell in the southwestern quarter of the Nation. High winds and dust storms occurred in some southwestern areas.

TEMPERATURE. -- Temperatures averaged warmer than normal over the western half of the Nation during the first half of February and cooler than normal over the East. The situation was reversed in the last week. Warm weather prevailed over almost the entire Country in the 3d week. Monthly mean temperatures were 3° to 7° above normal in the northern Rocky Mountains and 3° to 7° cooler than normal in eastern Kansas, western Missouri, and from the Lower Ohio River to the southern Appalachians.

Subzero temperatures occurred on several mornings in the northern half of the Nation in the first half of February. Eagle River, Wis., registered 40° below zero on the 2d. London, Ky., recorded 10° below zero on the same date. Subfreezing weather occurred in the Deep South. About the middle of the 1st week of February, warm, moist, Gulf air pushed northward over mid-America and afternoon temperatures in the southern portions of Kansas and Missouri climbed into the 60's. Bitter cold continued over the northern Great Plains and eastward to New England where afternoon temperatures remained below freezing the entire week. February 7 was especially cold. Minimums dropped to zero or lower as far south as northern Kansas and afternoon temperatures failed to go as high as zero at some localities in the northern portions of Nebraska and Iowa. On February 8, the temperature at Waterloo, Iowa, plunged to 26° below zero. At the other extreme, Thermal, Calif., registered 94° on the 11th.

Pacific air brought a warming trend to the western and central portions of the Nation in the 2d week of February. Tulsa, Okla., recorded 16° as a maximum temperature on the 8th but 2 days later, the mercury had climbed to 60°. Great Falls, Mont., with 52° was as warm as Tampa, Fla., and Bismarck, N. Dak., with 35° on the 10th, was 10° warmer than Lexington, Ky.

Pleasant weather prevailed over most of the Nation in the 3d week of the month. Pacific air warmed the West while warm, moist Gulf air moved northward over the central and eastern portions of the Country. Few localities experienced subzero weather. Pellston, in northern Lower Michigan, plunged to 18° below zero on the morning of the 16th. Subzero weather occurred in northern New York, northern New England and at West Yellowstone, Mont., on the 17th. Afternoon temperatures were generally above the seasonal normals. Valentine, Nebr., registered 59° on the 15th, and Cotulla, Texas, recorded 89° on the 18th. The 3d week of February ended a cold spell which had prevailed over parts of the East for more than 2 months.

Cold air swept down across the Great Plains early in the last week of February. Temperatures dropped below zero in the Rocky Mountains from western Wyoming to northern New Mexico, and in parts of the northern Great Plains. Subfreezing weather occurred as far south as southern Texas where San Antonio registered 29° on the 23d. Record warmth occurred in the East. Hatteras, N. C., recorded 76° on the 22d, the highest February temperature of record for that location. By February 25, springlike weather occurred over much of mid-America. Afternoon maximums ranged from the 40's in the Dakotas to the 80's in the Rio Grande Valley. Orlando, Fla., recorded 88° on the 25th, and Tampa, Fla., registered 88° on the 26th. This set a new February record for Tampa. Meanwhile, bitter cold hit the Northeast. The mercury at Greenville and Houlton, Maine, tumbled to 11° below zero on February 25. Another cold blast hit the Far West at the end of the month. Bryce Canyon, Utah, recorded 21° below zero on the morning of the 27th and on the last day of February the mercury at Phoenix, Ariz., had tumbled to 31°. Dozens of stations in the central Rocky Mountains recorded subzero weather on the last day of February. Among the coldest in Colorado were: Twin Lakes Reservoir, -27°; Steamboat Springs, -29°; Frazer, -35°; Taylor Park, -38°; and Crested Butte, -25°.

PRECIPITATION.--A large and powerful storm began shaping up in the central Rocky Mountains on February 3. In the next few days it produced widespread precipitation over much of the eastern half of the Nation. Snow fell from the northern and central Rocky Mountains across the Great Plains to the upper Mississippi River Valley, freezing rain and freezing drizzle from the central Great Plains to New Jersey, and scattered thundershowers from Oklahoma to the Ohio River Valley and southward to the Gulf of Mexico. In most areas, the snow or rain was accompanied by fog. A few tornadoes hit Mississippi and Alabama late on February 4. A tornado at Grenada, Miss., killed 7 persons. Few localities in the eastern half of the Nation escaped the damp and dismal weather produced by the massive storm. To add to the misery produced by the storm, the winds gusted to over 70 m.p.h. at a few localities in the Ohio River Valley. Another storm moved out of the southern Rocky Mountains near the end of the 1st week of February. It produced snow from Colorado and New Mexico to New England. Showers and thunderstorms fell from the snow belt southward to the Gulf of Mexico. Hail fell from some of the thunderclouds. On the 7th, hail as large as baseballs fell at De Land, Fla. Tornadoes struck Georgia and Florida and funnel clouds were seen in South Carolina.

Severe weather occurred over much of the eastern half of the Nation in the 2d week of February. Heavy snow fell in parts of New York and New England. Heavy showers and thunderstorms occurred south of the snowblet. Tornadoes touched down in Georgia and Florida. Flash floods occurred from extreme southeastern Pennsylvania and New Jersey to Georgia. Shortly before midmonth, a storm moved from the Deep South to the Lower St. Lawrence River Valley spreading precipitation from the Gulf of Mexico to Lakes Erie and Ontario and eastward to the Atlantic Ocean. Heavy snow fell in the Appalachians from eastern Tennessee to New England. Freezing rain or freezing drizzle

fell east and south of the snow belt. Strong winds drifted the snow badly and the freezing precipitation iced the highways. The strong winds, deep drifts, and icy roads made travel difficult, and in some places, impossible. Numerous streams in Pennsylvania rose to above flood stage but the cold weather prevented rapid thawing and extensive major flooding.

More inclement weather occurred over the eastern half of the Nation in the 3d week of February, more snow in the Northeast and rain showers along the Atlantic seaboard. A storm in the West dumped 9 inches of snow at Cedar City, Utah. A number of tornadoes hit Colorado, Kansas, Oklahoma, and Texas. Near the end of the 3d week, heavy snow fell in parts of the Texas Panhandle and nearby portions of Oklahoma. Strong winds and drifting snow halted traffic in some areas. Numerous tornadoes occurred in the South from Texas to Georgia. In Mississippi, scores of persons were killed, hundreds injured, and property damages were estimated in the millions of dollars.

A massive storm centered over Missouri and Arkansas moved to New England in the last week of February. It dumped heavy snow along most of its path. The snowpack over parts of northern New England increased to 3 or 4 feet, 5 feet at Greenville, Maine. Deep snow drifts and blizzards halted traffic. Ahead of the storm, mixtures of snow and freezing rain iced the highways and made highway travel risky.

February 24 was a fairly decent day over most of the Nation but the touch of spring was short-lived. A new front brought snow to the Pacific Northwest and scattered snow fell in the northern Rocky Mountains accompanied, in some localities, by gales. The snow spread eastward and southward. Winds at Winslow, Ariz., gusted to 74 m.p.h. picking up sand and dust and reducing the visibility to about 200 yards. Severe weather occurred throughout the South from eastern Texas to Georgia.

Many stations in the northern and central parts of the Nation received more snow in February 1971 than in any previous February. In some areas, the precipitation totals, including the moisture from melted snow, set new February records.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	2 Stations	83	27+	Waterloo	0	9	Aliceville	14.05	Phenix City 2 NNW	4.48
Alaska	Eklutna Project	51	8	Atctic Village	-66	27+	Little Port Walter	22.17	Barter Island WSO	.01
Arizona	Tempe Citrus Exp Sta	90	14	Sanders 11 ESE	-16	3	Walnut Creek	2.47	5 Stations	.00
Arkansas	Nashville Exp Station	79	27	Yellville	-14	9	Eudora	D 7.18	Ozark	1.25
California	2 Stations	94	13-	Bodie	-32	27	Klamath	8.30	8 Stations	.00
Colorado	2 Stations	70	25+	Taylor Park	-38	28	Independence Pass 5 SW	5.04	Pueblo Army Depot	.05
Connecticut	2 Stations	56	28+	Falls Village	-22	1	Groton	6.38	Cream Hill	2.70
Delaware	Lewes 1 SW	71	27	Bridgeville 1 NW	-1	1	Wilmington Porter Resvr	6.67	Georgetown 5 SW	4.88
Florida	3 Stations	92	28+	Fountain 3 SSE	12	10	Panama City 2	9.37	Dania 4 WNW	.50
Georgia	8 Stations	85	27+	Blairsville Exp Sta	3	10	Cuthbert	9.80	Savannah Beach	2.01
Hawaii	Keawakapu Beach 260.2	88	20	Mauna Loa Slope Obs, Hawaii	26	25+	Hilo Country Club 86.6	11.09	2 Stations	.00
Idaho	2 Stations	72	10	Island Park Dam	-35	6	Mullan FAA	4.32	Leadore No 2	D .10
Illinois	Griggsville	72	18	Wheaton 3 SE	-18	2	Benton Forest Service	5.70	Keithsburg 1 NW	1.14
Indiana	Evansville	72	18	Culver Experiment Farm	-15	2	Vevay	6.88	Ogden Dunes	1.31
Iowa	Le Claire L&D 14	64	14	Fayette	-36	8	Tipton	4.37	Bartlett 5 E	.59
Kansas	Columbus 6 NNW	75	17	Horton	-26	8	Natoma	4.78	Norton Dam	.57
Kentucky	Pikeville	77	22	Somerset 2 S	-13	1	Madisonville 1 SE	8.19	Hindman 11 NNE	1.40
Louisiana	Schriever	83	20	4 Stations	15	10+	Diamond 4 NW	10.10	Quarantine	1.35
Maine	Belfast	51	28	Squa Pan Dam	-38	5+	Saco	7.29	Fort Fairfield	2.12
Maryland	Leonardtown 3 NW	75	27	Savage River Dam	-10	2	Elkton	7.20	Edgemont	2.83
Massachusetts	Brockton	58	12	Chester 2	-31	1	New Bedford	7.26	Adams	2.16
Michigan	2 Stations	56	26	Stambaugh 1 S	-40	8	Hillsdale	4.62	Holland WJBL	.87
Minnesota	Luverne	53	25	Detroit Lakes 1 NNE	-40	8	Caledonia	3.58	Thorhult	.05
Mississippi	8 Stations	80	27+	University	-2	9	Beaumont	10.69	Belzoni	2.94
Missouri	Van Buren RS	76	27	Maryville 2 E	-26	9+	Kennett Radio KBOA	6.50	Lucerne	.42
Montana	2 Stations	63	12	Jordan 22 E Van Norman	-46	7	Bangtail Ridge	4.27	6 Stations	T
Nebraska	Benkelman	70	14	Agate 3 E	-26	7	Wayne	3.99	Ellsworth 15 NNE	.10
Nevada	Lathrop Wells 16 SSE	87	12	Ruth	-8	28+	Austin	2.40	Penoyer Valley	.00
New Hampshire	Epping	52	28	First Conn Lake	-40	4	Mount Washington	8.32	Whitefield	1.52
New Jersey	2 Stations	72	28+	Sussex 1 SE	-12	3+	Millville FAA AP	7.64	Jersey City	2.90
New Mexico	4 Stations	80	20+	Red River	-16	22	Brazos Lodge	2.05	9 Stations	.00
New York	2 Stations	66	27	Stillwater Reservoir	-34	4	Forestport	9.04	Rushford 1 W	1.47
North Carolina	New Holland	79	22	Grandfather Mountain	-10	10+	Coweeta Exp Station	10.15	Hatteras	2.63
North Dakota	2 Stations	49	24+	Linton	-40	8	Courtenay 1 NW	.65	3 Stations	.00
Ohio	Ironton	73	22	Barnesville Water Wks	-20	2	Higginsport	7.17	Columbus Valley Cross	1.26
Oklahoma	Ardmore	84	16	Jay	-10	9+	Bear Mountain Tower	4.55	Vinson 3 WNW	.40
Oregon	Dora 2 W	78	11	Minam 7 NE	-5	6	Tillamook 13 ENE	18.24	Rockville 5 N	T
Pennsylvania	Laurelton St Village	70	28	2 Stations	-23	3+	Marcus Hook	6.82	Farrell Sharon	1.96
Puerto Rico	2 Stations, P.R.	90	25-	Adjuntas Substation, P.R.	48	15	Pico Del Este, P.R.	9.60	Ponce City, P.R.	.18
Rhode Island	Providence WSO	54	28	North Scituate 4 W	-6	3	Block Island WSO	6.88	Woonsocket	4.66
South Carolina	4 Stations	80	27+	Caesars Head 1 NE	0	10	Salem	9.73	Beaufort 7 SW	2.38
South Dakota	Angostura Dam	62	16	Deerfield 4 NW	-42	6	Parkston 5 E	2.73	Eureka	.09
Tennessee	2 Stations	76	26+	Centerville Water Pl	-17	9	Pulaski Water Plant	10.26	Greeneville Exp Sta	2.92
Texas	2 Stations	97	1	Dalhart FAA AP	-2	7	Jewett	6.64	26 Stations	.00
Utah	Saint George	75	11	Soldier Creek	-24	22	Alta	7.65	Mexican Hat	.01
Vermont	Vernon	51	19	Cavendish	-32	1	Searsburg Station	5.63	Gilman	1.98
Virginia	Chase City	79	22+	Big Meadows	-7	2	Partlow 3 WNW	7.45	Parramore Beach L B S	1.03
Washington	Richland	73	1	Mazama	-10	6	Spruce	14.63	2 Stations	T
West Virginia	2 Stations	75	23+	Mannington 1 N	-13	2	Seneca State Forest	6.19	Hico	2.22
Wisconsin	Janesville	57	26	2 Stations	-44	8	Readstown	4.11	Ridgeland 1 NNE	1.16
Wyoming	Emblem	67	12	Recluse 14 NNW	-44	7	Burgess Junction	2.61	2 Stations	T

* And [illegible] earlier date or dates.

Note: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall, wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							Snow, Ice pellets					Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	995.3	1018.3	56	32	44.2	- 4.5	76	19	10	10	0	13	31	64	9.28	4.00	3.85	13	5	0.8	1	1.1	24	38	SW	4	10	5	13	6.0	55
HUNTSVILLE	624	994.6	1018.2	55	32	43.4	- 1.7	74	18	8	9	0	13	32	66	9.57	4.35	3.86	10	5	2.4	1	1.6	19	39	28	4	8	8	12	6.1	
MOBILE	211	1010.2	1018.1	65	43	54.3	- 0.9	75	21+	21	10	0	5	42	70	7.15	2.56	2.01	11	4	0.0	0	1.8	11	29	32	12	12	6	10	5.0	
MONTGOMERY	183	1011.2	1018.5	61	37	49.0	- 1.3	79	19	16	10	0	11	35	63	6.61	2.25	1.86	10	6	T	0	1.1	25	38	W	26	15	2	11	4.8	60
ALASKA												8																				
ANCHORAGE	114	999.0	1003.9	27	14	20.6	1.9	45	7	-17	26	0	24	14	74	1.49	0.78	0.45	17	0	18.5	13	1.9	35	24	35	23+	4	1	23	8.3	51
ANNETTE	110	1008.5	1012.6	40	30	34.9	- 0.2	46	23+	15	5	0	13	29	80	10.70	2.16	2.49	21	0	13.3	5	6.0	13	35	14	23+	0	8	20	8.8	
BARROW	31	1016.6	1017.3	-21	-31	-26.1	- 7.8	- 6	22	-47	4	0	28	-32	74	0.13	- 0.04	0.10	2	0	1.6	9	0.7	30	24	7	8	15	5	8	4.1	
BARTER ISLAND	39	1015.2	1017.3	-24	-36	-30.2	-10.6	-11	22+	-48	4+	0	28	-38	63	0.01	- 0.34	0.01	1	0	0.1	17	5.5	26	40	28	23	12	6	10	4.6	
BETHEL	125	999.3	1005.3	7	-10	- 1.5	- 9.7	37	8	-32	17	0	28	- 5	85	0.16	- 0.96	0.06	5	0	4.8	9	9.4	2	38	4	14	6	7	15	6.6	
BETTLES	644	985.8	1013.1	- 7	-26	-16.8		26	21	-52	24	0	28	-29	54	1.21		0.29	11	0	25.3	47	5.4	35	22	13	22	12	1	15	5.4	
BIG DELTA	1268			12	- 7	2.5		42	8+	-43	25	0	28			0.49		0.17	8	0	8.8	16			32	19	7	2	4	22	8.3	
COLD BAY	96	996.6	1000.1	31	21	26.0	- 2.0	45	26	0	17	0	21	23	88	2.17	- 1.00	0.52	19	0	10.5	4	1.3	23	47	34	28	0	4	24	9.1	
FAIRBANKS	436	990.9	1008.9	6	-15	- 4.6	- 1.7	29	21	-42	26	0	28	-15	62	0.63	0.11	0.27	12	0	16.3	40	0.7	29	16	24	23+	4	4	20	8.2	
GULKANA	1572	947.2	1008.3	18	- 2	8.0		41	7	-39	26	0	27			0.20		0.11	5	0	4.3		0.2	8	30	18	22	1	8	19	8.1	
HOMER	67	998.6	1001.5	32	17	24.4		43	8+	- 6	25+	0	24	19	79	3.25	1.81	0.76	16	0	21.2	6	2.6	4	29	21	18	2	5	21	8.1	
JUNEAU	12	1009.1	1009.7	33	23	28.1	1.3	41	17+	- 5	4	0	27	28	97	3.93	0.87	0.59	23	0	21.5	19	7.7	11	28	11	13+	2	1	25	9.1	16
KING SALMON	49	999.7	1001.5	22	3	12.2	- 5.2	42	20	-29	25+	0	26	5	69	1.62	0.67	0.50	16	0	15.2	9	4.3	5	45	14	7	5	5	18	7.4	
KOTZEBUE	10	1012.5	1012.9	-12	-26	-18.9	-14.9	20	8	-42	25	0	28	-27	64	0.17	- 0.13	0.06	6	0	2.8	13	2.8	35	37	30	14	16	1	11	4.6	
MC GRATH	344	994.2	1007.7	6	-16	- 5.3	- 5.4	28	7	-51	24	0	28	-10	74	0.71	- 0.43	0.23	11	0	15.1	28	1.4	31	17	36	28	4	5	19	7.8	
NOME	13	1009.1	1010.0	- 1	-22	-11.6	-17.1	37	8	-42	28+	0	28	-20	63	0.09	- 0.85	0.05	2	0	2.2	18	6.6	3	51	4	5	16	3	9	4.0	69
ST. PAUL ISLAND	22	1002.0	1003.1	22	9	15.3	- 8.0	35	26+	-15	22	0	28	12	86	1.03	- 0.20	0.40	17	0	9.6	10	12.0	3	58	18	17	4	6	18	7.8	
SHEMYA	122	1000.7	1004.4	31	26	28.4	- 2.4	38	24	7	21	0	28	20	71	1.04	- 1.24	0.23	20	0	7.7	5	12.5	2	46	2	6	0	9	19	8.4	
SUMMIT	2401	915.3	1007.8	14	0	6.9		37	8+	-35	26	0	28	2	70	1.14		0.31	17	0	30.5	42	8.7	7	33	12	23+	1	6	21	8.6	
TALKEETNA	345			23	2	12.6	- 2.9	39	18	-39	26+	0	28			2.72	1.00	0.81	16	0	52.2	47			15	18	18+	3	3	22	8.4	
UNALAKLEET	15			- 2	-18	-10.0		29	8	-47	28	0	28			0.55		0.15	12	0	6.0	33			40	8	7+	10	6	12	5.5	
YAKUTAT	28	1005.4	1006.5	31	19	25.0	- 3.6	38	18+	-13	3	0	27	22	85	15.48	7.28	2.59	23	0	51.6	41	6.3	11	28	14	11	2	3	23	8.8	
ARIZONA																																
FLAGSTAFF	7006	784.3	1015.8	45	17	31.1	1.5	65	13	2	21	0	27	14	54	1.48	- 0.30	0.88	6	1	15.1	12	2.5	23	29	21	25	13	6	9	4.5	
PHOENIX	1117	975.3	1014.6	71	42	56.3	2.8	84	13+	31	28	0	2	32	32	0.35	- 0.50	0.34	3	1	0.0	0	0.9	14	46Y	WNW	3	16	8	4	2.9	89
TUCSON	2584	925.5	1014.1	67	38	52.3	- 0.6	80	15+	27	4	0	6	20	35	0.50	- 0.34	0.34	3	0	T	T	3.3	19	37	W	3	16	8	4	3.2	88
WINSLOW	4895	849.6	1016.6	54	21	37.1	- 0.4	68	15	6	27	0	27	15	46	0.25	- 0.23	0.16	4	0	2.3	1	3.4	23	63	22	25	14	8	6	4.1	
YUMA	194	1007.8	1015.1	73	44	58.2	0.9	86	11	37	7	0	0	29	38	0.03	- 0.33	0.03	1	0	0.0	0	2.8	32	32	NW	19	20	6	2	2.3	88
ARKANSAS																																
FORT SMITH	447	999.3	1016.2	54	30	41.6	- 2.1	73	16	9	9	0	19	28	62	2.45	- 0.98	0.85	9	3	0.3	T	1.8	1	38	W	4	7	8	13	6.5	53
LITTLE ROCK	257	1007.1	1016.8	56	33	44.4	0.0	78	26	11	9	0	13	32	64	2.21	- 2.12	0.77	9	5	0.7	1	0.6	22	57	SW	4	8	9	11	5.8	61
CALIFORNIA																																
BAKERSFIELD	475	1002.4	1020.3	60	39	49.8	- 2.2	78	12	30	26	0	3	39	68	0.35	- 0.79	0.18	2	0	0.0	0	1.5	2	25	34	25+	7	12	9	5.4	
BISHOP	4108			60	26	43.0	1.8	76	13	8	27	0	24			0.11	- 0.87	0.11	1		T	0						12	10	6	4.7	
BLUE CANYON	5280			45	32	38.1	1.0	62	13+	16	28+	0	16			2.16	- 8.03	0.78	9		15.6	66			23	16	25	9	9	10	5.6	
EUREKA U	43			52	40	46.3	- 1.9	72	12	32	26+	0	2			3.28	- 2.25	0.59	14		T	0			38	NW	25	2	5	21	8.4	42
FRESNO	328	1008.8	1020.6	59	36	47.6	- 2.9	72	14+	25	26	0	8	40	78	0.29	- 1.90	0.16	5	0	0.0	0	1.4	33	35	NW	25	7	11	10	5.5	70
LONG BEACH	34	1016.3	1017.5	67	45	56.0	1.6	91	12	36	21	1	0	41	64	0.66	- 1.65	0.61	3	0	0.0	0	2.0	26	29	27	27	10	9	9	4.7	
LOS ANGELES	97	1013.5	1017.1	65	49	56.7	1.5	86	12	41	27	0	0	43	67	0.36	- 2.52	0.34	3	0	0.0	0	2.0	28	43Y	N	25	14	7	7	4.3	
LOS ANGELES U	270			69	50	59.2	2.1	91	12	41	27	1	0			0.67	- 2.66	0.66	3		0.0	0			33	NW	25	17	5	6	3.4	81
MT. SHASTA R	3544	894.7	1021.0	49	28	38.4	1.4	67	11	16	26	0	21	27	67	0.21	- 5.70	0.06	8		1.5	T	3.7	33								
OAKLAND	6	1021.3	1021.4	57	44	50.4	- 0.3	74	11	37	26+	0	0	43	77	0.57	- 2.64	0.40	3	0	0.0	0	5.0	30	23	29	27+	7	13	8	5.3	
RED BLUFF	342	1007.5	1020.5	62	38	49.9	0.2	81	11	27	26	0	3	35	62	0.13	- 3.18	0.11	3	0	T	0	3.8	33	32	NW	28	9	8	11	5.8	76
SACRAMENTO	17	1019.6	1020.6	58	38	48.2	- 1.0	70	13	27	3	0	2	40	79	0.56	- 2.43	0.39	4	0	0.0	0	1.2	30	28	N	19	8	10	10	5.9	71
SANDBERG R	4517	862.9		51	34	42.9	1.5	72	13	19	20	0	14	22	54	0.98	- 1.60	0.93	4		4.2	1	10.1	36	37	34	15	13	4	11	4.9	
SAN DIEGO	13	1016.6	1017.5	62	49	55.4	- 0.8	84	12	43	27	0	0	43	66	1.27	- 0.88	1.12	4	0	0.0	0	2.8	28	22	W	19	12	6	10	4.9	70
SAN FRANCISCO	8	1020.7	1021.4	57	43	50.0	- 0.9	71	11	36	26+	0	0	41	76	0.26	- 3.22	0.09	4	0	0.0	0	7.1	29	32	29	17	6	14	8	5.6	
SAN FRANCISCO U	52			58	46	51.9	- 1.1	73	13	40	1	0	0			0.26	- 3.40	0.14	5		0.0	0			27	W	27					80
SANTA MARIA	236			63	36	49.6	- 2.2	84	11	22	27	0	7			0.10	- 2.40	0.09	3		0.0	0						16	6	6	3.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90 F or above	Temperature: No. of days Min. 32 F or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 01 inch or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow Ice pellets Total	Precipitation: Snow Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days (sunrise to sunset) Clear 0.3	No. of days (sunrise to sunset) Partly cloudy 4-7	No. of days (sunrise to sunset) Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	Ft.	Mb.	Mb.	F	F	F	F	F		F				F	%	In	In	In			In	In.	M p h.		M p h							%
CALIFORNIA																																
STOCKTON	22	1020.3	1021.4	59	38	47.8	- 1.2	68	13	27	3	0	3	38	74	0.83	- 1.63	0.32	7	0	T	T	2.4	30	29	33	19	7	8	13	6.3	
COLORADO																																
ALAMOSA	7536	766.0		40	4	22.3	- 1.2	57	1	-10	26+	0	28			0.26	0.09	0.14	7		7.7	4						16	6	5	4.3	
COLORADO SPRINGS	6145	805.6	1014.8	41	19	29.8	- 1.7	63	13	0	7	0	27	12	64	0.53	0.20	0.37	6	0	11.5	6	4.8	36	35	30	26+	12	8	9	4.6	
DENVER	5283	831.4	1013.1	43	18	30.6	- 0.9	68	13	- 2	7	0	28	17	61	0.78	0.09	0.58	7	0	11.9	8	1.3	26	35	NE	11	8	8	12	5.6	65
GRAND JUNCTION	4843	850.3	1016.6	47	21	34.1	1.5	62	14	4	27	0	26	15	51	0.13	- 0.56	0.07	4	0	1.5	1	0.7	4	37	NW	25	11	6	11	5.8	66
PUEBLO	4684	851.3	1013.4	50	20	35.3	1.4	69	10	7	22	0	27	15	49	0.23	- 0.25	0.13	4	0	6.6	3	2.9	33	43	N	11	12	5	11	4.9	71
CONNECTICUT																																
BRIDGEPORT	7	1015.9	1016.5	39	26	32.9	2.4	55	28	6	2	0	19	23	71	6.15	3.19	1.60	10	2	2.9	1	3.8	30	38	E	23	6	9	13	6.7	
HARTFORD	169	1009.1	1015.9	36	22	29.0	1.9	50	28+	- 8	1	0	22	19	69	4.60	1.66	1.29	11	1	8.4	8	2.7	27	31	S	13	3	8	17	7.5	49
DELAWARE																																
WILMINGTON	74	1013.9	1017.0	43	28	35.5	1.7	66	20	3	1	0	17	24	66	6.29	3.34	1.76	12	2	0.2	T	3.1	29	28	21	13	4	8	16	7.0	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	290	1005.1	1017.1	47	26	36.7		71	27	9	10+	0	18	24	63	4.68		1.27	12	1	0.2	T	2.5	29	29	30	14	9	7	17	6.8	
WASHINGTON NATIONAL	10	1014.9	1017.1	48	31	39.1	1.3	73	27	11	2	0	15	25	61	5.44	2.97	1.77	12	1	0.3	T	3.2	29	42	S	13	8	4	16	6.8	45
FLORIDA																																
APALACHICOLA U	13			62	47	54.2	- 2.6	74	27	27	10	0	3			3.86	- 0.05	2.04	8	7	0.0	0			30	NW	13	11	5	12	5.3	77
DAYTONA BEACH	31	1018.3	1019.7	72	48	59.9	- 0.7	87	28+	29	10	0	4	48	70	5.48	2.73	4.39	6	5	0.0	0	1.7	22	39	24	13	9	12	7	4.9	
FORT MYERS	15	1019.0	1019.2	77	56	66.8	0.6	97	26	33	15	0	0	54	68	1.55	- 0.66	1.10	4	1	0.0	0	2.5	12	35	25	8	13	11	4	4.1	
JACKSONVILLE	26	1018.0	1019.0	70	44	57.1	- 0.4	86	26	24	11	0	6	45	70	2.55	- 0.36	1.98	7	4	0.0	0	2.2	25	38	SW	13	12	6	10	5.0	62
KEY WEST	4	1017.6	1018.1	77	67	71.9	1.5	83	28	53	11	0	0	62	73	2.76	- 0.78	1.52	9	1	0.0	0	6.6	9	29	NW	13	12	13	3	4.3	80
LAKELAND U	214			74	52	63.0	- 0.1	86	26	32	10	0	1			4.81	2.30	3.92	7		0.0	0						10	11	7	4.8	65
MIAMI	7	1018.6	1018.8	77	64	70.9	3.0	87	23	43	15+	0	0	60	70	3.80	- 1.07	0.40	5	1	0.0	0	5.0	12	29	25	8	8	17	5	5.0	
ORLANDO	108	1014.9	1019.2	77	51	64.1	2.2	89	26	32	10	0	1	50	65	2.98	0.56	2.31	8	4	0.0	0	1.4	18	29	27	13	10	11	7	5.0	
PENSACOLA	112	1014.6	1018.7	63	45	53.8	- 2.3	76	20	23	10	0	6	43	71	5.43	1.18	1.60	11	6	0.0	0	1.8	9	25	33	8	12	7	9	5.0	
TALLAHASSEE	55	1016.3	1018.7	67	40	53.3	- 2.3	80	27	14	10	0	12	41	68	5.48	1.30	3.35	8	7	0.0	0	1.9	20	25	23	8	11	5	12	5.0	
TAMPA	19	1018.6	1019.0	74	52	63.1	0.4	88	26	32	15+	0	3	51	68	4.25	1.41	2.97	6	3	0.0	0	2.1	15	30	20	8	10	9	9	5.3	74
WEST PALM BEACH	15	1018.3	1019.0	77	58	67.4	- 0.2	84	6	36	15+	0	0	56	69	1.08	- 1.27	0.44	6	2	0.0	0	4.4	12	38	27	8	7	15	6	5.4	
GEORGIA																																
ATHENS	802	988.5	1018.1	56	33	44.3	- 1.3	72	18	12	10	0	14	31	64	5.62	0.92	1.52	12	3	T	T	2.8	27	31	31	5	10	5	13	5.6	
ATLANTA	1010	980.7	1018.4	55	33	44.3	- 1.8	72	20+	12	10	0	13	29	61	5.77	1.26	1.43	13	3	1.0	1	1.5	28	32	NW	13	12	2	14	5.7	58
AUGUSTA	136	1012.9	1018.3	59	33	45.8	- 3.5	75	27+	14	10	0	15	34	69	5.35	1.83	1.86	12	4	T	T	2.8	25	31	26	13+	10	7	11	5.3	
COLUMBUS	385	1004.4		61	36	48.5	- 1.2	78	26	15	10	0	10		67	7.13	2.50	1.80	12	4	T	T	1.0	31	27	28	26	12	5	11	5.2	
MACON	354	1005.8	1018.8	62	36	49.1	- 2.0	78	26	16	10	0	11	36	67	5.61	1.35	2.83	13	4	T	T	1.9	27	29	S	22+	11	6	11	5.3	54
ROME	637			54	28	40.5	- 3.3	74	19	7	10	0	19			6.52	1.22	1.88	11		0.5	1										
SAVANNAH	46	1016.9	1018.8	66	39	52.4	- 0.7	81	27+	19	10	0	9	39	66	2.60	- 1.08	1.56	10	3	0.0	0	2.6	24	38	W	13	11	4	13	5.5	60
HAWAII																																
HILO	27	1016.3	1017.5	81	62	71.9	1.2	87	13	58	18	0	0	62	76	5.31	- 7.63	2.02	17	2	0.0	0	4.0	17	21	E	18	7	9	12	6.0	40
HONOLULU	7	1016.6	1017.0	82	67	74.4	2.0	84	19+	64	11+	0	0	63	72	2.37	- 0.93	1.65	6	1	0.0	0	5.9	6	34	NE	22	14	12	2	3.9	83
KAHULUI	48	1014.2	1016.6	83	62	72.3	0.6	86	28+	55	11	0	0	63	77	0.78	- 1.76	0.57	3	1	0.0	0	5.4	6	40	NE	22	21	5	2	2.9	86
LIHUE	103	1012.5	1017.6	80	67	73.8	3.1	83	10	61	10	0	0	65	76	1.69	- 3.63	0.38	9	1	0.0	0	3.1	9	27	NE	22	6	18	4	5.0	59
IDAHO																																
BOISE	2838	917.0	1019.2	46	29	37.5	3.0	59	12	16	28	0	19	24	62	0.65	- 0.68	0.33	9	0	2.1	1	0.7	34	33	W	24	3	10	15	7.0	65
LEWISTON	1413			47	31	39.0	3.1	61	12	18	6	0	16			0.73	- 0.24	0.47	7		1.2	1						2	8	18	8.0	
POCATELLO	4454	862.2	1018.9	37	19	27.8	0.6	54	13	2	21+	0	27	18	70	0.62	- 0.30	0.19	11	0	5.9	2	6.5	22	41	SW	24	4	5	19	7.5	49
ILLINOIS																																
CAIRO U	314			47	30	38.4	- 2.3	70	18	7	9	0	17			5.31	1.64	2.23	11		4.3	4			38	SW	22	11	4	13	5.9	49
CHICAGO O HARE	658	988.8	1014.1	35	21	28.2	2.0	56	26+	-10	2	0	22	20	73	1.94	0.43	0.54	12	1	1.4	3	5.5	25	41	22	5	5	3	20	7.6	
CHICAGO MIDWAY	607	990.9	1014.2	36	21	28.2	0.5	59	26+	- 9	2	0	23	18	69	2.39	0.79	0.87	14	1	5.0	3	5.7	24	42	SW	27	5	2	21	7.5	30

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ♂	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.								%
ILLINOIS																																
MOLINE	582	992.6	1014.9	33	19	25.9	0.2	64	26	- 8	8	0	24	17	70	1.57	0.22	0.50	8	3	2.6	4	4.8	26	39	NE	22	8	2	18	6.8	47
PEORIA	652	990.2	1015.0	36	20	27.7	- 0.7	60	26	- 7	8	0	24	19	72	1.64	- 0.07	0.87	10	2	0.6	T	4.9	24	35	SW	5	7	4	17	6.9	47
ROCKFORD	724	986.1	1013.9	32	18	25.0	0.6	54	26+	-14	2	0	24	17	75	2.67	1.23	0.95	11	1	3.4	6	4.0	27	40	27	27	7	3	18	7.0	
SPRINGFIELD	588	992.2	1015.1	39	22	30.7	- 0.9	65	18	- 8	2	0	20	22	72	2.36	0.54	1.09	11	3	3.4	2	5.5	24	40	SW	5	7	7	14	6.4	50
INDIANA																																
EVANSVILLE	381	1002.4	1016.9	43	24	33.6	- 4.0	70	18	0	9	0	19	25	70	4.90	1.72	1.34	12	0	8.5	5	3.0	23	33	SW	5	7	5	16	6.9	44
FORT WAYNE	791	984.4	1015.5	35	21	27.9	- 0.4	56	26	- 7	2	0	22	20	72	3.86	1.62	1.23	14	0	6.1	4	6.3	24	47	SW	5	3	5	20	8.0	30
INDIANAPOLIS	792	985.4	1015.6	37	21	28.9	- 2.2	56	26	- 5	2	0	24	22	79	5.35	3.07	1.68	14	0	8.2	4	4.0	23	38	SW	27	3	8	17	7.5	45
SOUTH BEND	773	985.1	1014.1	35	22	28.6	1.8	55	26	- 7	2	0	23	21	76	2.12	0.24	1.25	15	1	7.5	13	5.9	24	39	23	5	4	2	22	8.1	
IOWA																																
BURLINGTON	692			34	19	26.3	- 1.5	63	19	- 8	8	0	25	16	63	1.70	0.31	0.60	8	3	1.0	1	3.9	28	30	27	27	9	4	15	6.8	
DES MOINES	938	979.3	1015.4	30	16	23.1	- 0.3	51	17	-17	8	0	24	15	71	2.34	1.24	1.20	10	2	13.7	7	3.4	30	37	W	26	5	9	14	7.0	47
DUBUQUE	1056	973.6		27	13	20.0	- 2.0	50	26	-17	2	0	25			2.96	1.56	0.95	11		7.5	16						6	6	16	6.9	
SIOUX CITY	1095	974.3	1015.7	33	16	24.4	2.2	58	17	-11	8	0	27	15	70	2.66	1.77	2.15	6	2	3.5	3	3.9	32	38	W	26	8	5	15	6.3	60
WATERLOO	868	981.7	1015.0	23	9	16.2	- 5.2	44	26	-27	8	0	27	10	72	3.54	2.62	1.25	10	1	14.1	15	3.3	31	44	28	27	7	5	16	6.9	
KANSAS																																
CONCORDIA	1470	960.7	1015.5	36	18	26.6	- 5.0	58	18	-14	8	0	25	20	78	2.50	1.59	0.84	10	1	20.6	12	2.8	30	34	W	26+	8	4	16	6.6	55
DODGE CITY	2582	921.4	1014.7	42	22	31.9	- 3.1	65	15	0	8+	0	22	21	71	2.04	1.34	1.03	10	1	14.1	9	3.8	33	56	S	18	9	5	14	5.9	62
GOODLAND	3654	883.8	1013.8	42	19	30.6	- 0.3	70	13	1	7	0	27	19	67	1.36	0.85	0.82	10	1	11.4	5	6.4	30	43	33	19+	6	9	13	6.5	
TOPEKA	877	983.1	1016.2	36	17	26.8	- 6.3	65	18	-20	8	0	26	20	77	3.49	2.44	2.33	6	2	22.4	12	2.8	30	30	W	26+	5	8	15	7.1	51
WICHITA	1321	966.5	1015.7	38	20	28.8	- 7.5	64	17	- 6	8	0	26	23	78	1.70	0.78	1.01	6	2	16.7	13	2.2	35	39	NE	21	6	6	16	7.1	51
KENTUCKY																																
COVINGTON	869	983.7	1016.1	42	24	33.3	0.2	69	22	- 3	2	0	19	24	68	5.89	2.98	2.23	15	0	13.3	8	5.2	23	35	28	27+	3	7	18	7.8	
LEXINGTON	966	980.7	1017.0	44	25	34.8	- 1.0	69	18	- 2	2+	0	17	24	68	4.72	1.30	0.94	12	1	9.1	7	5.1	21	25	29	27	5	5	18	7.3	
LOUISVILLE	477	998.6		44	26	35.0	- 0.8	69	18	1	9	0	17	24	66	6.28	2.99	2.53	12	0	11.9	7	3.9	24	35	SE	19	5	6	17	7.4	48
LOUISIANA																																
ALEXANDRIA	92	1012.9	1017.3	63	38	50.2	- 2.6	78	21	18	10	0	11			7.57	2.60	3.02	10	7	0.0	0	1.0	18	29	30	4	10	6	12	5.4	
BATON ROUGE	64	1014.6	1017.2	65	41	53.3	- 2.1	82	21	23	10	0	6	43	71	4.39	- 0.03	1.28	9	5	T	0	1.8	14	29	18	21	10	7	11	5.1	
LAKE CHARLES	9	1015.6	1017.2	67	44	55.6	- 0.7	80	26	29	10+	0	2	45	72	3.45	- 1.06	1.35	9	6	0.0	0	2.9	13	40	25	12	11	5	12	5.3	
NEW ORLEANS	4	1016.6	1017.6	65	43	53.9	- 3.2	82	20	24	10	0	5	44	70	4.87	0.88	1.87	9	5	0.0	0	1.7	12	37	15	21	13	8	7	4.5	
SHREVEPORT	254	1006.8	1016.1	64	37	50.6	0.3	78	26+	21	10+	0	10	38	65	4.13	0.04	2.00	10	7	0.6	T	2.0	19	30	31	12	9	7	12	5.6	61
MAINE																																
CARIBOU	624	991.2		24	5	14.3	1.8	42	14	-30	4	0	28			2.16	0.14	0.70	15		16.3	23						6	6	16	6.9	
PORTLAND	43	1013.2	1015.6	31	13	21.9	- 0.9	46	28	-25	3	0	27	15	72	6.76	2.96	1.75	12	0	35.6	27	2.8	30	29	W	9	6	7	15	6.7	55
MARYLAND																																
BALTIMORE	148	1011.5	1017.3	45	30	37.4	1.7	70	20	9	2	0	15	23	61	6.21	3.32	2.18	11	1	0.6	T	3.6	26	36	W	14	7	7	14	6.7	51
MASSACHUSETTS																																
BLUE HILL OBS P	629			35	22	28.3	0.9	54	13	- 2	3+	0	24			5.51	1.78	1.33	9		5.3	7			44	W	14					46
BOSTON	15	1014.6	1015.7	37	24	30.5	0.2	53	13	5	3	0	26	22	74	5.05	1.73	1.32	11	0	8.1	2	4.3	28	42	NE	8	7	7	14	6.8	55
WORCESTER	986	977.7	1015.9	33	19	25.9	1.0	49	26	- 7	3+	0	26	17	72	5.60	2.68	2.07	13	0	11.4	22	3.9	27	32	26	14	7	7	14	6.8	
MICHIGAN																																
ALPENA	689	986.5	1012.8	29	8	18.5	- 0.1	46	27	-18	1	0	28	13	74	3.17	1.56	1.04	18	0	25.0	28	2.8	24	29	SW	27	2	8	18	7.6	42
DETROIT	619			34	22	28.2	1.0	54	26	- 3	2+	0	22	22	78	2.81	0.73	0.97	18	2	7.4		6.5	24	40	23	5					
DETROIT M WAYNE CO	633	989.2	1014.0	34	21	27.4	0.7	54	26	- 9	2	0	23	20	75	2.68	0.73	1.19	16	1	5.9	4	5.8	25	41	SW	5	3	6	19	8.1	24
FLINT	771	984.4	1013.2	32	21	26.3	1.5	51	26	- 5	2+	0	24	20	78	2.32	0.56	0.88	14	0	6.1	3	5.9	25	39	24	27+	2	7	19	8.0	
GRAND RAPIDS	784	983.1	1013.4	31	18	24.1	- 0.2	51	26	-11	2+	0	24	17	75	2.48	0.73	0.95	16	1	4.4	12	5.8	23	58	SW	5	2	2	24	8.6	27
HOUGHTON LAKE	1149	968.8	1012.6	28	10	18.7	- 0.1	47	26	-17	1	0	28	14	79	3.36	2.07	1.43	13	0	23.6	13	2.9	25	34	22	27+	2	9	17	7.9	
LANSING	841	980.7	1013.5	33	20	26.5	2.3	54	26	- 6	2	0	25	18	72	2.40	0.45	0.91	13	0	5.7	5	6.6	24	56	SW	27	2	6	20	8.3	36
MARQUETTE J	677			27	12	19.2	- 0.5	49	17	-10	2+	0	28			2.54	0.89	0.86	15		22.7	36			32	SW	16	6	6	16	7.0	49

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	989.5	1013.4	31	19	24.8	- 0.9	51	26	0	24+	0	25	18	75	2.19	0.39	0.60	18	1	10.5	16	3.4	24	41	20	5	2	3	23	8.8	
SAULT STE MARIE	721	984.1	1012.0	22	4	13.1	- 2.6	37	27+	-28	2	0	28	8	79	3.74	2.24	0.72	19	1	32.6	32	0.9	11	35	SW	27	6	8	14	6.9	50
MINNESOTA																																
DULUTH	1428	959.7	1013.7	22	4	12.6	1.8	43	17	-25	2	0	28	6	75	2.37	1.41	1.08	11	1	27.4	27	3.5	31	43	NE	19	8	7	13	6.5	48
INTERNATIONAL FALLS	1179	968.8	1014.2	21	- 2	9.7	2.6	46	25	-30	2	0	28	0	68	1.22	0.51	0.78	8	0	11.8	19	2.9	29	32	31	27	7	8	13	6.5	
MINNEAPOLIS	834	982.7	1014.6	25	9	17.0	1.3	42	17	-23	8	0	28	9	68	1.74	0.96	0.59	10	0	13.9	20	3.0	32	42	NW	27	8	3	17	6.6	49
ROCHESTER	1297	964.1	1013.9	24	9	16.4	0.2	41	17	-24	8	0	27	12	79	2.21	1.41	0.72	9	1	16.0	19	4.4	28	45	28	27	6	6	16	6.9	
ST CLOUD	1034	975.3		24	5	14.4	1.0	42	17	-28	8	0	28			1.53	0.73	0.61	7		21.6	17						7	7	14	6.5	
MISSISSIPPI																																
JACKSON	310	1005.4	1017.3	62	36	49.1	- 1.4	79	21	13	10	0	11	38	71	5.68	0.72	2.27	10	6	T	T	2.7	17	37	SE	21	8	9	11	5.7	63
MERIDIAN	290	1006.8	1018.1	61	36	48.2	- 2.4	76	25+	13	10	0	12	37	70	5.72	0.63	1.70	8	5	T	T	0.6	16	28	23	26	9	10	9	5.4	
MISSOURI																																
COLUMBIA	887	982.4	1015.6	41	23	32.2	- 1.6	69	18	- 2	8	0	22	22	68	2.39	0.58	1.13	7	1	2.2	1	3.7	25	42	SW	4	5	9	14	6.9	49
KANSAS CITY	742	987.8	1015.6	40	24	31.5	- 4.3	71	18	- 4	8	0	22	22	69	0.89	- 0.35	0.43	6	0	8.2	5	2.6	27	33	N	12	6	9	13	6.6	60
ST JOSEPH	811			40	21	30.4	- 0.7	69	18	-19	8	0	22			0.91	- 0.18		6		0.0		2.3	29	32	14	18	7	7	14	6.3	
ST LOUIS	535	994.9	1015.8	44	24	33.9	- 0.8	74	18	1	9	0	20	24	71	3.08	1.04	1.45	11	1	1.4	1	3.6	23	38	SW	5+	5	9	14	6.7	55
SPRINGFIELD	1268	969.2	1015.7	45	23	34.4	- 2.7	70	25	-10	8	0	21	24	69	2.37	0.25	0.80	12	1	7.1	7	2.7	21	31	SW	4	6	7	15	6.9	50
MONTANA																																
BILLINGS	3567	888.3	1015.7	36	18	26.8	1.1	54	13	-12	7	0	25	17	70	0.56	- 0.04	0.35	8	0	5.7	5	7.6	26	36	NW	25	3	9	16	7.4	53
GLASGOW	2284	931.3	1016.9	24	5	14.3	0.7	43	24	-32	7	0	28	9	75	0.21	- 0.20	0.07	7	0	4.3	20	2.2	5	31	24	25	5	8	15	6.9	
GREAT FALLS	3662	884.9	1015.8	38	21	29.4	5.6	54	24	- 5	5	0	21	17	61	0.65	- 0.09	0.18	8	0	8.9	5	10.7	24	46	SW	24	4	6	18	7.5	51
HAVRE	2594	920.8	1016.0	29	10	19.8	3.5	47	24	-30	7	0	25	15	77	0.33	- 0.10	0.16	8	0	4.2	16	5.6	24	36	SW	9	5	7	16	7.1	67
HELENA	3828	878.4	1017.2	37	20	28.5	5.3	52	24	- 2	6	0	27	17	64	0.63	0.20	0.16	11	0	3.5	2	5.4	27	37	SW	24	4	4	20	7.9	40
KALISPELL	2965	910.3	1017.5	37	20	28.8	4.3	54	1	- 9	6	0	24	19	70	0.81	- 0.19	0.29	8	0	8.4	4	2.0	18	25	20	24	2	4	22	8.4	
MILES CITY	2629	919.7	1016.5	29	12	20.4	0.1	48	24	-31	7	0	27	15	79	0.76	0.39		12	0	6.6		3.0	29								
MISSOULA	3190	903.8	1018.4	40	25	32.2	7.2	57	14	15	28+	0	24	23	74	0.56	- 0.31	0.32	8	0	3.4	1	2.5	29	30	NW	26	2	6	20	8.4	40
NEBRASKA																																
GRAND ISLAND	1841	947.2	1015.7	36	16	26.1	0.0	60	15	- 8	8+	0	27	14	61	3.39	2.65	2.21	9	1	12.7	9	5.5	31	40	34	22	5	8	15	7.0	
LINCOLN U	1150			34	18	26.3	- 2.4	57	17	-14	8	0	25			2.79	1.70	1.74	7		17.6	12			37	NE	21	7	5	16	6.5	60
NORFOLK	1544			34	15	24.4	1.5	55	15	-10	8	0	26			3.18	2.40	2.41	7		2.6	2						10	5	13	6.1	
NORTH PLATTE	2775	914.3	1015.5	30	13	24.5	- 3.4	65	15	-10	6	0	28	15	70	1.28	0.76	1.15	8	1	2.7	4	5.7	33	40	NW	26	5	7	16	7.1	56
OMAHA	977	978.7	1015.5	34	17	25.3	- 1.2	59	17	-17	8	0	26	16	69	2.43	1.48	1.13	8	2	17.4	10	2.9	33	34	NW	12	8	5	15	6.5	52
SCOTTSBLUFF	3957	876.1	1015.5	40	17	28.6	- 0.4	64	13	-12	7	0	27	14	57	0.44	0.04	0.25	9	0	4.4	2	7.3	32	33	32	26	7	3	18	7.1	
VALENTINE	2587			31	9	20.3	- 2.7	59	15	-25	7	0	28			0.67	0.11	0.55	4		9.3	8			42	NW	26	4	7	17	7.3	55
NEVADA																																
ELKO	5050	844.2	1018.2	44	24	34.0	6.0	61	13	8	28	0	25	18	54	1.03	0.14	0.33	9	1	11.8	2	3.5	27	32	22	24	4	14	10	6.4	
ELY	6253	807.0	1017.2	42	18	29.9	3.3	59	13	0	27	0	28	17	64	0.57	- 0.13	0.18	7	1	7.7	3	2.3	28	40	N	20	7	12	9	6.0	71
LAS VEGAS	2162	939.4	1016.6	63	37	49.7	1.9	79	11	19	27	0	7	15	28	0.03	- 0.41	0.02	2	0	0.0	0	3.1	32	46	NW	19	13	9	6	3.8	89
RENO	4404	867.6	1019.7	53	21	36.9	1.1	71	13	10	26	0	27	21	56	0.33	- 0.69	0.21	6	0	4.9	3	2.8	30	33	NW	28	6	9	13	6.0	60
WINNEMUCCA	4301	869.6	1019.6	51	19	34.9	2.6	69	12	7	28	0	28	19	58	0.37	- 0.57	0.12	6	0	2.4	1	3.1	26	31	NW	25	7	5	16	6.6	82
NEW HAMPSHIRE																																
CONCORD	342	1002.7	1016.0	34	13	23.3	0.6	49	28+	-27	3	0	28	15	70	3.87	1.39	0.96	11	0	19.8	21	1.8	30	29	NW	19	4	10	14	7.1	58
MT WASHINGTON OBS	6262			17	0	8.2	2.6	37	8	-32	2	0	28			8.32	3.11	1.93	21	0	45.9	26			124Y	W	28	3	5	20	7.9	36
NEW JERSEY																																
ATLANTIC CITY	64	1014.2	1016.7	45	27	35.7	1.0	70	27	- 1	1	0	17	24	65	5.26	2.13	2.00	12	2	1.9	1	4.1	26	35	18	13	6	7	15	6.8	43
ATLANTIC CITY U	11			44	32	38.1	2.4	63	27	12	2	0	12			4.31	0.93	2.00	11						40	S	13					
NEWARK	7	1015.2	1016.3	42	29	35.2	2.5	64	27	7	2+	0	15	25	70	4.44	1.64	0.97	12	1	1.1	1	4.1	26	29	24	28	5	5	18	7.3	
TRENTON U	56			42	29	35.7	2.3	63	27	7	2	0	13			4.96	2.37	1.36	13		1.2	T			41	SW	13	4	12	12	6.7	52

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW MEXICO																																
ALBUQUERQUE	5311	834.7	1013.6	53	25	38.9	- 1.0	69	17	13	28	0	25	13	40	0.21	- 0.17	0.21	2	0	2.3	2	3.1	33	47	SW	3	13	8	7	4.0	82
CLAYTON	4969			49	20	34.5	- 1.5	69	25+	2	7	0	24			0.33	- 0.04	0.15	6		6.3	3						12	8	8	4.4	
ROSWELL	3612			60	26	42.9	0.8	78	15	3	8	0	22			0.23	- 0.19	0.23	2		2.4	2			43	SW	18					76
NEW YORK																																
ALBANY	275	1004.7	1015.9	35	16	25.4	1.7	51	18	-18	1	0	26	20	78	4.10	1.90	1.10	11	1	17.6	22	2.9	26	32	W	14	3	5	20	8.0	39
BINGHAMTON	1590	964.3	1015.1	30	17	23.6	- 0.2	48	27	- 7	1	0	27	17	76	4.36	2.18	1.60	11	0	18.7	18	4.3	23	36	SE	5	1	6	21	8.3	39
BUFFALO	705	997.5	1013.9	33	21	27.0	2.9	58	26	- 2	1	0	25	20	78	3.03	0.31	0.67	19	2	19.4	11	8.9	25	41	SW	27	1	6	21	8.7	26
NEW YORK W	132	1012.9	1016.0	40	30	35.1	1.7	66	27	6	2	0	12	23	66	5.33	2.49	1.44	11	1	T	T	2.6	28	38	NE	7					46
NEW YORK KENNEDY	13	1015.9	1016.5	40	29	34.2	2.6	60	27	7	2	0	17	24	70	4.76	1.83	1.86	10	1	0.2	T	4.7	27	31	B	23+	4	8	16	7.3	
NEW YORK LA GUARDIA	11	1015.7	1016.9	41	31	36.0	2.4	63	27	10	2+	0	11	23	62	4.10	1.01	1.11	10	1	0.3	T	4.0	29	40	S	13+	5	3	20	7.4	
ROCHESTER	547	993.9	1014.7	34	20	26.9	2.0	53	26	0	1	0	23	19	73	4.21	1.68	1.82	16	0	29.7	16	8.0	24	40	SW	28+	2	6	20	8.3	32
SYRACUSE	410	999.0	1014.8	33	20	26.5	2.2	49	27	- 4	3	0	24	19	73	4.07	0.94	1.26	13	0	25.2	21	3.6	23	33	W	28	1	5	22	8.4	40
NORTH CAROLINA																																
ASHEVILLE	2140	939.4	1016.9	52	27	39.5	0.6	73	20	8	10	0	21	28	69	4.93	0.90	1.30	11	1	0.1	T	2.0	35	30	34	14+	12	5	11	5.4	65
CAPE HATTERAS R	7	1018.0	1018.4	57	38	47.3	0.8	76	22	21	2	0	7	39	73	3.76	- 0.17	1.23	12	4	0.0	0	3.7	26	39	23	13	11	5	12	5.3	67
CHARLOTTE	736	989.6	1017.5	53	30	41.4	- 2.8	76	27	10	10	0	18	29	64	5.19	1.64	1.66	11	2	0.8	1	2.8	21	28	SW	13	9	7	12	5.8	56
GREENSBORO	897	989.1	1017.7	50	27	38.7	- 2.3	71	27	6	2	0	19	27	67	4.46	1.16	1.42	11	2	0.7	1	2.9	25	30	SW	13	9	6	13	5.9	63
RALEIGH	434	1001.4	1017.7	54	30	42.1	- 0.9	75	27	5	2	0	18	27	62	3.85	0.62	1.25	9	3	T	T	3.1	25	32	24	13	11	4	13	5.6	68
WILMINGTON	28	1017.3	1018.7	60	36	48.0	- 0.7	76	22	21	2	0	10	37	69	3.51	0.09	1.12	14	4	0.0	0	2.5	23	38	SW	13	11	6	11	5.1	61
NORTH DAKOTA																																
BISMARCK	1647	954.3	1017.1	24	2	12.9	- 0.6	44	25	-37	8	0	28	7	75	0.41	- 0.02	0.31	6	0	6.1	11	3.7	32	36	NW	26	6	11	11	6.3	63
FARGO	896	981.7	1016.1	22	3	12.7	2.0	39	25+	-26	8	0	28	8	78	0.34	- 0.17	0.31	4	0	4.8	14	3.6	32	45	NW	26	7	10	11	5.9	56
WILLISTON	1899	945.1	1016.8	25	5	14.9	2.5	41	24+	-26	7	0	28	10	80	0.15	- 0.33	0.08	4	0	2.5	11	3.6	30	33	N	26	6	12	10	6.1	72
OHIO																																
AKRON	1208	968.8	1014.8	38	23	30.4	1.7	62	26	- 5	2+	0	20	20	68	3.89	1.59	1.18	20	3	15.7	11	6.1	23	37	24	5	4	4	20	7.8	
CINCINNATI CO	761			41	25	33.0	- 2.1	68	22	- 1	2	0	20			5.75	2.95	2.43	15		14.6	9			27	SW	5					37
CLEVELAND	777	985.1	1015.3	35	21	27.9	- 0.6	58	26	- 7	2	0	25	21	76	3.69	1.36	0.71	18	3	14.3	8	7.7	22	42	SW	5	4	3	21	8.2	36
COLUMBUS	812	985.1	1016.1	39	23	30.8	- 0.3	62	22	- 1	10+	0	21	22	70	3.16	0.85	1.01	16	3	12.3	10	4.8	23	44	SW	5	5	4	19	7.7	27
DAYTON	1002	978.3	1015.8	38	23	30.0	- 0.9	59	27+	- 4	2	0	22	22	73	3.66	1.34	1.11	16	2	9.8	5	6.1	23	40	W	27	2	9	17	7.8	35
MANSFIELD	1295			36	22	28.9	1.1	59	27	- 6	2+	0	23	21	75	2.58	- 0.02	0.80	15	3	15.9	8	8.5	22	40	21	5	4	5	19	7.6	
TOLEDO	669	988.6	1014.4	35	21	27.9	0.6	55	26	- 9	2	0	24	20	73	2.59	0.71	1.08	15	2	8.0	4	6.5	24	45	SW	5	3	5	20	8.1	33
YOUNGSTOWN	1178	971.2	1015.1	34	21	27.1	- 0.5	60	26	- 8	2	0	24	19	74	3.56	1.06	0.89	21	3	18.0	11	6.9	24	38	22	5	5	2	21	8.1	
OKLAHOMA																																
OKLAHOMA CITY	1285	967.8	1015.3	51	27	39.1	- 2.2	71	16	3	8	0	18	26	63	1.95	0.58	1.63	7	3	5.1	5	1.9	1	35	NE	21+	8	5	15	6.4	64
TULSA	650	990.3	1015.7	49	29	39.0	- 1.6	74	16	2	8	0	17	27	65	4.18	2.41	2.27	9	2	6.5	4	0.8	33	39	S	18	5	9	14	6.8	52
OREGON																																
ASTORIA	8	1018.6	1019.4	49	36	42.2	- 0.6	60	11	25	6	0	11	38	87	6.67	- 3.22	1.38	22	0	0.2	T	3.5	20	35	28	25	3	2	23	8.2	
BURNS U	4151	873.7	1019.4	44	22	33.1	3.4	61	10	11	28	0	27	22	67	0.46	- 0.81	0.17	8		4.4	1	5.8	32				7	6	15	6.5	
EUGENE	359	1007.8	1021.7	48	34	41.1	- 1.5	66	12	25	3	0	9	37	86	5.11	0.14	1.12	17	1	4.5	3	4.2	19	32	25	24	0	1	27	9.4	
MEACHAM	4350	881.6	1019.6	37	25	30.8	1.7	54	12+	12	6	0	23			2.95	- 1.05	0.93	15		18.2	8			26	28	10	3	7	18	7.5	
MEDFORD	1298	975.9	1022.7	50	32	40.8	0.7	65	11+	23	20	0	15	34	81	1.43	- 0.97	0.55	13	0	2.3	T	1.0	28	21	28	28+	1	6	21	8.4	
PENDLETON	1482	964.8	1019.6	49	31	39.8	2.4	65	14	19	8	0	17	26	60	0.69	- 0.49	0.29	7	0	0.6	T	6.4	26	39	28	10	3	8	17	7.5	
PORTLAND	21	1019.4	1020.6	50	35	42.8	0.8	62	11	23	7	0	9	36	79	3.36	- 0.86	0.60	16	0	1.7	T	3.7	20	31	W	25+	2	4	22	8.3	28
SALEM	196	1013.5	1020.8	49	30	39.4	- 2.5	63	13+	15	28	0	18	33	79	4.34	- 0.97	0.74	17	1	8.1	4	5.5	20	26	20	26+	2	2	24	8.4	
SEXTON SUMMIT R	3836	886.2	1021.5	42	31	36.2	0.1	64	11	17	26+	0	17			3.80	- 0.32	0.80	14		33.1	24			32	20	14+	3	6	19	7.8	
PACIFIC AREA																																
GUAM TAGUAC R	361	997.3	1009.8	84	72	78.1	- 0.2	86	25+	67	4+	0	0	72	83	5.78	2.29	2.24	18	0	0.0	0	10.5	8	25	E	17	0	12	16	7.7	57
JOHNSTON	7	1013.2	1014.8	81	74	77.3	0.3	82	28+	70	22+	0	0	69	75	0.34	- 1.19	0.17	5	0	0.0	0	15.1	9	36	NE	22	19	9	0	2.8	82
KOROR R	94	1004.1	1007.7	87	76	81.3	1.0	90	24+	71	14	4	0	75	85	10.68	3.55	5.14	20	3	0.0	0	6.7	7	24	E	17	0	0	28	9.8	48
KWAJALEIN	8	1007.5	1008.2	86	77	81.7	1.7	88	7+	74	20+	0	0	74	78	3.63	1.48	1.38	16	0	0.0	0	15.7	7	33	9	23	2	14	12	7.0	
MAJURO	10	1008.1	1008.4	86	77	80.9	0.5	86	22+	73	23	0	0	74	78	5.74	- 2.81	2.18	17	0	0.0	0	13.5	7	28	NE	6	3	17	8	6.3	70

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
				Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days: 01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Station Ø Mb.	Sea level Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In			In.	In.	M.p.h.		M.p.h.							
PACIFIC AREA																																	%
PAGO PAGO	12	1008.5	1008.7	85	73	79.4		88	14+	71	28	0	0	75	87	14.33		2.02	25	7	0.0	0	2.2	36	20	NE	25	1	3	24	8.9	30
POHAPE R	123	1002.4	1007.8	85	74	79.4	- 1.1	90	7	68	27	1	0	73	81	13.12	3.38	2.00	24	2	0.0	0	7.1	7	23	NE	10	0	7	21	8.5	50
TRUK MOEN ISLAND	5	1007.5	1007.7	86	77	81.3	- .6	88	28+	72	11	0	0	74	80	8.63	2.34	3.37	21	1	0.0	0	9.3	6	24	SE	3	0	6	22	9.1	68
WAKE	11	1012.2	1012.3	81	71	76.3	- 0.8	86	7+	67	24	0	0	66	74	3.34	1.99	1.66	12	0	0.0	0	9.4	5	37	NE	24	11	9	8	5.4	64
YAP R	44			86	75	80.7	0.3	88	21+	72	23+	0	0			10.11	5.47	2.06	21	0	0.0	0			22	E	23	0	9	19	8.4	82
PENNSYLVANIA																																	
ALLENTOWN	387	1002.0	1016.5	37	23	30.0	0.8	56	28	1	2	0	22	23	76	5.44	2.80	1.56	12	1	4.4	3	3.7	27	33	26	28	6	6	16	7.0	
ERIE	731	987.1	1014.7	34	21	27.3	3.9	58	26	- 7	2	0	24	18	69	2.05	- 0.27	0.44	19	2	21.4	12	7.3	22	30	16	5+	0	6	22	8.9	
HARRISBURG	338	1003.4	1016.8	40	26	33.2	0.6	65	27	6	3+	0	18	21	65	5.62	3.31	1.63	14	1	5.1	3	3.9	28	34	W	28	4	7	17	7.5	39
PHILADELPHIA	5	1015.6	1016.7	43	29	36.1	2.9	64	20	6	2	0	15	25	68	5.43	2.63	1.46	11	2	0.8	T	3.6	26	35	SW	13	4	7	17	7.3	42
PITTSBURGH	1137	970.2	1015.4	38	23	30.4	1.2	62	26	- 6	2	0	20	20	67	4.04	1.85	1.06	16	1	20.6	10	6.2	26	32	25	28	5	4	19	7.9	28
SCRANTON	930	981.0	1016.3	34	20	27.2	- 1.1	54	27	- 4	3+	0	23	19	72	3.92	1.93	1.29	14	2	12.1	6	3.4	23	34	W	28	4	6	18	7.8	43
WILLIAMSPORT	524	996.6	1016.3	39	22	30.4	1.2	58	27	-13	1	0	18	21	70	6.50	3.99	2.72	13	0	15.5	10	3.0	27	28	26	28	6	3	19	7.4	
RHODE ISLAND																																	
BLOCK ISLAND	110			37	27	31.8	0.0	52	13	7	2	0	20			6.88	3.59	2.55	10		0.5	1										
PROVIDENCE	51	1013.9	1016.3	38	24	30.9	1.2	54	28	- 1	1	0	23	21	69	5.36	2.26	1.50	10	0	5.0	2	4.1	29	36	23	13	6	7	15	6.6	52
SOUTH CAROLINA																																	
CHARLESTON	40	1016.9	1019.0	62	37	49.8	- 1.7	80	26	22	14+	0	10	37	66	4.71	1.42	1.20	11	5	T	0	2.7	23	45Y	W	13+	10	5	13	5.5	64
CHARLESTON U	9			59	43	51.0	- 1.3	72	22	24	10	0	7			2.50	- 0.57	0.71	9		0.0	0			33	SW	8					
COLUMBIA	213	1010.2	1018.3	60	33	46.3	- 2.1	77	27	16	10	0	18	34	69	5.23	1.49	2.13	11	3	T	T	2.2	24	29	28	7	10	7	11	5.6	53
GREENVLLE-SPRTNBRG	957	982.7	1018.0	54	30	41.9	- 3.2	75	27	10	1	0	17	29	66	7.43	3.36	2.01	11	3	1.0	1	2.1	25	28	W	23	9	7	12	5.5	55
SOUTH DAKOTA																																	
ABERDEEN	1296	967.2	1016.4	26	4	15.2	0.2	46	25	-37	8	0	28	8	72	0.41	- 0.24	0.33	4	0	6.2	9	4.6	34	32	32	26	10	5	13	5.6	
HURON	1291	967.5	1016.3	26	5	15.7	- 0.9	50	17	-30	8	0	28	11	81	0.99	0.39	0.73	8	0	16.0	11	4.8	31	37	NW	26	7	7	14	6.4	68
RAPID CITY	3162	901.5	1016.3	32	13	22.6	- 1.5	53	15	-22	7	0	27	14	69	1.00	0.52	0.38	13	0	15.7	14	7.4	34	45	NW	26	5	8	15	6.9	57
SIOUX FALLS	1418	961.4	1015.2	28	10	18.8	- 0.3	53	25+	-27	9	0	28	13	78	0.90	- 0.03	0.68	5	0	1.7	5	4.7	31	32	30	27	8	5	15	6.3	
TENNESSEE																																	
BRISTOL	1507	962.1	1017.4	49	25	36.9	- 3.1	72	22	0	2	0	18	26	66	3.59	0.03	0.87	12	0	9.9	9	2.3	23	23	28	8	8	6	14	6.4	
CHATTANOOGA	665	992.2	1017.7	51	28	39.9	- 4.5	71	25	9	10	0	16	29	69	8.50	3.13	2.43	11	4	0.6	T	2.3	24	33	SW	22	7	7	14	6.4	46
KNOXVILLE	980	981.7	1017.6	51	28	39.4	- 3.7	71	22	3	10	0	14	28	67	4.93	0.12	1.25	13	2	6.4	4	3.5	26	34	SW	22	4	9	15	6.8	52
MEMPHIS	258	1006.8	1017.3	53	34	43.5	- 0.6	73	26	11	9	0	13	29	60	7.21	2.52	3.24	10	3	6.7	3	2.5	20	34	N	12	8	7	13	6.0	60
NASHVILLE	590	994.9	1017.1	50	27	38.7	- 3.3	71	18	- 5	9	0	17	28	69	4.70	0.19	1.23	9	3	6.5	4	3.5	22	34	SE	22	9	6	13	6.1	50
OAK RIDGE R	905			50	28	39.1	- 2.0	70	22+	7	1	0	15			4.68	- 1.12	1.37	14		1.9	1			41Y		22	6	7	15	6.9	
TEXAS																																	
ABILENE	1762	952.6	1014.8	63	35	48.7	0.3	83	16	3	8	0	13	28	51	0.57	- 0.52	0.35	3	2	1.2	1	3.5	23	43	SW	18	14	5	9	4.2	73
AMARILLO	3604	887.2	1012.6	52	25	38.8	- 2.5	76	15	0	7	0	22	20	52	1.65	1.03	1.28	5	1	17.3	14	3.2	27	43	N	21	13	8	7	4.4	74
AUSTIN	597	993.2	1015.3	67	43	54.9	1.1	81	18+	20	8	0	7	37	56	0.69	- 1.89	0.47	4	2	T	0	0.7	23	43	NW	21	13	6	9	4.4	61
BROWNSVILLE	19	1014.2	1014.6	78	56	67.2	3.2	90	26	35	o+	1	0	55	67	0.30	- 1.18	0.26	2	1	0.0	0	5.6	13	36	N	21	11	8	9	4.9	61
CORPUS CHRISTI	41	1013.5	1015.0	74	50	62.0	1.6	86	26+	28	9	0	3	50	68	0.22	- 1.48	0.22	2	0	0.0	0	5.4	11	44	SE	18	12	7	9	4.8	63
DALLAS	481	997.6	1015.3	63	39	50.7	1.2	80	16	15	8	0	9	32	53	2.65	0.10	1.20	9	3	0.5	T	2.1	16	34	W	22+	12	6	10	4.8	66
DEL RIO	1026	978.0	1014.4	71	42	56.8	0.6	86	20	21	8	0	5	32	47	0.29	- 0.59	0.28	2	1	0.0	0	3.0	8	35	31	4	17	3	8	3.6	
EL PASO	3918	879.8	1012.6	64	33	48.4	- 0.7	78	15	13	8	0	13	15	28	0.04	- 0.37	0.03	2	0	T	0	5.7	26	56	SW	3	15	11	2	3.4	95
FORT WORTH	537	995.3	1015.8	62	36	49.2	0.0	81	16	12	8	0	12	34	60	1.32	- 0.92	0.53	7	4	T	T	2.2	21	32	17	18	14	5	9	4.8	
GALVESTON U	7			63	52	57.1	0.3	79	26	30	8	0	1			4.12	1.24	3.09	6		0.0	0			37	NW	21					63
HOUSTON	96	1012.9	1016.6	68	43	55.7	1.9	80	26+	25	10+	0	6	43	66	2.11	- 1.54	1.30	7	4	0.0	0	2.0	13	29	30	21	9	6	13	5.4	58
LUBBOCK	3254	900.4	1013.1	59	27	42.7	- 0.4	74	15+	5	8+	0	19	22	50	0.81	0.24	0.80	3	2	5.2	5	3.3	29	33	25	18	14	7	7	4.2	
MIDLAND	2851	914.3	1013.4	62	32	47.2	- 1.1	80	16	12	8	0	14	20	39	0.01	- 0.59	0.01	1	0	0.1	T	3.1	24	36	32	21+	17	4	7	3.9	
PORT ARTHUR	16	1016.3		67	46	56.6	0.6	80	26	28	10+	0	3	46	70	4.31	- 0.14	2.38	10	8	0.0	0	2.8	13	33	NW	12	10	7	11	5.3	58
SAN ANGELO	1903	947.2	1014.3	68	36	52.0	1.5	87	20+	12	8	0	12	28	46	0.42	- 0.48	0.24	3	2	T	T	4.3	23	36	28	21	17	3	8	3.6	
SAN ANTONIO	788	986.8	1015.1	72	43	57.4	2.0	86	18	23	8	0	8	37	53	0.81	- 0.84	0.65	7	1	0.0	0	1.0	2	33	NW	25	12	7	9	4.5	64
VICTORIA	104	1011.5	1015.6	71	45	58.0	0.0	83	26+	22	8	0	4	45	66	1.10	- 1.24	0.85	5	1	0.0	0	2.8	12	45Y	NW	21	11	5	12	5.4	
WACO	501	997.3	1015.5	65	41	52.9	1.4	81	16	19	8	0	8	37	57	1.33	- 1.09	0.55	5	4	T	0	3.1	19	35	30	21	15	7	6	4.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

FEBRUARY 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						Snow, Ice pellets					Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
TEXAS																																
WICHITA FALLS	994	977.7	1014.9	59	31	44.8	- 2.0	81	16	6	8	0	17	29	61	1.37	- 0.01	1.17	5	4	T	T	0.6	30	38	31	21	8	12	8	5.3	
UTAH																																
MILFORD	5008	846.2		45	16	30.4	0.7	64	14+	- 1	27	0	28			1.30	0.60	0.64	9		18.8	7						11	7	10	5.3	
SALT LAKE CITY	4220	871.5	1018.0	44	26	34.5	2.4	61	13	12	27	0	24	23	64	2.13	0.95	0.75	9	0	8.7	2	2.1	21	41	NW	25+	5	7	16	7.1	59
WENDOVER	4237	870.6	1018.0	45	27	35.7	2.0	63	10	14	27	0	22	19	54	0.38	0.08	0.23	6		1.2	1	3.0	34				12	7	9	5.2	
VERMONT																																
BURLINGTON	332	1012.0	1015.2	29	11	20.0	2.6	43	18	-25	3	0	27	12	69	2.98	1.19	0.71	14	0	23.1	21	2.4	21	35	SW	17	3	4	21	8.3	59
VIRGINIA																																
LYNCHBURG	916			49	29	38.7	- 0.2	72	27	8	2	0	19			4.45	1.80	1.23	11		2.3	2			31	SW	13	9	6	13	5.9	56
NORFOLK	22	1016.3	1017.2	55	34	44.7	3.1	73	27	17	2	0	14	32	65	3.59	0.38	1.07	12	4	2.4	1	4.0	22	42	SW	13	10	6	12	5.5	61
RICHMOND	164	1015.8	1017.5	50	29	39.5	- 0.4	73	27	3	2	0	20	28	66	4.37	1.47	1.68	10	2	2.0	2	3.4	23	40	SW	13	7	8	13	6.3	54
ROANOKE	1149	973.9	1016.8	50	28	39.1	- 0.1	74	19	6	1	0	18	22	55	5.13	2.27	1.62	11	1	3.6	3	4.5	28	32	30	14+	9	7	12	6.0	
WALLOPS ISLAND	9			47	30	38.3		73	27	8	2	0	15			3.14		0.92	9		1.0	2			53Y	SSW	13					
WASHINGTON																																
OLYMPIA	196	1011.5	1018.8	47	32	39.3	- 1.7	58	11	15	28	0	13	36	88	4.41	- 2.21	1.28	17	0	5.1	3	5.3	20	32	19	3	2	7	19	8.1	
QUILLAYUTE	170	1010.2	1017.8	48	34	40.7	0.3	55	12	15	28	0	13	36	86	12.81	0.53	2.53	19	0	12.8	7	2.0	20	28	S	3	3	5	20	8.1	35
SEATTLE TACOMA	400	1001.7	1018.4	47	38	42.3	1.5	56	14+	24	28	0	8	35	75	4.36	0.12	1.00	19	4	2.2	2	4.2	18	32	SW	24	2	5	21	8.4	36
SPOKANE	2356	931.6	1017.3	40	27	33.6	3.6	53	14+	11	28	0	23	24	72	0.88	- 0.98	0.28	9	0	5.5	4	5.4	21	42	SW	24	2	7	19	8.0	37
STAMPEDE PASS R	3958	877.4		31	24	27.0	1.3	45	12+	13	28+	0	24			10.89	0.74	1.81	20		59.6	153						1	3	24	9.1	
WALLA WALLA U	940			49	34	41.5	3.1	68	14	24	6	0	11			0.85	- 0.67	0.29	9		0.6	T			35	NW	24	3	4	21	7.9	32
YAKIMA	1052	979.3	1018.8	49	27	37.8	3.8	63	13	15	28	0	23	25	62	T	- 0.87	T	0	0	T	0	4.3	27	31	29	25	5	9	14	6.7	
WEST INDIES																																
SAN JUAN P.R.	13	1014.9	1017.3	82	72	77.4	3.0	84	25+	69	24+	0	0	66	70	3.67	0.77	1.02	19	0	0.0	0	9.6	9	32	E	5	9	16	3	4.7	79
WEST VIRGINIA																																
BECKLEY	2504	825.8	1017.4	42	24	33.3	- 1.0	62	20+	- 5	1	0	19	22	67	3.67	- 0.39	1.05	13	0	13.4	9	5.1	23	28	18	22	7	6	15	6.7	
CHARLESTON	981	981.4	1016.5	46	26	35.2	- 2.3	67	22	1	1	0	18	24	67	3.40	- 0.13	0.89	16	1	10.5	5	4.1	24	28	25	22	4	8	16	6.9	
ELKINS	1948	942.8		43	20	31.5	- 1.5	64	19	- 4	2	0	23			3.16	- 0.11	1.12	16		14.1	7						4	6	18	7.7	
HUNTINGTON	827	985.4	1016.3	47	28	37.3	- 0.4	74	22	1	2+	0	16	25	65	2.71	- 0.33	0.83	15	1	9.8	6	4.2	22	31	22	27	5	7	16	7.2	
PARKERSBURG U	615			44	26	35.1	- 0.4	68	22	1	2	0	19			3.62	0.79	1.13	13		8.0	5			35	W	27					36
WISCONSIN																																
GREEN BAY	682	986.5	1013.1	24	6	15.2	- 2.9	40	26+	-26	2	0	28	10	77	2.03	0.95	0.81	13	0	11.0	19	2.6	26	50	SW	27	6	7	15	6.8	43
LA CROSSE	651	989.2	1014.7	26	8	17.0	- 2.4	46	17	-36	8	0	27	12	78	2.06	1.01		12	1	20.4		1.8	27								
MADISON	858	980.7	1013.4	28	11	19.9	0.4	47	26	-22	2	0	26	14	77	2.59	1.46	1.13	11	2	3.7	15	3.2	26	40	SW	27	6	4	18	7.3	38
MILWAUKEE	672	987.5	1013.7	29	15	21.6	- 0.8	46	26	-15	2	0	27	14	75	2.50	1.10	1.19	12	1	2.5	8	6.3	26	57	SW	26	6	2	20	7.5	41
WYOMING																																
CASPER	5338	832.7	1015.3	36	14	24.7	- 1.6	57	13	-16	7	0	27	15	69	0.80	0.21	0.22	11	0	11.2	2	7.7	25	32	25	15+	7	5	16	6.6	
CHEYENNE	6128	806.6	1015.5	36	16	25.8	- 1.5	56	13	-14	7	0	26	11	57	0.62	0.06	0.22	10	0	9.3	3	11.3	31	56	NW	26	8	7	13	6.2	71
LANDER	5563	824.6	1015.2	37	15	26.1	2.0	57	13	- 4	22	0	28	12	59	0.45	- 0.24	0.30	6	0	12.6	7	2.1	27	48	SW	25	6	8	14	6.4	72
SHERIDAN	3964	875.4	1016.5	37	13	24.8	1.0	56	13	-16	7	0	27	14	61	1.17	0.43	0.35	15	0	15.7	11	4.8	31	38	NW	7	6	5	17	7.0	49

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day-data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

FEBRUARY 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0.3	No. of days (sunrise to sunset): Partly cloudy, 4.7	No. of days (sunrise to sunset): Cloudy, 8.10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C	C	C.	C.	C.		C.				C.	%	Mm	Mm.	Mm.			Mm.	Mm	M.p.s		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	995.3	1018.3	13.3	0.0	6.8	- 2.5	24.4	19	-12.2	10	0	13	- 0.6	64	236	102	98	13	5	20	25	0.5	24	17.0	SW	4	10	5	13	6.0	55
HUNTSVILLE	190	994.6	1018.2	12.8	0.0	6.3	- 0.9	23.3	18	-13.3	9	0	13	0.0	66	243	110	98	10	5	61	25	0.7	19	17.4	28	4	8	8	12	6.1	
MOBILE	64	1010.2	1018.1	18.3	6.1	12.4	- 0.5	23.9	21+	- 6.1	10	0	5	5.6	70	182	65	51	11	4	0	0	0.8	11	13.0	32	12	12	6	10	5.0	
MONTGOMERY	56	1011.2	1018.5	16.1	2.8	9.4	- 0.7	26.1	19	- 8.9	10	0	11	1.7	63	168	57	47	10	6	T	0	0.5	25	17.0	W	26	15	2	11	4.8	60
ALASKA																											B					
ANCHORAGE	35	999.0	1003.9	- 2.8	-10.0	- 6.3	1.1	7.2	7	-27.2	26	0	24	-10.0	74	38	20	11	17	0	470	330	0.8	35	10.7	35	23+	4	1	23	8.3	51
ANNETTE	34	1008.5	1012.6	4.4	- 1.1	1.6	- 0.1	7.8	23+	- 9.4	5	0	13	- 1.7	80	272	55	63	21	0	338	127	2.7	13	15.6	14	23+	0	8	20	8.8	
BARROW	9	1016.6	1017.3	-29.4	-35.0	-32.3	- 4.3	-21.1	22	-43.9	4	0	28	-35.6	74	3	- 1	3	2	0	41	229	0.3	30	10.7	7	8	15	5	8	4.1	
CARTER ISLAND	12	1015.2	1017.3	-31.1	-37.8	-34.6	- 5.9	-23.9	22+	-44.4	4+	0	28	-38.9	63	T	- 9	T	1	0	T	432	2.5	26	17.9	28	23	12	6	10	4.6	
BETHEL	38	999.3	1005.3	-13.9	-23.3	-18.6	- 5.4	2.8	8	-35.6	17	0	28	-20.6	85	4	- 24	2	5	0	122	229	4.2	2	17.0	4	14	6	7	15	6.6	
BETTLES	196	985.8	1013.1	-21.7	-32.2	-27.1		3.3	21	-46.7	24	0	28	-33.9	54	31		7	11	0	643	1194	2.4	35	9.8	13	22	12	1	15	5.4	
BIG DELTA	386			-11.1	-21.7	-16.4		5.6	8+	-41.7	25	0	28			12		4	8	0	224	406			14.3	19	7	2	4	22	8.3	
COLD BAY	29	996.6	1000.1	- 0.6	- 6.1	- 3.3	- 1.1	7.2	26	-17.8	17	0	21	- 5.0	88	55	- 25	13	19	0	267	102	0.6	23	21.0	34	28	0	4	24	9.1	
FAIRBANKS	133	990.9	1008.9	-14.4	-26.1	-20.3	- 0.9	- 1.7	21	-41.1	26	0	28	-26.1	62	16	3	7	12	0	414	1016	0.3	29	7.2	24	23+	4	4	20	8.2	
GULKANA	479	947.2	1008.3	- 7.8	-18.9	-13.3		5.0	7	-39.4	26	0	27			5		3	5	0	109		0.1	8	13.4	18	22	1	8	19	8.1	
HOMER	20	998.6	1001.5	0.0	- 8.3	- 4.2		6.1	8+	-21.1	25+	0	24	- 7.2	79	83	46	19	16	0	538	152	1.2	4	13.0	21	18	2	5	21	8.1	
JUNEAU	4	1009.1	1009.7	0.6	- 5.0	- 2.2	0.7	5.0	17+	-20.6	4	0	27	- 2.2	97	100	22	15	23	0	546	483	3.4	11	12.5	11	13+	2	1	25	9.1	16
KING SALMON	15	999.7	1001.5	- 5.6	-16.1	-11.0	- 2.9	5.6	20	-33.9	25+	0	26	-15.0	69	41	17	13	16	0	386	229	1.9	5	20.1	14	7	5	5	18	7.4	
KOTZEBUE	3	1012.5	1012.9	-24.4	-32.2	-28.3	- 8.3	- 6.7	8	-41.1	25	0	28	-32.8	64	4	- 3	2	6	0	71	330	1.3	35	16.5	30	14	16	1	11	4.6	
MC GRATH	105	994.2	1007.7	-14.4	-26.7	-20.7	- 3.0	- 2.2	7	-46.1	24	0	28	-23.3	74	18	- 11	6	11	0	384	711	0.6	31	7.6	36	28	4	5	19	7.8	
NOME	4	1009.1	1010.0	-18.3	-30.0	-24.2	- 9.5	2.8	8	-41.1	28+	0	28	-28.9	63	2	- 22	1	2	0	56	457	3.0	3	22.8	4	5	16	3	9	4.0	69
ST. PAUL ISLAND	7	1002.0	1003.1	- 5.6	-12.8	- 9.3	- 4.4	1.7	26+	-26.1	22	0	28	-11.1	86	26	- 5	10	17	0	244	254	5.4	3	25.9	18	17	4	6	18	7.8	
SHEMYA	37	1000.7	1004.4	- 0.6	- 3.3	- 2.0	- 1.3	3.3	24	-13.9	21	0	28	- 6.7	71	26	- 31	6	20	0	196	127	5.6	2	20.6	2	6	0	9	19	8.4	
SUMMIT	732	915.3	1007.8	-10.0	-17.8	-13.9		2.8	8+	-37.2	26	0	28	-16.7	79	29		8	17	0	775	1067	3.9	7	14.8	12	23+	1	6	21	8.6	
TALKEETNA	105			- 5.0	-16.7	-10.8	- 1.6	3.9	18	-39.4	26+	0	28			69	25	21	16	0	1326	1194			6.7	18	18+	3	3	22	8.4	
UNALAKLEET	5			-18.9	-27.8	-23.3		- 1.7	8	-43.9	28	0	28			14		4	12	0	152	838			17.9	8	7+	10	6	12	5.5	
YAKUTAT	9	1005.4	1006.5	- 0.6	- 7.2	- 3.9	- 2.0	3.3	18+	-25.0	3	0	27	- 5.6	85	393	185	66	23	0	1311	1041	2.8	11	12.5	14	11	2	3	23	8.8	
ARIZONA																																
FLAGSTAFF	2135	784.3	1015.8	7.2	- 8.3	- 0.5	0.8	18.3	13	-16.7	21	0	27	-10.0	54	38	- 8	22	6	1	384	305	1.1	23	13.0	21	25	13	6	9	4.5	
PHOENIX	340	975.3	1014.6	21.7	5.6	13.5	1.6	28.9	13+	- 0.6	28	0	2	- 5.6	32	9	- 13	9	3	1	0	0	0.4	14	20.6Y	WNW	3	16	8	4	2.9	89
TUCSON	788	925.5	1014.1	19.4	3.3	11.3	- 0.3	26.7	15+	- 2.8	4	0	6	- 6.7	35	13	- 9	9	3	0	T	T	1.5	19	16.5	W	3	16	8	4	3.2	88
WINSLOW	1492	849.6	1016.6	12.2	- 6.1	2.8	- 0.2	20.0	15	-14.4	27	0	27	- 9.4	46	6	- 6	4	4	0	58	25	1.5	23	28.2	22	25	14	8	6	4.1	
YUMA	59	1007.8	1015.1	22.8	6.7	14.6	0.5	30.0	11	2.8	7	0	0	- 1.7	38	1	- 8	1	1	0	0	0	1.3	32	14.3	NW	19	20	6	2	2.3	88
ARKANSAS																																
FORT SMITH	136	999.3	1016.2	12.2	- 1.1	5.3	- 1.2	22.8	16	-12.8	9	0	19	- 2.2	62	62	- 25	22	9	3	8	T	0.8	1	17.0	W	4	7	8	13	6.5	53
LITTLE ROCK	78	1007.1	1016.8	13.3	0.6	6.9	0.0	25.6	26	-11.7	9	0	13	0.0	64	56	- 54	20	9	5	18	25	0.3	22	25.5	SW	4	8	9	11	5.8	61
CALIFORNIA																																
BAKERSFIELD	145	1002.4	1020.3	15.6	3.9	9.9	- 1.2	25.6	12	- 1.1	26	0	3	3.9	68	9	- 20	5	2	0	0	0	0.7	2	11.2	34	25+	7	12	9	5.4	
BISHOP	1252			15.6	- 3.3	6.1	1.0	24.4	13	-13.3	27	0	24			3	- 22	3	1		T	0						12	10	6	4.7	
BLUE CANYON	1609			7.2	0.0	3.4	0.6	16.7	13+	- 8.9	28+	0	16			55	-204	20	9		396	1676			10.3	16	25	9	9	10	5.6	
EUREKA U	13			11.1	4.4	7.9	- 1.1	22.2	12	0.0	26+	0	2			83	- 57	15	14		T	0			17.0	NW	25	2	5	21	8.4	42
FRESNO	100	1008.8	1020.6	15.0	2.2	8.7	- 1.6	22.2	14+	- 3.9	26	0	8	4.4	78	7	- 48	4	5	0	0	0	0.6	33	15.6	NW	25	7	11	10	5.5	70
LONG BEACH	10	1016.3	1017.5	19.4	7.2	13.3	0.9	32.8	12	2.2	21	1	0	5.0	64	17	- 42	15	3	0	0	0	0.9	26	13.0	27	27	10	9	9	4.7	
LOS ANGELES	30	1013.5	1017.1	18.3	9.4	13.7	0.8	30.0	12	5.0	27	0	0	6.1	67	9	- 64	9	3	0	0	0	0.9	28	19.2Y	N	25	14	7	7	4.3	
LOS ANGELES U	82			20.6	10.0	15.1	1.2	32.8	12	5.0	27	1	0			17	- 68	17	3		0	0			14.8	NW	25	17	5	6	3.4	81
MT SHASTA R	1080	894.7	1021.0	9.4	- 2.2	3.6	0.8	19.4	11	- 8.9	26	0	21	- 2.8	67	5	-145	2	8		38	T	1.7	33								
OAKLAND	2	1021.3	1021.4	13.9	6.7	10.2	- 0.2	23.3	11	2.8	26+	0	0	6.1	77	14	- 67	10	3	0	0	0	2.2	30	10.3	29	27+	7	13	8	5.3	
RED BLUFF	104	1007.5	1020.5	16.7	3.3	9.9	0.1	27.2	11	- 2.8	26	0	3	1.7	62	3	- 81	3	3	0	T	0	1.7	33	14.3	NW	28	9	8	11	5.8	76
SACRAMENTO	5	1019.6	1020.6	14.4	3.3	9.0	- 0.6	21.1	13	- 2.8	3	0	2	4.4	79	14	- 62	10	4	0	0	0	0.5	30	12.5	N	19	8	10	10	5.9	71
SANDBERG R	1377	862.9		10.6	1.1	6.1	0.8	22.2	13	- 7.2	20	0	14	- 5.6	54	25	- 41	24	4		107	25	4.5	36	16.5	34	15	13	4	11	4.9	
SAN DIEGO	4	1016.6	1017.5	16.7	9.4	13.0	- 0.4	28.9	12	6.1	27	0	0	6.1	66	32	- 22	28	4	0	0	0	1.3	28	9.8	W	19	12	6	10	4.9	70
SAN FRANCISCO	2	1020.7	1021.4	13.9	6.1	10.0	- 0.5	21.7	11	2.2	26+	0	0	5.0	76	7	- 82	2	4	0	0	0	3.2	29	14.3	29	17	6	14	8	5.6	
SAN FRANCISCO U	16			14.4	7.8	11.1	- 0.6	22.8	13	4.4	1	0	0			7	- 86	4	5		0	0			12.1	W	27					80
SANTA MARIA	72			17.2	2.2	9.8	- 1.2	28.9	11	- 5.6	27	0	7			3	- 61	2	3		0	0						16	6	6	3.9	
STOCKTON	7	1020.3	1021.4	14.4	3.3	8.8	- 0.7	20.0	13	- 2.8	3	0	3	3.3	74	21	- 41	8	7	0	T	T	1.1	30	13.0	33	19	7	8	13	6.3	
COLORADO																																
ALAMOSA	2297	766.0		4.4	-15.6	- 5.4	- 0.7	13.9	1	-23.3	26+	0	28			7	2	4	7		196	102						16	6	6	4.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

FEBRUARY 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm. or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm	Mm	Mm.			Mm.	Mm.	M.p.s		M.p.s.							%
COLORADO																																
COLORADO SPRINGS	1873	805.6	1014.8	5.0	- 7.2	- 1.2	- 0.9	17.2	13	-17.8	7	0	27	-11.1	54	13	5	9	6	0	292	152	2.1	36	15.6	30	26+	12	8	8	4.6	
DENVER	1610	831.4	1013.1	6.1	- 7.8	- 0.8	- 0.5	20.0	13	-18.9	7	0	28	- 8.3	63	20	2	15	7	0	302	203	0.6	26	15.6	NE	11	8	8	12	5.6	65
GRAND JUNCTION	1476	850.3	1016.6	8.3	- 6.1	1.2	0.8	16.7	14	-15.6	27	0	26	- 9.4	51	3	- 14	2	4	0	38	25	0.3	4	16.5	NW	25	11	6	11	5.8	66
PUEBLO	1428	851.3	1013.4	10.0	- 6.7	1.8	0.8	20.6	10	-13.9	22	0	27	- 9.4	49	6	- 6	3	4	0	168	76	1.3	33	19.2	N	11	12	5	11	4.9	71
CONNECTICUT																																
BRIDGEPORT	2	1015.9	1016.5	3.9	- 3.3	0.5	1.3	12.8	28	-14.4	2	0	19	- 5.0	71	156	81	41	10	2	74	25	1.7	30	17.0	6	23	6	9	13	6.7	
HARTFORD	52	1009.1	1015.9	2.2	- 5.6	- 1.7	1.1	10.0	28+	-22.2	1	0	22	- 7.2	69	117	42	33	11	1	213	203	1.2	27	13.9	S	13	3	8	17	7.5	49
DELAWARE																																
WILMINGTON	23	1013.9	1017.0	6.1	- 2.2	1.9	0.9	18.9	20	-16.1	1	0	17	- 4.4	66	160	85	45	12	2	5	T	1.4	29	12.5	21	13	4	8	16	7.0	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1005.1	1017.1	8.3	- 3.3	2.6		21.7	27	-12.8	10+	0	18	- 4.4	63	119		32	12	1	5	T	1.1	29	13.0	30	14	9	2	17	6.8	
WASHINGTON NATIONAL	3	1014.9	1017.1	8.9	- 0.6	3.9	0.7	22.8	27	-11.7	2	0	15	- 3.9	61	138	75	45	12	1	8	T	1.4	29	18.8	S	13	8	4	16	6.8	45
FLORIDA																																
APALACHICOLA U	4			16.7	8.3	12.3	- 1.4	23.3	27	- 2.8	10	0	3			98	- 1	52	8	7	0	0			13.4	NW	13	11	5	12	5.3	77
DAYTONA BEACH	9	1018.3	1019.7	22.2	8.9	15.5	- 0.4	30.6	28+	- 1.7	10	0	4	8.9	70	139	69	112	6	5	0	0	0.8	22	17.4	24	13	9	12	7	4.9	
FORT MYERS	5	1019.0	1019.2	25.0	12.8	18.8	0.3	30.6	26	0.6	15	0	0	12.2	68	39	- 17	28	4	1	0	0	1.1	12	15.6	25	8	13	11	4	4.1	
JACKSONVILLE	8	1018.0	1019.0	21.1	6.7	13.9	- 0.2	30.0	26	- 4.4	11	0	6	7.2	70	65	- 9	50	7	4	0	0	1.0	25	17.0	SW	13	12	6	10	5.0	62
KEY WEST	1	1017.6	1018.1	25.0	19.4	22.2	0.8	28.3	28	11.7	11	0	0	16.7	73	70	20	39	9	1	0	0	3.0	9	13.0	NW	13	12	13	3	4.3	80
LAKELAND U	65			23.3	11.1	17.2	0.1	30.0	26	0.0	10	0	1			122	58	100	7		0	0						10	11	7	4.8	65
MIAMI	2	1018.6	1018.8	25.0	17.8	21.6	1.7	30.6	23	6.1	15+	0	0	15.6	70	20	- 27	10	5	1	0	0	2.2	12	13.0	25	8	8	17	3	5.0	
ORLANDO	33	1014.9	1019.2	25.0	10.6	17.8	1.2	31.7	26	0.0	10	0	1	10.0	66	76	14	59	8	4	0	0	0.6	18	13.0	27	13	10	11	7	5.0	
PENSACOLA	34	1014.6	1018.7	17.2	7.2	12.1	- 1.3	24.4	20	- 5.0	10	0	6	6.1	71	138	30	41	11	5	0	0	0.8	9	11.2	33	8	12	7	9	5.0	
TALLAHASSEE	17	1016.3	1018.7	19.4	4.4	11.8	- 1.3	26.7	27	-10.0	10	0	12	5.0	68	139	33	85	8	7	0	0	0.8	20	11.2	23	8	11	5	12	5.0	
TAMPA	6	1018.6	1019.0	23.3	11.1	17.3	0.2	31.1	26	0.0	15+	0	3	10.6	68	108	36	75	6	3	0	0	0.9	15	13.4	20	8	10	9	9	5.3	74
WEST PALM BEACH	5	1018.3	1019.0	25.0	14.4	19.7	- 0.1	28.9	6	2.2	15+	0	0	13.3	69	27	- 32	11	6	2	0	0	2.0	12	17.0	27	8	7	15	6	5.4	
GEORGIA																																
ATHENS	244	988.5	1018.1	13.3	0.6	6.8	- 1.0	22.2	18	-11.1	10	0	14	- 0.6	64	143	23	39	12	3	T	T	1.3	27	13.9	31	5	10	5	13	5.6	
ATLANTA	308	980.7	1018.4	12.8	0.6	6.8	- 1.0	22.2	20+	-11.1	10	0	13	- 1.7	61	147	32	36	13	3	25	25	0.7	28	14.3	NW	13	12	2	14	5.7	58
AUGUSTA	41	1012.9	1018.3	15.0	0.6	7.7	- 1.9	23.9	27+	-10.0	10	0	15	1.1	69	136	46	47	12	4	T	T	1.3	25	13.9	26	13+	10	7	11	5.3	
COLUMBUS	117	1004.4		16.1	2.2	9.2	- 0.7	25.6	26	- 9.4	10	0	10			181	64	46	12	4	T	T	0.4	31	12.1	28	26	12	5	11	5.2	
MACON	108	1005.8	1018.8	16.7	2.2	9.5	- 1.1	25.6	26	- 8.9	10	0	11	2.2	67	142	34	72	13	4	T	T	0.8	27	13.0	S	22+	11	6	11	5.3	54
ROME	194			12.2	- 2.2	4.7	- 2.2	23.3	19	-13.9	10	0	19			166	31	48	11		13	25											
SAVANNAH	14	1016.9	1018.8	18.9	3.9	11.3	- 0.4	27.2	27+	- 7.2	10	0	9	3.9	66	66	- 27	40	10	3	0	0	1.2	24	17.0	W	13	11	4	13	5.5	60
HAWAII																																
HILO	8	1016.3	1017.5	27.2	16.7	22.2	0.7	30.6	13	14.4	18	0	0	16.7	76	135	-194	51	17	2	0	0	1.8	17	9.4	E	18	7	9	12	6.0	40
HONOLULU	2	1016.6	1017.0	27.8	19.4	23.6	1.1	28.9	19+	17.8	11+	0	0	17.2	72	60	- 24	42	6	1	0	0	2.6	6	15.2	NE	22	14	12	2	3.9	83
KAHULUI	15	1014.2	1016.6	28.3	16.7	22.4	0.3	30.0	28+	12.8	11	0	0	17.2	77	20	- 45	14	3	1	0	0	2.4	6	17.9	NE	22	21	5	2	2.9	86
LIHUE	31	1012.5	1017.6	26.7	19.4	23.2	1.7	28.3	10	16.1	10	0	0	18.3	76	43	- 92	10	9	1	0	0	1.4	9	12.1	NE	22	6	18	4	5.0	59
IDAHO																																
BOISE	865	917.0	1019.2	7.8	- 1.7	3.1	1.7	15.0	12	- 8.9	28	0	19	- 4.4	62	17	- 17	8	9	0	53	25	0.3	34	14.8	W	24	3	10	15	7.0	65
LEWISTON	431			8.3	- 0.6	3.9	1.7	16.1	12	- 7.8	6	0	16			19	- 6	12	7		30	25						2	8	18	8.0	
POCATELLO	1358	862.2	1018.9	2.8	- 7.2	- 2.3	0.3	12.2	13	-16.7	21+	0	27	- 7.8	70	16	- 8	5	11	0	150	51	2.9	22	18.3	SW	24	4	5	19	7.5	49
ILLINOIS																																
CAIRO U	96			8.3	- 1.1	3.6	- 1.3	21.1	18	-13.9	9	0	17			135	42	57	11		109	102			17.0	SW	22	11	4	13	5.9	49
CHICAGO O HARE	201	988.8	1014.1	1.7	- 6.1	- 2.1	1.1	13.3	26+	-23.3	2	0	22	- 6.7	73	49	11	14	12	1	36	76	2.5	25	18.3	22	5	5	3	20	7.6	
CHICAGO MIDWAY	185	990.9	1014.2	2.2	- 6.1	- 2.1	0.3	15.0	26+	-22.8	2	0	23	- 7.8	69	61	20	22	14	1	127	76	2.5	24	18.8	SW	27	5	2	21	7.5	30
MOLINE	177	992.6	1014.9	0.6	- 7.2	- 3.4	0.1	17.8	26	-22.2	8	0	24	- 8.3	70	40	6	13	8	3	66	102	2.1	26	17.4	NE	22	8	2	18	6.8	47
PEORIA	199	990.2	1015.0	2.2	- 6.7	- 2.4	- 0.4	15.6	26	-21.7	9	0	24	- 7.2	72	42	- 2	22	10	2	15	T	2.2	24	15.6	SW	5	7	4	17	6.9	47
ROCKFORD	221	986.1	1013.9	0.0	- 7.8	- 3.9	0.3	12.2	26+	-25.6	2	0	24	- 8.3	75	68	31	24	11	1	86	152	1.8	27	17.9	27	27	7	3	18	7.0	
SPRINGFIELD	179	992.2	1015.1	3.9	- 5.6	- 0.7	- 0.5	18.3	18	-22.2	2	0	20	- 5.6	72	60	14	28	11	3	86	51	2.5	24	17.9	SW	5	7	7	14	6.4	50
INDIANA																																
EVANSVILLE	116	1002.4	1016.9	6.1	- 4.4	0.9	- 2.2	21.1	18	-17.8	9	0	19	- 3.9	70	124	44	34	12	0	216	127	1.3	23	14.8	SW	5	7	5	16	6.9	44

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

FEBRUARY 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C	C.	C.	C.	C		C.				C.	%	Mm	Mm.	Mm.			Mm.	Mm.	M.p.s		M.p.s							%
INDIANA																																
FORT WAYNE	241	984.4	1015.5	1.7	- 6.1	- 2.3	- 0.2	13.3	26	-21.7	2	0	22	- 6.7	72	98	41	31	14	0	155	102	2.8	24	21.0	SW	5	3	5	20	8.0	30
INDIANAPOLIS	241	985.4	1015.6	2.8	- 6.1	- 1.7	- 1.2	13.3	26	-20.6	2	0	24	- 5.6	79	136	78	43	14	0	208	102	1.8	23	17.0	SW	27	3	8	17	7.5	45
SOUTH BEND	236	985.1	1014.1	1.7	- 5.6	- 1.9	1.0	12.8	26	-21.7	2	0	23	- 6.1	76	54	6	32	15	1	191	330	2.6	24	17.4	23	5	4	2	22	8.1	
IOWA																																
BURLINGTON	211			1.1	- 7.2	- 3.2	- 0.8	17.2	19	-22.2	8	0	25	- 8.9	63	43	8	15	8	3	25	25	1.7	28	13.4	27	27	9	4	15	6.8	
DES MOINES	286	979.3	1015.4	- 1.1	- 8.9	- 4.9	- 0.2	10.6	17	-27.2	8	0	24	- 9.4	71	59	31	30	10	2	348	178	1.5	30	16.5	W	26	5	9	14	7.0	47
DUBUQUE	322	973.6		- 2.8	-10.6	- 6.7	- 1.1	10.0	26	-27.2	2	0	25			75	40	24	11		191	406						6	6	16	6.9	
SIOUX CITY	334	974.3	1015.7	0.6	- 8.9	- 4.2	1.2	14.4	17	-23.9	8	0	27	- 9.4	70	68	45	55	6	2	89	76	1.7	32	17.0	W	26	8	5	15	6.3	60
WATERLOO	265	981.7	1015.0	- 5.0	-12.8	- 8.8	- 2.9	6.7	26	-32.8	8	0	27	-12.2	72	90	67	32	10	1	358	381	1.5	31	19.7	28	27	7	5	16	6.9	
KANSAS																																
CONCORDIA	448	960.7	1015.5	2.2	- 7.8	- 3.0	- 2.8	14.4	18	-25.6	8	0	25	- 6.7	78	64	40	21	10	1	523	305	1.3	30	15.2	W	26+	8	4	16	5.6	55
DODGE CITY	787	921.4	1014.7	5.6	- 5.6	- 0.1	- 1.7	18.3	15	-17.8	8+	0	22	- 6.1	71	52	34	26	10	1	358	229	1.7	33	25.0	S	18	9	5	14	5.9	62
GOODLAND	1114	883.8	1013.8	5.6	- 7.2	- 0.8	- 0.2	21.1	13	-17.2	7	0	27	- 7.2	67	35	22	21	10	1	290	127	2.9	30	19.2	33	19+	6	9	13	6.5	
TOPEKA	267	983.1	1016.2	2.2	- 8.3	- 2.9	- 3.5	18.3	18	-28.9	8	0	26	- 6.7	77	89	62	59	6	2	569	305	1.3	30	13.4	W	26+	5	8	15	7.1	51
WICHITA	403	966.5	1015.7	3.3	- 6.7	- 1.8	- 4.2	17.8	17	-21.1	8	0	26	- 5.0	78	43	20	26	6	2	424	330	1.0	35	17.4	NE	21	6	6	16	7.1	51
KENTUCKY																																
COVINGTON	265	983.7	1016.1	5.6	- 4.4	0.7	0.1	20.6	22	-19.4	2	0	19	- 4.4	68	150	76	57	15	0	338	203	2.3	23	15.6	28	27+	3	7	18	7.8	
LEXINGTON	294	980.7	1017.0	6.7	- 3.9	1.6	- 0.6	20.6	18	-18.9	2+	0	17	- 4.4	68	120	33	24	12	1	231	178	2.3	21	11.7	29	27	5	5	18	7.3	
LOUISVILLE	145	998.6		6.7	- 3.3	1.7	- 0.4	20.6	18	-17.2	9	0	17	- 4.4	66	160	76	64	12	0	302	178	1.7	24	15.6	SE	19	5	6	17	7.4	48
LOUISIANA																																
ALEXANDRIA	28	1012.9	1017.3	17.2	3.3	10.1	- 1.4	25.6	21	- 7.8	10	0	11			192	66	77	10	7	0	0	0.4	18	13.0	30	4	10	6	12	5.4	
BATON ROUGE	20	1014.6	1017.2	18.3	5.0	11.8	- 1.2	27.8	21	- 5.0	10	0	6	6.1	71	112	- 1	33	9	5	T	0	0.8	14	13.0	18	21	10	7	11	5.1	
LAKE CHARLES	3	1015.6	1017.2	19.4	6.7	13.1	- 0.4	26.7	26	- 1.7	10+	0	2	7.2	72	88	- 27	34	9	6	0	0	1.3	13	17.9	25	12	11	5	12	5.3	
NEW ORLEANS	1	1016.6	1017.6	18.3	6.1	12.2	- 1.8	27.8	20	- 4.4	10	0	5	6.7	70	124	22	47	9	5	0	0	0.8	12	16.5	15	21	13	8	7	4.5	
SHREVEPORT	77	1006.8	1016.1	17.8	2.8	10.3	0.2	25.6	26+	- 6.1	10+	0	10	3.3	65	105	1	51	10	7	15	T	0.9	19	13.4	31	12	9	7	12	5.6	61
MAINE																																
CARIBOU	190	991.2		- 4.4	-15.0	- 9.8	1.0	5.6	14	-34.4	4	0	28			55	4	18	15		414	584						6	6	16	6.9	
PORTLAND	13	1013.2	1015.6	- 0.6	-10.6	- 5.6	- 0.5	7.8	28	-31.7	3	0	27	- 9.4	72	172	75	44	12	0	904	686	1.3	30	13.0	W	9	6	7	15	6.7	55
MARYLAND																																
BALTIMORE	45	1011.5	1017.3	7.2	- 1.1	3.0	0.9	21.1	20	-12.8	2	0	15	- 5.0	61	158	[illegible]4	55	11	1	15	T	1.6	26	16.1	W	14	7	7	14	6.7	51
MASSACHUSETTS																																
BLUE HILL OBS R	192			1.7	- 5.6	- 2.1	0.5	12.2	13	-18.9	3+	0	24			140	45	34	9		135	178			19.7	W	14					46
BOSTON	5	1014.6	1015.7	2.8	- 4.4	- 0.8	0.1	11.7	13	-15.0	3	0	26	- 5.6	74	128	44	34	11	0	206	51	1.9	28	18.8	NE	8	7	7	14	6.8	55
WORCESTER	301	977.7	1015.9	0.6	- 7.2	- 3.4	0.6	9.4	26	-21.7	3+	0	26	- 8.3	72	142	68	53	13	0	290	559	1.7	27	14.3	26	14	7	7	14	6.8	
MICHIGAN																																
ALPENA	210	986.5	1012.8	- 1.7	-13.3	- 7.5	- 0.1	7.8	27	-27.8	1	0	28	-10.6	74	81	40	26	18	0	635	711	1.3	24	13.0	SW	27	2	8	18	7.6	42
DETROIT	189			1.1	- 5.6	- 2.1	0.6	12.2	26	-19.4	2+	0	22	- 5.6	78	71	19	25	18	2	188		2.9	24	17.9	23	5					
DETROIT M WAYNE CO	193	989.2	1014.0	1.1	- 6.1	- 2.6	0.4	12.2	26	-22.8	2	0	23	- 6.7	75	68	19	30	16	1	150	102	2.6	25	18.3	SW	5	3	6	19	8.1	24
FLINT	235	984.4	1013.2	0.0	- 6.1	- 3.2	0.8	10.6	26	-20.6	2+	0	24	- 6.7	78	59	14	22	14	0	155	76	2.6	25	17.4	24	27+	2	7	19	8.0	
GRAND RAPIDS	239	983.1	1013.4	- 0.6	- 7.8	- 4.4	- 0.1	10.6	26	-23.9	2+	0	24	- 8.3	75	63	19	24	16	1	112	305	2.6	23	25.9	SW	5	2	2	24	8.6	27
HOUGHTON LAKE	350	968.8	1012.6	- 2.2	-12.2	- 7.4	- 0.1	8.3	26	-27.2	1	0	28	-10.0	79	85	53	36	13	0	599	330	1.3	25	15.2	22	27+	2	9	17	7.9	
LANSING	256	980.7	1013.5	0.6	- 6.7	- 3.1	1.3	12.2	26	-21.1	2	0	25	- 7.8	72	61	11	23	13	0	145	127	3.0	24	25.0	SW	27	2	6	20	8.3	36
MARQUETTE U	206			- 2.8	-11.1	7.1	- 0.3	9.4	17	-23.3	2+	0	28			65	23	22	15		577	914			14.3	SW	16	6	6	16	7.0	49
MUSKEGON	191	989.5	1013.4	- 0.6	- 7.2	- 4.0	- 0.5	10.6	26	-17.8	2+	0	25	- 7.8	75	56	10	15	18	1	267	406	1.5	24	18.3	20	5	2	3	23	8.8	
SAULT STE MARIE	220	984.1	1012.0	- 5.6	-15.6	-10.5	- 1.4	2.8	27+	-33.3	2	0	28	-13.3	79	95	57	18	19	1	828	813	0.4	11	15.6	SW	27	6	8	14	6.9	50
MINNESOTA																																
DULUTH	435	959.7	1013.7	- 5.6	-15.6	-10.8	1.0	6.1	17	-31.7	2	0	28	-14.4	75	60	36	27	11	1	696	686	1.6	31	19.2	NE	19	8	7	13	6.5	48
INTERNATIONAL FALLS	359	968.8	1014.2	- 6.1	-18.9	-12.4	1.4	7.8	25	-34.4	2	0	28	-17.8	63	31	13	20	8	0	300	483	1.3	29	14.3	31	27	7	8	13	6.5	
MINNEAPOLIS	254	982.7	1014.6	- 3.9	-12.8	- 8.3	0.7	5.6	17	-30.6	8	0	28	-12.8	68	44	24	15	10	0	353	508	1.3	32	18.8	NW	27	8	3	17	6.6	49
ROCHESTER	395	964.1	1013.9	- 4.4	-12.8	- 8.7	0.1	5.0	17	-31.1	8	0	27	-11.1	79	56	36	18	9	1	406	483	2.0	28	20.1	28	27	6	6	16	6.9	
ST CLOUD	315	975.3		- 4.4	-15.0	- 9.8	0.6	5.6	17	-33.3	8	0	28			39	19	15	7		549	432						7	7	14	6.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm. or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	M.p.s		M.p.s							%
MISSISSIPPI																																
JACKSON	94	1005.4	1017.3	16.7	2.2	9.5	- 0.8	26.1	21	-10.6	10	0	11	3.3	71	144	18	58	10	6	T	T	1.2	17	16.5	SE	21	8	9	11	5.7	63
MERIDIAN	88	1006.8	1018.1	16.1	2.2	9.0	- 1.3	24.4	25+	-10.6	10	0	12	2.8	70	145	16	43	8	5	T	T	0.3	16	12.5	23	26	9	10	9	5.4	
MISSOURI																																
COLUMBIA	270	982.4	1015.6	5.0	- 5.0	0.1	- 0.9	20.6	18	-18.9	8	0	22	- 5.6	68	61	15	29	7	1	56	25	1.7	25	18.8	SW	4	5	9	14	6.9	49
KANSAS CITY	226	987.8	1015.6	4.4	- 4.4	- 0.3	- 2.4	21.7	18	-20.0	8	0	22	- 5.6	69	23	- 9	11	6	0	208	127	1.2	27	14.8	N	12	6	9	13	6.6	60
ST JOSEPH	247			4.4	- 6.1	- 0.9	- 0.4	20.6	18	-28.3	8	0	22			23	- 5		6		0		1.0	29	14.3	14	18	7	7	14	6.3	
ST LOUIS	163	994.9	1015.8	6.7	- 4.4	1.1	- 0.4	23.3	18	-17.2	9	0	20	- 4.4	71	78	26	37	11	1	36	25	1.6	23	17.0	SW	5+	5	9	14	6.7	55
SPRINGFIELD	386	969.2	1015.7	7.2	- 5.0	1.3	- 1.5	21.1	25	-23.3	8	0	21	- 4.4	69	60	6	20	12	1	180	178	1.2	21	13.9	SW	4	6	7	15	6.9	50
MONTANA																																
BILLINGS	1087	888.3	1015.7	2.2	- 7.8	- 2.9	0.6	12.2	13	-24.4	7	0	25	- 8.3	70	14	- 1	9	8	0	145	127	3.4	26	16.1	NW	25	3	9	16	7.4	53
GLASGOW	696	931.3	1016.9	- 4.4	-15.0	- 9.8	0.4	6.1	24	-35.6	7	0	28	-12.8	75	5	- 5	2	7	0	109	508	1.0	5	13.9	24	25	5	8	15	6.9	
GREAT FALLS	1116	884.9	1015.8	3.3	- 6.1	- 1.4	3.1	12.2	24	-20.6	5	0	21	- 8.3	61	17	- 2	5	8	0	226	127	4.8	24	20.6	SW	24	4	6	18	7.5	51
HAVRE	788	920.8	1016.0	- 1.7	-12.2	- 6.8	1.9	8.3	24	-34.4	7	0	25	- 9.4	77	8	- 3	4	8	0	107	406	2.5	24	16.1	SW	9	5	7	16	7.1	67
HELENA	1167	878.4	1017.2	2.8	- 6.7	- 1.9	2.9	11.1	24	-18.9	6	0	27	- 8.3	64	16	5	4	11	0	89	51	2.4	27	16.5	SW	24	4	4	20	7.9	40
KALISPELL	904	910.3	1017.5	2.8	- 6.7	- 1.8	2.4	12.2	1	-22.8	6	0	24	- 7.2	70	21	- 5	7	8	0	213	102	0.9	18	11.2	20	24	2	4	22	8.4	
MILES CITY	801	919.7	1016.5	- 1.7	-11.1	- 6.4	0.1	8.9	24	-35.0	7	0	27	- 9.4	79	19	10		12	0	168		1.3	29								
MISSOULA	972	903.8	1018.4	4.4	- 3.9	0.1	4.0	13.9	14	- 9.4	28+	0	24	- 5.0	74	14	- 8	8	8	0	86	25	1.1	29	13.4	NW	26	2	6	20	8.4	40
NEBRASKA																																
GRAND ISLAND	561	947.2	1015.7	2.2	- 8.9	- 3.3	0.0	15.6	15	-22.2	8+	0	27	-10.0	61	86	67	56	9	1	323	229	2.5	31	17.9	34	22	5	8	15	7.0	
LINCOLN U	351			1.1	- 7.8	- 3.2	- 1.3	13.9	17	-25.6	8	0	25			71	43	44	7		447	305			16.5	NE	21	7	5	16	6.5	60
NORFOLK	471			1.1	- 9.4	- 4.2	- 0.8	12.8	15	-23.3	8	0	26			81	61	61	7		66	51						10	5	13	6.1	
NORTH PLATTE	846	914.3	1015.5	2.2	-10.6	- 4.2	- 1.9	18.3	15	-23.3	6	0	28	- 9.4	70	33	19	29	8	1	69	102	2.5	33	17.9	NW	26	5	7	16	7.1	56
OMAHA	298	978.7	1015.5	1.1	- 8.3	- 3.7	- 0.7	15.0	17	-27.2	8	0	26	- 8.9	69	62	38	29	8	2	442	254	1.3	33	15.2	NW	12	8	5	15	6.5	52
SCOTTSBLUFF	1206	876.1	1015.5	4.4	- 8.3	- 1.9	- 0.2	17.8	13	-24.4	7	0	27	-10.0	57	11	1	6	9	0	112	51	3.3	32	14.8	32	26	7	3	18	7.1	
VALENTINE	789			- 0.6	-12.8	- 6.5	- 1.5	15.0	15	-31.7	7	0	28			17	3	14	4		236	203			18.8	NW	26	4	7	17	7.3	55
NEVADA																																
ELKO	1539	844.2	1018.2	6.7	- 4.4	1.1	3.3	16.1	13	-13.3	28	0	25	- 7.8	54	26	4	8	9	1	300	51	1.6	27	14.3	22	24	4	14	10	6.4	
ELY	1906	807.0	1017.2	5.6	- 7.8	- 1.2	1.8	15.0	13	-17.8	27	0	28	- 8.3	64	14	- 3	5	7	1	196	76	1.0	28	17.9	N	20	7	12	9	6.0	71
LAS VEGAS	659	939.4	1016.6	17.2	2.8	9.8	1.1	26.1	11	- 7.2	27	0	7	- 9.4	28	1	- 10	1	2	0	0	0	1.4	32	20.6	NW	19	13	9	6	3.8	89
RENO	1342	867.6	1019.7	11.7	- 6.1	2.7	0.7	21.7	13	-12.2	26	0	27	- 6.1	56	8	- 18	5	6	0	124	76	1.3	30	14.8	NW	28	6	9	13	6.0	60
WINNEMUCCA	1311	869.6	1019.6	10.6	- 7.2	1.6	1.4	20.6	12	-13.9	28	0	28	- 7.2	58	9	- 14	3	6	0	61	25	1.4	26	13.9	NW	25	7	5	16	6.6	42
NEW HAMPSHIRE																																
CONCORD	104	1002.7	1016.0	1.1	-10.6	- 4.8	0.3	9.4	28+	-32.8	3	0	28	- 9.4	70	98	35	24	11	0	503	533	0.8	30	13.0	NW	19	4	10	14	7.1	58
MT WASHINGTON OBS	1909			- 8.3	-17.8	-13.2	1.4	2.8	8	-35.6	2	0	28			211	79	49	21	0	1166	660			55.4Y	W	28	3	5	20	7.9	36
NEW JERSEY																																
ATLANTIC CITY	20	1014.2	1016.7	7.2	- 2.8	2.1	0.6	21.1	27	-18.3	1	0	17	- 4.4	65	134	54	51	12	2	48	25	1.8	26	15.6	18	13	6	7	15	6.8	43
ATLANTIC CITY U	3			6.7	0.0	3.4	1.3	17.2	27	-11.1	2	0	12			109	24	51	11							17.9	S	13					
NEWARK	2	1015.2	1016.3	5.6	- 1.7	1.8	1.4	17.8	27	-13.9	2+	0	15	- 3.9	70	113	42	25	12	1	28	25	1.8	26	13.0	24	28	5	5	18	7.3	
TRENTON U	17			5.6	- 1.7	2.1	1.3	17.2	27	-13.9	2	0	13			126	60	35	13		30	T				18.3	SW	13	4	12	12	6.7	52
NEW MEXICO																																
ALBUQUERQUE	1619	834.7	1013.6	11.7	- 3.9	3.8	- 0.6	20.6	17	-10.6	28	0	25	-10.6	40	5	- 4	5	2	0	58	51	1.4	33	21.0	SW	3	13	8	7	4.0	82
CLAYTON	1515			9.4	- 6.7	1.4	- 0.8	20.6	25+	-16.7	7	0	24			8	- 1	4	6		160	76						12	8	8	4.4	
ROSWELL	1101			15.6	- 3.3	6.1	0.4	25.6	15	-13.9	8	0	22			6	- 5	6	2		61	51			19.2	SW	18					76
NEW YORK																																
ALBANY	84	1004.7	1015.9	1.7	- 8.9	- 3.7	0.9	10.6	18	-27.8	1	0	26	- 6.7	78	104	48	28	11	1	447	559	1.3	26	14.3	W	14	3	5	20	8.0	39
BINGHAMTON	485	954.3	1015.1	- 1.1	- 8.3	- 4.7	- 0.1	8.9	27	-21.7	1	0	27	- 8.3	76	111	55	41	11	0	475	457	1.9	23	16.1	SE	5	1	6	21	8.3	39
BUFFALO	215	987.5	1013.9	0.6	- 6.1	- 2.8	1.6	14.4	26	-18.9	1	0	25	- 6.7	78	77	8	17	19	2	493	279	4.0	25	18.3	SW	27	1	6	21	8.7	26
NEW YORK U	40	1012.9	1016.0	4.4	- 1.1	1.7	0.9	18.9	27	-14.4	2	0	12	- 5.0	66	135	63	37	11	1	T	T	1.2	28	17.0	NE	7					46
NEW YORK KENNEDY	4	1015.9	1016.5	4.4	- 1.7	1.2	1.4	15.6	27	-13.9	2	0	17	- 4.4	70	121	46	47	10	1	5	T	2.1	27	13.9	8	23+	4	8	16	7.3	
NEW YORK LA GUARDIA	3	1015.9	1016.9	5.0	- 0.6	2.2	1.3	17.2	27	-12.2	2+	0	11	- 5.0	62	104	26	28	10	1	8	T	1.8	29	17.9	S	13+	5	3	20	7.4	
ROCHESTER	167	993.9	1014.7	1.1	- 6.7	- 2.8	1.1	11.7	26	-17.8	1	0	23	- 7.2	73	107	43	46	16	0	754	406	3.6	24	17.9	SW	28+	2	6	20	8.3	32
SYRACUSE	125	999.0	1014.3	0.6	- 6.7	- 3.1	1.2	9.4	27	-20.0	3	0	24	- 7.2	73	103	24	32	13	0	640	533	1.6	23	14.8	W	28	1	5	22	8.4	40

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

FEBRUARY 197-

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	M.p.s		M.p.s							%
NORTH CAROLINA																																
ASHEVILLE	652	939.4	1016.9	11.1	- 2.8	4.2	0.3	22.8	20	-13.3	10	0	21	- 2.2	69	125	23	33	11	1	T	T	0.9	35	13.4	34	14+	12	5	11	5.4	65
CAPE HATTERAS R	2	1018.0	1018.4	13.9	3.3	8.5	0.4	24.4	22	- 6.1	2	0	7	3.9	73	96	- 4	31	12	4	0	0	1.7	26	17.4	23	13	11	5	12	5.3	67
CHARLOTTE	224	989.5	1017.5	11.7	- 1.1	5.2	- 1.6	24.4	27	-12.2	10	0	18	- 1.7	64	132	42	42	11	2	20	25	1.3	21	12.5	SW	13	9	7	12	5.8	56
GREENSBORO	273	985.1	1017.7	10.0	- 2.8	3.7	- 1.3	21.7	27	-14.4	2	0	19	- 2.8	67	113	29	36	11	2	18	25	1.3	25	13.4	SW	13	9	6	13	5.9	63
RALEIGH	132	1001.4	1017.7	12.2	- 1.1	5.6	- 0.5	23.9	27	-15.0	2	0	18	- 2.8	62	98	16	32	9	3	T	T	1.4	25	14.3	24	13	11	4	13	5.6	68
WILMINGTON	9	1017.3	1018.7	15.6	2.2	8.9	- 0.4	24.4	22	- 6.1	2	0	10	2.8	69	89	2	28	14	4	0	0	1.1	23	17.0	SW	13	11	6	12	5.1	61
NORTH DAKOTA																																
BISMARCK	502	954.3	1017.1	- 4.4	-16.7	-10.6	- 0.3	6.7	25	-38.3	8	0	28	-13.9	75	10	- 1	8	6	0	155	279	1.7	32	16.1	NW	26	6	11	11	6.3	63
FARGO	273	981.7	1016.1	- 5.6	-16.1	-10.7	1.1	3.9	25+	-32.2	8	0	28	-13.3	78	9	- 4	8	4	0	122	356	1.6	32	20.1	NW	26	7	10	11	5.9	56
WILLISTON	579	945.1	1016.8	- 3.9	-15.0	- 9.5	1.4	5.0	24+	-32.2	7	0	28	-12.2	80	4	- 8	2	4	0	64	279	1.6	30	14.8	N	26	6	12	10	6.1	72
OHIO																																
AKRON	368	968.8	1014.8	3.3	- 5.0	- 0.9	0.9	16.7	26	-20.6	2+	0	20	- 6.7	68	99	40	30	20	3	399	279	2.7	23	16.5	24	5	4	4	20	7.8	
CINCINNATI OBS	232			5.0	- 3.9	0.6	- 1.2	20.0	22	-18.3	2	0	20			146	75	62	15		371	229			12.1	SW	5					37
CLEVELAND	237	985.1	1015.3	1.7	- 6.1	- 2.3	- 0.3	14.4	26	-21.7	2	0	25	- 6.1	76	94	35	18	18	3	363	203	3.4	22	18.8	SW	5	4	3	21	8.2	36
COLUMBUS	247	985.1	1016.1	3.9	- 5.0	- 0.7	- 0.2	16.7	22	-18.3	10+	0	21	- 5.6	70	80	22	26	16	3	312	254	2.1	23	19.7	SW	5	5	4	19	7.7	27
DAYTON	305	978.3	1015.8	3.3	- 5.0	- 1.1	- 0.5	15.0	27+	-20.0	2	0	22	- 5.6	73	93	34	28	16	2	249	127	2.7	23	17.9	W	27	2	9	17	7.8	35
MANSFIELD	395			2.2	- 5.6	- 1.7	0.6	15.0	27	-21.1	2+	0	23	- 6.1	75	66	- 1	20	15	3	404	203	3.8	22	17.9	21	5	4	5	19	7.6	
TOLEDO	204	988.5	1014.4	1.7	- 6.1	- 2.3	0.3	12.8	26	-22.8	2	0	24	- 6.7	73	66	18	27	15	2	203	102	2.9	24	20.1	SW	5	3	5	20	8.1	33
YOUNGSTOWN	359	971.2	1015.1	1.1	- 6.1	- 2.7	- 0.3	15.6	26	-22.2	2	0	24	- 7.2	74	90	27	23	21	3	457	279	3.1	24	17.0	22	5	5	2	21	8.1	
OKLAHOMA																																
OKLAHOMA CITY	392	967.8	1015.3	10.6	- 2.8	3.9	- 1.2	21.7	16	-16.1	8	0	18	- 3.3	63	50	15	41	7	3	130	127	0.8	1	15.6	NE	21+	8	5	15	6.4	64
TULSA	198	990.9	1015.7	9.4	- 1.7	3.9	- 0.9	23.3	16	-16.7	8	0	17	- 2.8	65	106	61	58	9	2	165	102	0.4	33	17.4	S	18	5	9	14	6.8	52
OREGON																																
ASTORIA	2	1018.6	1019.4	9.4	2.2	5.7	- 0.3	15.6	11	- 3.9	6	0	11	3.3	87	169	- 82	35	22	0	5	T	1.6	20	15.6	28	25	3	2	23	8.2	
BURNS U	1265	873.7	1019.4	6.7	- 5.6	0.6	1.9	16.1	10	-11.7	28	0	27	- 5.6	67	12	- 21	4	8		112	25	2.6	32				7	6	15	6.5	
EUGENE	109	1007.8	1021.7	8.9	1.1	5.1	- 0.8	18.9	12	- 3.9	3	0	9	2.8	86	130	4	28	17	1	114	76	1.9	19	14.3	25	24	0	1	27	9.4	
MEACHAM	1234	881.5	1019.6	2.8	- 3.9	- 0.7	0.9	12.2	12+	-11.1	6	0	23			75	- 27	24	15		462	203			11.6	28	10	3	7	18	7.5	
MEDFORD	396	973.9	1022.7	10.0	0.0	4.9	0.4	18.3	11+	- 5.0	20	0	15	1.1	81	36	- 25	14	13	0	58	T	0.4	28	9.4	28	28+	1	6	21	8.4	
PENDLETON	452	964.8	1019.6	9.4	- 0.6	4.3	1.3	18.3	14	- 7.2	8	0	17	- 3.3	60	18	- 12	7	7	0	15	T	2.9	26	17.4	28	10	3	8	17	7.5	
PORTLAND	6	1019.3	1020.6	10.0	1.7	6.0	0.4	16.7	11	- 5.0	7	0	9	2.2	79	85	- 22	15	16	0	43	T	1.7	20	13.9	W	25+	2	4	22	8.3	28
SALEM	60	1013.5	1020.8	9.4	- 1.1	4.1	- 1.4	17.2	13+	- 9.4	28	0	18	0.6	79	110	- 25	19	17	1	206	102	2.5	20	11.6	20	26+	2	2	24	8.4	
SEXTON SUMMIT R	1169	886.2	1021.5	5.6	- 0.6	2.3	0.1	17.8	11	- 8.3	26+	0	17			97	- 8	20	14		841	610			14.3	20	14+	3	6	19	7.8	
PACIFIC AREA																																
GUAM TAGUAC R	110	997.3	1009.8	28.9	22.2	25.6	- 0.1	30.0	25+	19.4	4+	0	0	22.2	83	147	58	57	18	0	0	0	4.7	8	11.2	E	17	0	12	16	7.7	57
JOHNSTON	2	1013.2	1013.8	27.2	23.3	25.2	0.2	27.8	28+	21.1	22+	0	0	20.6	75	9	- 30	4	5	0	0	0	6.8	9	16.1	NE	22	19	9	0	2.8	82
KOROR R	29	1004.1	1007.7	30.6	24.4	27.4	0.6	32.2	24+	21.7	14	4	0	23.9	85	271	90	131	20	3	0	0	3.0	7	10.7	E	17	0	0	28	9.8	48
KWAJALEIN	2	1007.5	1008.2	30.0	25.0	27.6	0.9	31.1	7+	23.3	20+	0	0	23.3	78	92	38	35	16	0	0	0	7.0	7	14.8	9	23	2	14	12	7.0	
MAJURO	3	1008.1	1008.4	29.4	25.0	27.2	0.3	30.0	22+	22.8	23	0	0	23.3	78	146	- 71	55	17	0	0	0	6.0	7	12.5	NE	6	3	17	8	6.3	70
PAGO PAGO	4	1008.5	1008.7	29.4	22.8	26.3		31.1	14+	21.7	28	0	0	23.9	87	364		51	25	7	0	0	1.0	36	8.9	NE	25	1	3	24	8.9	30
PONAPE R	37	1002.4	1007.8	29.4	23.3	26.3	- 0.6	32.2	7	20.0	27	1	0	22.8	81	333	86	51	24	2	0	0	3.2	7	10.3	NE	10	0	7	21	8.5	50
TRUK MOEN ISLAND	2	1007.5	1007.7	30.0	25.0	27.4	0.3	31.1	28+	22.2	11	0	0	23.3	80	219	59	86	21	1	0	0	4.2	6	10.7	SE	3	0	6	22	9.1	68
WAKE	3	1012.2	1012.3	27.2	21.7	24.6	- 0.4	30.0	7+	19.4	24	0	0	18.9	74	85	51	42	12	0	0	0	3.8	5	16.5	NE	24	11	9	8	5.4	64
YAP R	13			30.0	23.9	27.1	0.2	31.1	21+	22.2	23+	0	0			257	139	52	21	0	0	0			9.8	E	23	0	9	19	8.4	82
PENNSYLVANIA																																
ALLENTOWN	118	1002.0	1016.5	2.8	- 5.0	- 1.1	0.4	13.3	28	-17.2	2	0	22	- 5.0	76	138	71	40	12	1	112	76	1.7	27	14.8	26	28	6	6	16	7.0	
ERIE	223	987.1	1014.7	1.1	- 6.1	- 2.6	0.5	14.4	26	-21.7	2	0	24	- 7.8	69	52	- 7	11	19	2	544	305	3.3	22	13.4	16	5+	0	6	22	8.9	
HARRISBURG	103	1003.4	1016.8	4.4	- 3.3	0.7	0.3	18.3	27	-14.4	3+	0	18	- 6.1	65	143	84	41	14	1	130	76	1.7	28	15.2	W	28	4	7	17	7.5	39
PHILADELPHIA	2	1015.6	1016.7	6.1	- 1.7	2.3	1.6	17.8	20	-14.4	2	0	15	- 3.9	68	138	67	37	11	2	20	T	1.6	26	15.6	SW	13	4	7	17	7.3	42
PITTSBURGH	347	970.2	1015.4	3.3	- 5.0	- 0.9	0.7	16.7	26	-21.1	2	0	20	- 6.7	67	103	47	27	16	1	523	254	2.8	26	14.3	25	28	5	4	19	7.9	28
SCRANTON	283	981.0	1016.3	1.1	- 6.7	- 2.7	- 0.6	12.2	27	-20.0	3+	0	23	- 7.2	72	100	49	33	14	2	307	152	1.5	23	15.2	W	28	4	6	18	7.8	43
WILLIAMSPORT	160	996.6	1016.3	3.9	- 5.6	- 0.9	0.7	14.4	27	-25.0	1	0	18	- 6.1	70	165	101	69	13	0	394	254	1.3	27	12.5	26	28	6	3	19	7.4	
RHODE ISLAND																																
BLOCK ISLAND	34			2.8	- 2.8	- 0.1	0.5	11.1	13	-13.9	2	0	20			175	91	65	10		13	25										
PROVIDENCE	16	1013.9	1016.3	3.3	- 4.4	- 0.6	0.7	12.2	28	-18.3	1	0	23	- 6.1	69	136	57	38	10	0	127	51	1.8	29	16.1	23	13	6	7	15	6.6	52

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max 32.2 °C or above	Temperature: No. of days Min. 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 25 mm. or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset) Clear, 0-3	No. of days (sunrise to sunset) Partly cloudy, 4-7	No. of days (sunrise to sunset) Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							%
SOUTH CAROLINA																																
CHARLESTON	12	1016.9	1019.0	16.7	2.8	9.9	- 0.9	26.7	26	- 5.6	14+	0	10	2.8	66	120	36	30	11	5	T	0	1.2	23	20.1Y	W	13+	10	5	13	5.5	64
CHARLESTON U	3			15.0	6.1	10.6	- 0.7	22.2	22	- 4.4	10	0	7			64	- 14	18	9		0	0			14.8	SW	8					
COLUMBIA	65	1010.2	1018.3	15.6	0.6	7.9	- 1.2	25.0	27	- 8.9	10	0	18	1.1	69	133	38	54	11	3	T	T	1.0	24	13.0	28	7	10	7	11	5.6	53
GRNVLLE SPRTNBRG	292	982.7	1018.0	12.2	- 1.1	5.5	- 1.8	23.9	27	-12.2	1	0	17	- 1.7	66	189	85	51	11	3	25	25	0.9	25	12.5	W	23	9	7	12	5.5	55
SOUTH DAKOTA																																
ABERDEEN	395	967.2	1016.4	- 3.3	-15.6	- 9.3	0.1	7.8	25	-38.3	8	0	28	-13.3	72	10	- 6	8	4	0	157	229	2.1	34	14.3	32	26	10	5	13	5.6	
HURON	390	967.5	1016.3	- 3.3	-15.0	- 9.1	- 0.5	10.0	17	-34.4	8	0	28	-11.7	81	25	10	19	8	0	406	279	2.1	31	16.5	NW	26	7	7	14	6.4	68
RAPID CITY	964	901.5	1016.3	0.0	-10.6	- 5.2	- 0.8	11.7	15	-30.0	7	0	27	-10.0	69	25	13	10	13	0	399	356	3.3	34	20.1	NW	26	5	8	15	6.9	57
SIOUX FALLS	432	961.4	1015.2	- 2.2	-12.2	- 7.3	- 0.2	11.7	25+	-32.8	8	0	28	-10.6	78	23	- 1	17	5	0	43	127	2.1	31	14.3	30	27	8	5	15	6.3	
TENNESSEE																																
BRISTOL	459	962.1	1017.4	9.4	- 3.9	2.7	- 1.7	22.2	22	-17.8	2	0	18	- 3.3	66	91	1	22	12	0	251	229	1.0	23	10.3	28	8	8	6	14	6.4	
CHATTANOOGA	203	992.2	1017.7	10.6	- 2.2	4.4	- 2.5	21.7	25	-12.8	10	0	16	- 1.7	69	216	80	62	11	4	15	T	1.0	24	14.8	SW	22	7	7	14	6.4	46
KNOXVILLE	299	981.7	1017.6	10.6	- 2.2	4.1	- 2.1	21.7	22	-16.1	10	0	14	- 2.2	67	125	3	32	13	2	163	102	1.6	26	15.2	SW	22	4	9	15	6.8	52
MEMPHIS	79	1006.8	1017.3	11.7	1.1	6.4	- 0.3	22.8	26	-11.7	9	0	13	- 1.7	60	183	64	82	10	3	170	76	1.1	20	15.2	N	12	8	7	13	6.0	60
NASHVILLE	180	994.9	1017.1	10.0	- 2.8	3.7	- 1.8	21.7	18	-20.6	9	0	17	- 2.2	69	119	5	31	9	3	165	102	1.6	22	15.2	SE	22	9	6	13	6.1	50
OAK RIDGE R	276			10.0	- 2.2	3.9	- 1.1	21.1	22+	-13.9	1	0	15			119	- 28	35	14		48	25			18.3Y		22	6	7	15	6.9	
TEXAS																																
ABILENE	537	952.6	1014.8	17.2	1.7	9.3	0.2	28.3	16	-16.1	8	0	13	- 2.2	51	14	- 13	9	3	2	30	25	1.6	23	19.2	SW	18	14	5	9	4.2	73
AMARILLO	1098	887.2	1012.6	11.1	- 3.9	3.8	- 1.4	24.4	15	-17.8	7	0	22	- 6.7	52	42	26	33	5	1	439	356	1.4	27	19.2	N	21	13	8	7	4.4	74
AUSTIN	182	993.2	1015.3	19.4	6.1	12.7	0.6	27.2	18+	- 6.7	8	0	7	2.8	56	18	- 48	12	4	2	T	0	0.3	23	19.2	NW	21	13	6	9	4.4	61
BROWNSVILLE	6	1014.2	1014.6	25.6	13.3	19.6	1.8	32.2	26	1.7	9+	1	0	12.8	67	8	- 30	7	2	1	0	0	2.5	13	16.1	N	21	11	8	9	4.9	61
CORPUS CHRISTI	12	1013.5	1015.0	23.3	10.0	16.7	0.9	30.0	26+	- 2.2	9	0	3	10.0	68	6	- 38	6	2	0	0	0	2.4	11	19.7	SE	18	12	7	9	4.8	63
DALLAS	147	997.6	1015.3	17.2	3.9	10.4	0.7	26.7	16	- 9.4	8	0	9	0.0	53	67	3	30	9	3	13	T	0.9	16	15.2	W	22+	12	6	10	4.8	66
DEL RIO	313	978.0	1014.4	21.7	5.6	13.8	0.3	30.0	20	- 6.1	8	0	5	0.0	47	7	- 15	7	2	1	0	0	1.3	8	15.6	31	4	17	3	8	3.6	
EL PASO	1194	879.8	1012.6	17.8	0.6	9.1	- 0.4	25.6	15	-10.6	8	0	13	- 9.4	28	1	- 9	1	2	0	T	0	2.5	26	25.0	SW	3	15	11	2	3.4	95
FORT WORTH	164	995.3	1015.8	16.7	2.2	9.6	0.0	27.2	16	-11.1	8	0	12	1.1	60	34	- 23	13	7	4	T	T	1.0	21	14.3	17	18	14	5	9	4.8	
GALVESTON U	2			17.2	11.1	13.9	0.2	26.1	26	- 1.1	8	0	1			105	31	78	6		0	0			16.5	NW	21					63
HOUSTON	29	1012.9	1016.6	20.0	6.1	13.2	1.1	26.7	26+	- 3.9	10+	0	6	6.1	66	54	- 39	33	7	4	0	0	0.9	13	13.0	30	21	9	6	13	5.4	58
LUBBOCK	992	900.4	1013.1	15.0	- 2.8	5.9	- 0.2	23.3	15+	-15.0	8+	0	19	- 5.6	50	21	6	20	3	2	132	127	1.5	29	14.8	25	18	14	7	7	4.2	
MIDLAND	869	914.3	1013.4	16.7	0.0	8.4	- 0.6	26.7	16	-11.1	8	0	14	- 6.7	39	T	- 15	T	1	0	T	T	1.4	24	16.1	32	21+	17	4	7	3.9	
PORT ARTHUR	5	1016.3		19.4	7.8	13.7	0.3	26.7	26	- 2.2	10+	0	3	7.8	70	109	- 4	60	10	8	0	0	1.3	13	14.8	NW	12	10	7	11	5.4	58
SAN ANGELO	580	947.2	1014.3	20.0	2.2	11.1	0.8	30.6	20+	-11.1	8	0	12	- 2.2	46	11	- 12	6	3	2	T	T	1.9	23	16.1	28	21	17	3	8	3.6	
SAN ANTONIO	240	986.8	1015.1	22.2	6.1	14.1	1.1	30.0	18	- 5.0	8	0	8	2.8	53	21	- 21	17	7	1	0	0	0.4	2	14.8	NW	25	12	7	9	4.6	64
VICTORIA	32	1011.5	1015.6	21.7	7.2	14.4	0.0	28.3	26+	- 5.6	8	0	4	7.2	66	28	- 31	22	5	1	0	0	1.3	12	20.1Y	NW	21	11	5	15	5.4	
WACO	153	997.3	1015.5	18.3	5.0	11.6	0.8	27.2	16	- 7.2	8	0	8	2.8	57	34	- 28	14	5	4	T	0	1.4	19	15.6	30	21	15	7	6	4.2	
WICHITA FALLS	303	977.7	1014.9	15.0	- 0.6	7.1	- 1.1	27.2	16	-14.4	8	0	17	- 1.7	61	35	T	30	5	4	T	T	0.3	30	17.0	31	21	8	12	9	5.3	
UTAH																																
MILFORD	1533	845.2		7.2	- 8.9	- 0.9	0.4	17.8	14+	-18.3	27	0	28			33	15	16	9		478	178						11	7	10	5.3	
SALT LAKE CITY	1286	871.3	1018.0	6.7	- 3.3	1.6	1.3	16.1	13	-11.1	27	0	24	- 5.0	64	54	24	19	9	0	221	51	0.9	21	18.3	NW	25+	5	7	16	7.1	59
WENDOVER	1291	870.6	1018.0	7.2	- 2.8	2.1	1.6	17.2	10	-10.0	27	0	22	- 7.2	54	10	2	6	6		30	25	1.3	34				12	7	9	5.2	
VERMONT																																
BURLINGTON	101	1002.0	1015.2	- 1.7	-11.7	- 6.7	1.4	6.1	18	-31.7	3	0	27	-11.1	69	76	30	18	14	0	587	533	1.1	21	15.6	SW	17	3	4	21	8.3	59
VIRGINIA																																
LYNCHBURG	279			9.4	- 1.7	3.7	- 0.1	22.2	27	-13.3	2	0	19			113	46	31	11		58	51			13.9	SW	13	9	6	13	5.9	56
NORFOLK	7	1016.3	1017.2	12.8	1.1	7.1	1.7	22.8	27	- 8.3	2	0	14	0.0	65	91	10	27	12	4	61	25	1.8	22	18.8	SW	13	10	6	12	5.5	61
RICHMOND	50	1010.8	1017.5	10.0	- 1.7	4.2	- 0.2	22.8	27	-16.1	2	0	20	- 2.2	66	111	37	43	10	2	51	51	1.5	23	17.9	SW	13	7	8	13	6.3	54
ROANOKE	350	973.9	1016.8	10.0	- 2.2	3.9	- 0.1	23.3	19	-14.4	1	0	18	- 5.6	55	130	58	41	11	1	91	76	2.0	28	14.5	30	14+	9	7	12	6.0	
WALLOPS ISLAND	3			8.3	- 1.1	3.5		22.8	27	-13.3	2	0	15			80		23	9		25	51			23.7Y	SSW	14					
WASHINGTON																																
OLYMPIA	59	1011.5	1018.8	8.3	0.0	4.0	- 0.9	14.4	11	- 9.4	28	0	13	2.2	88	112	- 56	33	17	0	130	76	2.4	20	14.3	19	3	2	7	19	8.1	
QUILLAYUTE	55	1010.2	1017.8	8.9	1.1	4.8	0.2	12.8	12	- 9.4	28	0	13	2.2	86	325	13	64	19	0	425	178	0.9	20	12.5	3	3	3	5	20	8.1	35
SEATTLE TACOMA	122	1001.7	1018.4	8.3	3.3	5.7	0.8	13.3	14+	- 4.4	28	0	8	1.7	75	111	3	25	19	4	56	51	1.9	18	14.3	SW	24	2	5	21	8.4	36
SPOKANE	718	931.6	1017.3	4.4	- 2.8	0.9	2.0	11.7	14+	-11.7	28	0	23	- 4.4	72	22	- 25	7	9	0	140	102	2.4	21	18.8	SW	24	2	7	19	8.0	37
STAMPEDE PASS R	1206	877.4		- 0.6	- 4.4	- 2.3	0.7	7.2	12+	-10.6	28+	0	24			277	19	46	20		1514	3886						1	3	24	9.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

FEBRUARY 1975

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days Max 32.2 °C or above	Temperature: No of days Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days 25 mm or more	Precipitation: No of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days sunrise to sunset: Clear 0-3	No. of days sunrise to sunset: Partly cloudy 4-7	No. of days sunrise to sunset: Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C.	C		C.				C.	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							%
WASHINGTON																																
WALLA WALLA U	289			9.4	1.1	5.3	1.7	20.0	14	- 4.4	6	0	11			22	- 17	7	9		15	T			15.6	NW	24	3	4	21	7.9	32
YAKIMA	321	979.3	1018.8	9.4	- 2.8	3.2	2.1	17.2	13	- 9.4	28	0	23	- 3.9	62	T	- 22	T	C	C	T	0	1.9	27	13.9	29	25	5	9	14	6.7	
WEST INDIES																																
SAN JUAN P.R.	4	1014.9	1017.3	27.8	22.2	25.2	1.7	28.9	25+	20.6	24+	0	0	18.9	70	93	20	26	19	0	0	0	4.3	9	14.3	E	5	9	16	3	4.7	79
WEST VIRGINIA																																
BECKLEY	763	925.8	1017.4	5.6	- 4.4	0.7	- 0.6	16.7	20+	-20.6	1	0	19	- 5.6	67	93	- 10	27	13	0	340	229	2.3	23	12.5	18	22	7	6	15	6.7	
CHARLESTON	286	981.4	1016.5	7.2	- 3.3	1.8	- 1.3	19.4	22	-17.2	1	0	18	- 4.4	67	86	- 3	23	16	1	267	127	1.8	24	12.5	25	22	4	8	16	6.9	
ELKINS	594	942.8		6.1	- 6.7	- 0.3	- 2.8	17.8	19	-20.0	2	0	23			80	- 3	28	16		358	178						4	6	18	7.7	
HUNTINGTON	252	985.4	1016.3	8.3	- 2.2	2.9	- 0.2	23.3	22	-17.2	2+	0	16	- 3.9	65	69	- 8	21	15	1	249	152	1.9	22	13.9	22	27	5	7	16	7.2	
PARKERSBURG U	187			6.7	- 3.3	1.7	- 0.2	20.0	22	-17.2	2	0	19			92	20	29	13		203	127			15.6	W	27					36
WISCONSIN																																
GREEN BAY	208	986.5	1013.1	- 4.4	-14.4	- 9.3	- 1.6	4.4	26+	-32.2	2	0	28	-12.2	77	52	24	21	13	0	279	483	1.2	26	22.4	SW	27	6	7	15	6.8	43
LA CROSSE	198	989.2	1014.7	- 3.3	-13.3	- 8.3	- 1.3	7.8	17	-37.8	8	0	27	-11.1	78	52	26		12	1	518		0.8	27								
MADISON	262	980.7	1013.4	- 2.2	-11.7	- 6.7	0.2	8.3	26	-30.0	2	0	26	-10.0	77	66	37	29	11	2	94	381	1.4	26	17.9	SW	27	6	4	18	7.3	38
MILWAUKEE	205	987.5	1013.7	- 2.2	- 9.4	- 5.8	- 0.4	7.8	26	-26.1	2	0	27	-10.0	75	64	28	30	12	1	64	203	2.8	26	25.5	SW	26	6	2	20	7.5	41
WYOMING																																
CASPER	1627	832.7	1015.3	2.2	-10.0	- 4.1	- 0.9	13.9	13	-26.7	7	0	27	- 9.4	69	20	5	6	11	0	284	51	3.4	25	14.3	25	15+	7	5	16	6.6	
CHEYENNE	1867	806.6	1015.5	2.2	- 8.9	- 3.4	- 0.8	13.3	13	-25.6	7	0	26	-11.7	57	16	2	6	10	0	236	76	5.1	31	25.0	NW	26	8	7	13	6.2	71
LANDER	1696	824.6	1015.2	2.8	- 9.4	- 3.3	1.1	13.9	13	-20.0	22	0	28	-11.1	59	11	- 6	8	6	0	320	178	0.9	27	21.5	SW	25	6	8	14	6.4	72
SHERIDAN	1208	875.4	1016.5	2.8	-10.6	- 4.0	0.6	13.3	13	-26.7	7	0	27	-10.0	61	30	11	9	15	0	399	279	2.1	31	17.0	NW	7	6	5	17	7.0	49

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	578	2365	2071
HUNTSVILLE	597	2444	2479
MOBILE	308	1214	1307
MONTGOMERY	445	1818	1885
ALASKA			
ANCHORAGE	1238	8029	7725
ANNETTE	836	5119	4767
BARROW	2555	14519	13360
BARTER ISLAND	2671	14454	13165
BETHEL	1863	9801	9160
BETTLES	2295	13050	
BIG DELTA	1751	11027	
COLD BAY	1086	6455	6425
FAIRBANKS	1948	11385	10695
GULKANA	1594	11136	
HOMER	1132	7572	
JUNEAU	1029	7217	6210
KING SALMON	1476	8771	7885
KOTZEBUE	2354	11649	10778
MC GRATH	1968	11451	10497
NOME	2150	10671	9584
ST. PAUL ISLAND	1388	7257	7174
SHEMYA	1017	6223	6258
SUMMIT	1626	11059	
TALKEETNA	1465	9450	8311
UNALAKLEET	2100	10630	
YAKUTAT	1115	7139	6143
ARIZONA			
FLAGSTAFF	943	4899	4973
PHOENIX	241	1151	1473
TUCSON	350	1399	1477
WINSLOW	774	3805	3794
YUMA	195	938	1058
ARKANSAS			
FORT SMITH	647	2751	2670
LITTLE ROCK	571	2461	2650
CALIFORNIA			
BAKERSFIELD	420	1677	1731
BISHOP	607	3180	3203
BLUE CANYON	746	3708	3542
EUREKA U	518	3238	3043
FRESNO	480	2036	1967
LONG BEACH	251	1045	1168
LOS ANGELES	234	963	1183
LOS ANGELES U	184	762	938
MT SHASTA R	739	4059	3953
OAKLAND	400	2102	1992
RED BLUFF	419	2102	1959
SACRAMENTO	466	2066	2089
SANDBERG R	614	2985	2842
SAN DIEGO	266	1006	994
SAN FRANCISCO	414	2158	2033
SAN FRANCISCO U	359	2212	1984
SANTA MARIA	425	2263	1924
STOCKTON	477	2044	2106
COLORADO			
ALAMOSA	1188	6107	6205
COLORADO SPRINGS	980	4727	4545
DENVER	958	4505	4484
GRAND JUNCTION	858	4331	4358
PUEBLO	825	3719	4072
CONNECTICUT			
BRIDGEPORT	893	3894	4019
HARTFORD	1001	4618	4577
DELAWARE			
WILMINGTON	821	3562	3690
DIST.OF COLUMBIA			
WASHINGTON DULLES	786	3677	
WASHINGTON NATIONAL	722	3145	3236
FLORIDA			
APALACHICOLA U	299	1094	1095
DAYTONA BEACH	199	736	724
FORT MYERS	85	289	380
JACKSONVILLE	256	1044	1044
KEY WEST	20	57	99
LAKELAND U	134	540	562
MIAMI	45	177	195
ORLANDO	115	479	655
PENSACOLA	318	1208	1244
TALLAHASSEE	335	1491	1247
TAMPA	134	595	581
WEST PALM BEACH	73	284	222
GEORGIA			
ATHENS	573	2318	2335
ATLANTA	572	2314	2353
AUGUSTA	532	2133	1957
COLUMBUS	458	1751	1949
MACON	440	1727	1778
ROME	679	2657	2647
SAVANNAH	359	1481	1520
IDAHO			
BOISE	765	4119	4363
LEWISTON	720	3944	4093
POCATELLO	1034	5267	5113
ILLINOIS			
CAIRO U	739	3084	3040
CHICAGO O HARE	1026	4617	4834
CHICAGO MIDWAY	1023	4567	4526
MOLINE	1088	4963	4812
PEORIA	1035	4749	4534
ROCKFORD	1114	5158	5057
SPRINGFIELD	952	4192	4152
INDIANA			
EVANSVILLE	874	3693	3510
FORT WAYNE	1031	4570	4616
INDIANAPOLIS	1006	4288	4242
SOUTH BEND	1012	4680	4682
IOWA			
BURLINGTON	1079	4848	4619
DES MOINES	1167	5002	5102
DUBUQUE	1257	5562	5466
SIOUX CITY	1133	5549	5226
WATERLOO	1364	6112	5483
KANSAS			
CONCORDIA	1071	4667	4159
DODGE CITY	919	4188	3780
GOODLAND	957	4451	4472
TOPEKA	1065	4379	3994
WICHITA	1005	4108	3612
KENTUCKY			
COVINGTON	881	3678	3946
LEXINGTON	838	3649	3568
LOUISVILLE	833	3491	3549
LOUISIANA			
ALEXANDRIA	410	1719	1592
BATON ROUGE	333	1398	1319
LAKE CHARLES	271	1090	1225
NEW ORLEANS	328	1213	1154
SHREVEPORT	398	1629	1799
MAINE			
CARIBOU	1415	6815	6950
PORTLAND	1202	5528	5311
MARYLAND			
BALTIMORE	766	3323	3558
MASSACHUSETTS			
BLUE HILL OBS R	1022	4732	4517
BOSTON	962	4324	4031
WORCESTER	1087	5203	4977
MICHIGAN			
ALPENA	1298	5787	5909
DETROIT	1025	4528	4512
DETROIT METRO	1047	4725	4692
FLINT	1079	5008	4932
GRAND RAPIDS	1140	5166	5024
HOUGHTON LAKE	1289	5840	5882
LANSING	1070	5090	4977
MARQUETTE U	1279	5746	5790
MUSKEGON	1119	4972	4719
SAULT STE MARIE	1452	6585	6283
MINNESOTA			
DULUTH	1464	7229	7117
INTERNATIONAL FALLS	1550	7974	7747
MINNEAPOLIS	1341	6228	6226
ROCHESTER	1357	6318	6121
ST CLOUD	1414	6777	6561
MISSISSIPPI			
JACKSON	444	1791	1817
MERIDIAN	468	1913	1898
MISSOURI			
COLUMBIA REGIONAL	910	3898	3873
KANSAS CITY	931	3749	3626
ST JOSEPH	963	4055	4219
ST LOUIS	866	3834	3748
SPRINGFIELD	852	3715	3499
MONTANA			
BILLINGS	1063	5583	5122
GLASGOW	1416	7040	6676
GREAT FALLS	993	5795	5475
HAVRE	1261	7049	6362
HELENA	1013	6080	5860
KALISPELL	1006	6032	5919
MILES CITY	1243	6274	5712
MISSOULA	911	5538	5924
NEBRASKA			
GRAND ISLAND	1080	5061	4764
LINCOLN U	1077	4817	4427
NORFOLK	1126	5517	5217
NORTH PLATTE	1127	5340	4930
OMAHA	1106	4979	4748
SCOTTSBLUFF	1013	5213	4840
VALENTINE	1244	5817	5429
NEVADA			
ELKO	863	5131	5300
ELY	979	5564	5403
LAS VEGAS	421	2088	2257
RENO	780	4205	4547
WINNEMUCCA	837	4495	4835
NEW HAMPSHIRE			
CONCORD	1165	5567	5342
MT WASHINGTON OBS	1583	9263	9372
NEW JERSEY			
ATLANTIC CITY	814	3595	3503
ATLANTIC CITY U	749	3331	3331
NEWARK	827	3596	3760
TRENTON U	813	3601	3695
NEW MEXICO			
ALBUQUERQUE	725	3614	3384
CLAYTON	849	3964	3778
ROSWELL	612	2847	3080
NEW YORK			
ALBANY	1104	5220	5035
BINGHAMTON	1154	5367	5184
BUFFALO	1057	4707	4971
NEW YORK U	830	3670	3576
NEW YORK KENNEDY	858	3654	3745
NEW YORK LA GUARDIA	807	3492	3517
ROCHESTER	1059	4870	4810
SYRACUSE	1069	4992	4889
NORTH CAROLINA			
ASHEVILLE	737	3052	3401
CAPE HATTERAS R	486	2040	1970
CHARLOTTE	655	2626	2532
GREENSBORO	728	3090	2972
RALEIGH	636	2819	2692
WILMINGTON	469	1898	1894
NORTH DAKOTA			
BISMARCK	1458	7146	6557
FARGO	1461	7181	6843
WILLISTON	1400	7259	6802
OHIO			
AKRON	962	4304	4436
CINCINNATI OBS	890	3759	3642
CLEVELAND	1032	4520	4419
COLUMBUS	950	4189	4227
DAYTON	975	4163	4187
MANSFIELD	1004	4334	4631
TOLEDO	1035	4762	4725
YOUNGSTOWN	1055	4702	4648
OKLAHOMA			
OKLAHOMA CITY	718	3066	2975
TULSA	721	3103	3061
OREGON			
ASTORIA	632	3656	3476
BURNS U	889	5125	4988
EUGENE	664	3307	3297
MEACHAM	951	5417	5299
MEDFORD	674	3363	3614
PENDLETON	698	3900	3846
PORTLAND	615	3200	3303
SALEM	710	3649	3309
SEXTON SUMMIT R	799	4284	4083
PENNSYLVANIA			
ALLENTOWN	969	4328	4299
ERIE	1048	4686	4545
HARRISBURG	884	3823	3953
PHILADELPHIA	802	3565	3840
PITTSBURGH	961	4322	4399
SCRANTON	1051	4799	4635
WILLIAMSPORT	961	4166	4409
RHODE ISLAND			
BLOCK ISLAND	927	3952	3872
PROVIDENCE	949	4417	4265
SOUTH CAROLINA			
CHARLESTON	424	1658	1688
CHARLESTON U	386	1458	1479
COLUMBIA	519	2094	2046
GRNVLLE SPRTNBRG	643	2655	2435
SOUTH DAKOTA			
ABERDEEN	1388	6566	6341
HURON	1375	6357	6123
RAPID CITY	1182	5784	5227
SIOUX FALLS	1288	6345	5836
TENNESSEE			
BRISTOL	780	3131	3216
CHATTANOOGA	698	2808	2626
KNOXVILLE	710	2781	2760
MEMPHIS	593	2557	2607
NASHVILLE	733	3069	2837
OAK RIDGE R	717	2961	2681
TEXAS			
ABILENE	455	2011	2163
AMARILLO	726	3174	3131
AUSTIN	300	1177	1437
BROWNSVILLE	76	344	526
CORPUS CHRISTI	151	557	805
DALLAS	403	1667	1948
DEL RIO	239	1067	1339
EL PASO	457	2208	2276
FORT WORTH	440	1801	1987
GALVESTON U	223	795	1016
HOUSTON INTERCON	273	1126	1408
LUBBOCK	618	2769	2861
MIDLAND	493	2013	2179
PORT ARTHUR	254	932	1216
SAN ANGELO	359	1610	1901
SAN ANTONIO	239	1042	1312
VICTORIA	222	832	1000
WACO	349	1425	1694
WICHITA FALLS	560	2537	2328
UTAH			
MILFORD	962	4666	4790
SALT LAKE CITY	836	4376	4513
WENDOVER	813	4541	4413
VERMONT			
BURLINGTON	1257	5971	5925
VIRGINIA			
LYNCHBURG	729	3218	3216
NORFOLK	567	2433	2635
RICHMOND	709	3006	3047
ROANOKE	719	3220	3210
WALLOPS ISLAND	742	3047	
WASHINGTON			
OLYMPIA	716	4061	3657
QUILLAYUTE	673	4061	3847
SEATTLE TACOMA	628	3477	3560
SPOKANE	873	4858	4867
STAMPEDE PASS R	1033	6346	6206
WALLA WALLA U	653	3420	3652
YAKIMA	754	4355	4504
WEST VIRGINIA			
BECKLEY	883	3953	3991
CHARLESTON	828	3594	3423
ELKINS	930	4376	4194
HUNTINGTON	769	3434	3405
PARKERSBURG U	832	3568	3603
WISCONSIN			
GREEN BAY	1391	6169	5800
LA CROSSE	1340	6004	5665
MADISON	1258	5812	5720
MILWAUKEE	1211	5450	5432
WYOMING			
CASPER	1119	5516	5223
CHEYENNE	1093	5204	5112
LANDER	1083	5677	5665
SHERIDAN	1122	5866	5471

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, Sites.

COOLING DEGREE DAYS

(Base 65°F.)

FEBRUARY 1971

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	0	1	
HUNTSVILLE	0	0	
MOBILE	13	31	
MONTGOMERY	3	7	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	0	0	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	0	0	
BIG DELTA	0	0	
COLD BAY	0	0	
FAIRBANKS	0	0	
GULKANA	0	0	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	0	
PHOENIX	2	9	
TUCSON	0	6	
WINSLOW	0	0	
YUMA	11	33	
ARKANSAS			
FORT SMITH	0	0	
LITTLE ROCK	0	0	
CALIFORNIA			
BAKERSFIELD	0	0	
BISHOP	0	0	
BLUE CANYON	0	0	
EUREKA U	0	0	
FRESNO	0	0	
LONG BEACH	7	19	
LOS ANGELES	8	31	
LOS ANGELES U	28	99	
MT SHASTA R	0	0	
OAKLAND	0	0	
RED BLUFF	0	0	
SACRAMENTO	0	0	
SANDBERG R	0	0	
SAN DIEGO	3	8	
SAN FRANCISCO	0	0	
SAN FRANCISCO U	0	0	
SANTA MARIA	0	7	
STOCKTON	0	0	
COLORADO			
ALAMOSA	0	0	
COLORADO SPRINGS	0	0	
DENVER	0	0	
GRAND JUNCTION	0	0	
PUEBLO	0	0	
CONNECTICUT			
BRIDGEPORT	0	0	
HARTFORD	0	0	
DELAWARE			
WILMINGTON	0	0	
DIST.OF COLUMBIA			
WASHINGTON DULLES	0	0	
WASHINGTON NATIONAL	0	0	
FLORIDA			
APALACHICOLA U	5	5	
DAYTONA BEACH	65	104	
FORT MYERS	111	239	
JACKSONVILLE	42	57	
KEY WEST	220	424	
LAKELAND U	85	146	
MIAMI	219	395	
ORLANDO	97	174	
PENSACOLA	12	26	
TALLAHASSEE	13	16	
TAMPA	86	140	
WEST PALM BEACH	147	268	
GEORGIA			
ATHENS	0	0	
ATLANTA	0	0	
AUGUSTA	0	0	
COLUMBUS	2	4	
MACON	1	1	
ROME	0	0	
SAVANNAH	13	14	
HAWAII			
HILO	201	404	
HONOLULU	269	485	
KAHULUI	212	369	
LIHUE	253	409	
IDAHO			
BOISE	0	0	
LEWISTON	0	0	
POCATELLO	0	0	
ILLINOIS			
CAIRO U	0	0	
CHICAGO O HARE	0	0	
CHICAGO MIDWAY	0	0	
MOLINE	0	0	
PEORIA	0	0	
ROCKFORD	0	0	
SPRINGFIELD	0	0	
INDIANA			
EVANSVILLE	0	0	
FORT WAYNE	0	0	
INDIANAPOLIS	0	0	
SOUTH BEND	0	0	
IOWA			
BURLINGTON	0	0	
DES MOINES	0	0	
DUBUQUE	0	0	
SIOUX CITY	0	0	
WATERLOO	0	0	
KANSAS			
CONCORDIA	0	0	
DODGE CITY	0	0	
GOODLAND	0	0	
TOPEKA	0	0	
WICHITA	0	0	
KENTUCKY			
COVINGTON	0	0	
LEXINGTON	0	0	
LOUISVILLE	0	0	
LOUISIANA			
ALEXANDRIA	3	20	
BATON ROUGE	12	33	
LAKE CHARLES	15	40	
NEW ORLEANS	25	54	
SHREVEPORT	1	23	
MAINE			
CARIBOU	0	0	
PORTLAND	0	[illegible]	
MARYLAND			
BALTIMORE	0	0	
MASSACHUSETTS			
BLUE HILL OBS R	0	0	
BOSTON	0	0	
WORCESTER	0	0	
MICHIGAN			
ALPENA	0	0	
DETROIT	0	0	
DETROIT M WAYNE CO	0	0	
FLINT	0	0	
GRAND RAPIDS	0	0	
HOUGHTON LAKE	0	0	
LANSING	0	0	
MARQUETTE U	0	0	
MUSKEGON	0	0	
SAULT STE MARIE	0	0	
MINNESOTA			
DULUTH	0	0	
INTERNATIONAL FALLS	0	0	
MINNEAPOLIS	0	0	
ROCHESTER	0	0	
ST CLOUD	0	0	
MISSISSIPPI			
JACKSON	7	16	
MERIDIAN	2	7	
MISSOURI			
COLUMBIA	0	0	
KANSAS CITY	0	0	
ST JOSEPH	0	0	
ST LOUIS	0	0	
SPRINGFIELD	0	0	
MONTANA			
BILLINGS	0	0	
GLASGOW	0	0	
GREAT FALLS	0	0	
HAVRE	0	0	
HELENA	0	0	
KALISPELL	0	0	
MILES CITY	0	0	
MISSOULA	0	0	
NEBRASKA			
GRAND ISLAND	0	0	
LINCOLN U	0	0	
NORFOLK	0	0	
NEBRASKA			
NORTH PLATTE	0	0	
OMAHA	0	0	
SCOTTSBLUFF	0	0	
VALENTINE	0	0	
NEVADA			
ELKO	0	0	
ELY	0	0	
LAS VEGAS	0	0	
RENO	0	0	
WINNEMUCCA	0	0	
NEW HAMPSHIRE			
CONCORD	[illegible]	0	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	0	[illegible]	
ATLANTIC CITY U	0	[illegible]	
NEWARK	0	[illegible]	
TRENTON U	0	0	
NEW MEXICO			
ALBUQUERQUE	0	0	
CLAYTON	0	0	
ROSWELL	0	0	
NEW YORK			
ALBANY	[illegible]	0	
BINGHAMTON	0	0	
BUFFALO	0	0	
NEW YORK U	0	0	
NEW YORK KENNEDY	0	[illegible]	
NEW YORK LA GUARDIA	0	0	
ROCHESTER	0	0	
SYRACUSE	0	0	
NORTH CAROLINA			
ASHEVILLE	0	0	
CAPE HATTERAS R	0	0	
CHARLOTTE	0	0	
GREENSBORO	0	0	
RALEIGH	0	0	
WILMINGTON	0	0	
NORTH DAKOTA			
BISMARCK	0	0	
FARGO	0	0	
WILLISTON	0	0	
OHIO			
AKRON	0	0	
CINCINNATI OBS	0	0	
CLEVELAND	0	0	
COLUMBUS	[illegible]	[illegible]	
DAYTON	0	[illegible]	
MANSFIELD	0	0	
TOLEDO	0	[illegible]	
YOUNGSTOWN	0	0	
OKLAHOMA			
OKLAHOMA CITY	0	0	
TULSA	0	0	
OREGON			
ASTORIA	0	0	
BURNS U	0	0	
EUGENE	0	0	
MEACHAM	0	[illegible]	
MEDFORD	0	0	
PENDLETON	0	0	
PORTLAND	0	0	
SALEM	0	0	
SEXTON SUMMIT R	0	0	
PACIFIC AREA			
GUAM TAGUAC R	372	783	
JOHNSTON	350	692	
KOROR R	463	977	
KWAJALEIN	470	989	
MAJURO	454	948	
PAGO PAGO	410	884	
PONAPE R	408	899	
TRUK MOEN ISLAND	465	982	
WAKE	324	718	
YAP R	443	923	
PENNSYLVANIA			
ALLENTOWN	0	0	
ERIE	0	0	
HARRISBURG	0	0	
PHILADELPHIA	0	0	
PITTSBURGH	0	0	
SCRANTON	0	0	
WILLIAMSPORT	0	0	
RHODE ISLAND			
BLOCK ISLAND	0	0	
PROVIDENCE	0	0	
SOUTH CAROLINA			
CHARLESTON	5	7	
CHARLESTON U	3	3	
COLUMBIA	2	2	
GRNVLLE SPRTNBRG	0	[illegible]	
SOUTH DAKOTA			
ABERDEEN	0	0	
HURON	0	0	
RAPID CITY	0	0	
SIOUX FALLS	0	0	
TENNESSEE			
BRISTOL	0	0	
CHATTANOOGA	[illegible]	0	
KNOXVILLE	0	0	
MEMPHIS	0	0	
NASHVILLE	0	0	
OAK RIDGE R	0	0	
TEXAS			
ABILENE	4	4	
AMARILLO	[illegible]	0	
AUSTIN	20	34	
BROWNSVILLE	142	327	
CORPUS CHRISTI	74	172	
DALLAS	9	9	
DEL RIO	19	29	
EL PASO	0	[illegible]	
FORT WORTH	[illegible]	6	
GALVESTON U	5	13	
HOUSTON	18	66	
LUBBOCK	0	0	
MIDLAND	[illegible]	0	
PORT ARTHUR	24	66	
SAN ANGELO	4	4	
SAN ANTONIO	36	50	
VICTORIA	35	105	
WACO	14	20	
WICHITA FALLS	0	0	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	0	0	
WENDOVER	0	0	
VERMONT			
BURLINGTON	0	0	
VIRGINIA			
LYNCHBURG	0	0	
NORFOLK	3	3	
RICHMOND	0	[illegible]	
ROANOKE	[illegible]	0	
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	0	0	
QUILLAYUTE	0	0	
SEATTLE TACOMA	0	0	
SPOKANE	0	[illegible]	
STAMPEDE PASS R	0	0	
WALLA WALLA U	[illegible]	0	
YAKIMA	[illegible]	0	
WEST INDIES			
SAN JUAN P.R.	353	751	
WEST VIRGINIA			
BECKLEY	[illegible]	[illegible]	
CHARLESTON	0	0	
ELKINS	0	0	
HUNTINGTON	[illegible]	[illegible]	
PARKERSBURG U	0	0	
WISCONSIN			
GREEN BAY	0	0	
LA CROSSE	0	0	
MADISON	[illegible]	0	
MILWAUKEE	[illegible]	[illegible]	
WYOMING			
CASPER	0	0	
CHEYENNE	[illegible]	[illegible]	
LANDER	0	[illegible]	
SHERIDAN	[illegible]	[illegible]	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

FEBRUARY 1971

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	6	3	1	14	6	0	0	5	3	0	1	6	5	0	0	4	0									0	0	6	4
Alaska *																													
Arizona										0	0	4	0																
Arkansas	2	1	0	0	5					0	1	4	0																
California	1	1	0	0	0					0	?15	5	0																
Colorado	1	1	0	0	0																								
Connecticut																										0	0	5	0
Delaware *																													
Florida	5	2	0	113	6	0	0	3	0	0	2	6	4	0	0	5	0												
Georgia	10	3	0	8	5									0	0	4	0												
Hawaii						0	0	0	4																	0	0	4	0
Idaho										0	0	4	1					0	19	4	1								
Illinois	2	1	0	2	5	0	0	?	0	0	0	4	0																
Indiana	1	1	0	2	4					0	0	3	0																
Iowa										0	0	5	0					1	0	6	0								
Kansas	2	1	0	0	0													2	0	5	0	0	0	5	0				
Kentucky	1	1	0	0	4					0	1	4	0					?	?	?	0	?	?	?	0	0	0	?	0
Louisiana	2	2	10	19	6					0	0	5	0																
Maine										0	0	3	0									0	0	3	0	0	0	4	0
Maryland														0	0	2	0												
Massachusetts																		0	0	4	0					0	0	4	0
Michigan										2	2	6	0					1	0	4	0	0	0	4	0				
Minnesota																		0	0	4	0	0	0	5	0				
Mississippi	20	4	114	1524	7	0	0	?	0	0	1	5	0	0	0	4	0	0	0	?	0					0	0	5	0
Missouri	2	1	0	0	4					0	0	3	0	0	1														
Montana																		1	0	0	0								
Nebraska																		2	0	0	0					1	0	7	6
Nevada *																													
New Hampshire										0	0	3	0									0	0	3	0				
New Jersey *																													
New Mexico																		1	0	0	0								
New York												5						1	2	5								4	
North Carolina	1	1	2	64	6	0	0	3	0	0	0	5	0	0	0	3	0					1	300	5	0	0	0	4	0
North Dakota *																													
Ohio	3	2	0	7	6	0	0	?		0	1	5	0					14	?	?		?	?	?					
Oklahoma	2	2	0	1	4					0	0	3	0					1	?	6	0								
Oregon										0	1	4	0					0	0	4	0								
Pacific Area *																													
Pennsylvania										0	0	4	0	0	0	4	0	0	0	5	0	0	0	4	0	1	0	6	0
Puerto Rico *																													
Rhode Island																										0	0	5	0
South Carolina	1	1	0	0	4	0	0	2	2																				
South Dakota																						0	0	5	0				
Tennessee	2	1	0	36	6																	0	0	4	0	0	0	°5	C
Texas	20	3	0	0	5	0	0	4	0	0	21	5	0					3	0	5	6								
Utah						0	0	?	?	0	0	6	0																
Vermont										0	0	4	0					0	0	4	0	0	0	3	0				
U. S. Virgin Is.*																													
Virginia										0	0	5	0									0	0	3	0				
Washington												4																	
West Virginia										0	0	5	0																
Wisconsin										0	2	6	0	0	0	3	0	0	0	6	0	0	0	5	0				
Wyoming *																													

* Includes crop damage
C Crop damage
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
\# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the NOAA Environmental Data Service, monthly publication STORM DATA.

† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5,000,000
7 $5,000,000 to $50,000,000
8 $50,000,000 to $500,000,000
9 $500,000,000 to $5,000,000,000

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
FEBRUARY 1971

Elmer R. Nelson, Office of Hydrology

The most significant flooding during February occurred in western Iowa, western Missouri and northeastern Nebraska. Record flooding occurred on the North Branch Elkhorn River at Pierce, Nebr. Many communities without gages or records indicated the highest water in memory. Unprecedented lowland flooding occurred along the Elkhorn and other portions of the North Branch. The damages were heavy and estimated at approximately $5 million. The highest stage in the last 20 years was reported on the Nishnabotna River at Hamburg, Iowa.

HUDSON BAY DRAINAGE

Red River of the North Basin.--Much of the snowpack on the Dakota side of the Red River of the North melted during February and soaked into the porous surface soils, despite an unusually deep penetration of ground frost. The heaviest remaining snow cover is in the Red Lake River Basin and adjacent areas. Snow samples taken through the Red Lake River headwater Region during February indicate the water equivalent to be around 3.5 inches.

In the Souris Basin, the only snow remaining at the end of February was limited to the Turtle Mountains and the adjacent plain of Lake Souris.

Frost depths up to 5 or 6 ft. were common in most of the prairies. In the Red Lake Region frost depths from 0 to 6 inches were reported under the forest floor and in peat bogs.

ST. LAWRENCE DRAINAGE

Lake Michigan.--Extensive snow melt and rain in south-central lower Michigan caused up to 1 1/2 foot overflows on the Red Cedar on the 20-21st. No damage resulted from this overflow.

The headwaters of the Grand River rose to, but did not exceed, flood stage on the 23d. In the lower portion, ice jams appeared in the reach from Lowell to Grand Rapids, Mich., during the latter part of February. These ice jams caused fluctuations in the river levels with the area of Comstock Park, which is in the flood plain, receiving the most water and ice. Most of the damage resulted from ice action. About 40 homes were evacuated due to the high water.

Lake Erie.--Heavy rain on the 19-20th on frozen ground caused flooding on the St. Marys and Maumee Rivers in Indiana and on the St. Joseph River in Ohio. Ice jams occurred on the St. Marys River at Decatur, Ind., on the 21st and 22d. Additional precipitation on the 22d and 23d kept the rivers at high levels. The highest crest occurred on the St. Joseph River at Montpelier, Ohio, where it exceeded flood stage by 4.2 ft. on the 21st.

The Sandusky River at Freemont, Ohio, rose to bankfull stage on the 19th and 23d. Although some ice jamming occurred, the river continued to flow through the broken fields of ice.

Lake Ontario.--Canaseraga Creek at Groveland, N. Y., exceeded flood stage on the 27-28th. Route 258, across the valley, was closed by the flood waters. No damage resulted to structures or crops.

Minor flooding occurred on Oatka Creek at Garbutt, N. Y., on Feb. 28-March 1. No damage was reported.

Black Creek at Churchville, N. Y., exceeded flood stage on Feb. 27 to Mar. 3. The crest on Mar. 1 was 2.8 ft. above flood stage. Flooding in the lower Black Creek Valley, although extensive, was largely over pasture land, or land not in use at this time of the year. Little or no damage resulted from the high water.

ATLANTIC SLOPE DRAINAGE

Moderate to heavy precipitation in southeastern Pennsylvania and New Jersey early on the 13th caused sharp rises and overflows on many streams. The area of flooding extended from Brandywine Creek northeastward along the central and lower Schuylkill into the lower Lehigh River Valley in central New Jersey. Evacuations were necessary in some sections along the Schuylkill. Damage occurred along the Schuylkill and its tributaries from below Reading to below Pottstown, Pa. One death resulted from the high water in Pennsylvania. Minor damage occurred along the Jorden and Little Lehigh Creeks in Pennsylvania and along the Raritan River and Millstone Creek in central New Jersey.

The worst ice jam in recent years formed on the Susquehanna River below Harrisburg, Pa., causing flooding for 12 hrs. on the 15-16th. Flood damage was confined primarily to basements that were flooded due to water backing into sewers. Although the ice jam persisted, river levels receded slowly until the afternoon of the 19th when a channel opened through the jam allowing the water level to drop more rapidly. As the surge of water and ice moved down stream, temporary flooding resulted in communities along the Susquehanna River as far as York Haven, Pa. Farther up stream, snow melt and ice jams caused the Susquehanna to overflow its banks at Conklin, N. Y., on the 23d-29th and at Bainbridge, N. Y., on the 28th. The Chemung River at Chemung, N. Y., rose 2.2 ft. above flood stage on the 28th. No damage was reported.

Heavy rainfall (1.25 to 2.5 inches) on the 12-13th in the upper James Basin produced slight flooding at Lick Run, Buchanan and Bremo Bluff, Va. The overflow lasted 24 to 36 hours on the 13-16th. Downstream, the Westham gage at Richmond, Va., was above flood stage for over 48 hours on the 14-16th. A second rise on the 22d-24th brought stages in central and lower reaches to near bankfull, but no flooding resulted.

A mixture of frozen and liquid precipitation on the 3d-5th caused minor flooding on the middle reach of the Neuse and along the lower Cape Fear River in eastern North Carolina. The total precipitation ranged between 1 and 2 inches. Additional heavy rain (1 to 2 inches) on the 7-8th along the already swollen Neuse River raised the water level to over its banks at most gaging points by the 9th. The middle portion of the Cape Fear River rose 3 ft. over its banks and the lower portion 9 to 11 ft. above flood stage. The lower Tar and the lower Roanoke Rivers rose slightly above bankfull stage by the 13th. Precipitation on the 13th, ranging from 0.5 to 1.5 inches, prolonged the flooding. One to 2 inches of rain over the middle reaches of the Neuse on the 22d produced light flooding in the lower portion.

The Lumber river at Lumberton, N. C., continued above flood stage the entire month. The Little Pee Dee River at Galivants Ferry, S. C., was out of its banks from the 10th to the 20th with a crest 0.5 ft. above flood stage on the 14-15th. Moderate flooding moved downstream on the Pee Dee River from Cheraw to well below Peedee, S. C., on the 9th-22d. Minor flooding occurred on the Saluda River at Chappells, S. C., on the 8-9th. No significant damage resulted from the overflows.

Moderate flooding occurred along Stevens Creek

at Modoc, S. C., in the Savannah drainage on the 7-9th. Slight to moderate damage resulted. The light flooding along the Ogeechee River in Georgia from the 12th to the 24th caused slight damage.

Two to 3 inches of rain through central Georgia on the 7-8th produced light flooding on the Ocmulgee, Oconee and Altamaha Rivers. Only minor damage resulted.

EAST GULF OF MEXICO DRAINAGE

Heavy rains on the 7-9th caused the Apalachicola River to rise above flood stage on the 10th to the 17th. The crest on the 12th was 2.4 ft. above flood stage. A second period of heavy rainfall on the 21st-23d caused an additional rise with flooding continuing from the 19th to March 22. The crest on Mar. 8 was nearly 8.5 ft. above flood stage.

Two to 5 inches of rain on the 19th-21st caused moderate flooding on the Choctawhatchee, Cahaba and lower Alabama Rivers in Alabama. The only flooding of any magnitude was along the lower Choctawhatchee River at Caryville, Fla., where flood stage was exceeded by 1 foot. Flooding continued on the Alabama River into March.

Heavy rains on the 20th-21st and moderate rains on the 26-27th caused moderate flooding on the Black Warrior and Tombigbee Rivers. Rainfall during the 1st period averaged about 3 inches over the upper portion and over 4 inches in the middle portion. Rainfall during the latter period averaged between 1 and 2 inches. The greatest flood damage occurred in the Aberdeen-Columbus, Miss., area where residential sections were flooded. Estimates of damage by the Corps of Engineers were placed at $926,600.

Moderate to heavy precipitation during the month, with the heaviest amounts occurring on the 20th, 21st, and 23d, produced flooding on the Chickasawhay and Pearl Rivers in Mississippi. Precipitation during the month averaged from 7 to over 9 inches in the headwaters of the Pearl, Leaf and Chickasawhay Rivers, of which 3 to 6 inches occurred on the 20th, 21st and 23d. Tallahoma and Tallahala Creeks rose 10 to 15 ft. out of their banks at Laurel, Miss. Civil Defense units at Laurel evacuated 75 persons from the flooded area. The evacuees were housed in a church until the creeks subsided. Jackson, Miss., was flooded to a depth of 5 ft. in low lying areas. The heavy rains brought the Pearl River above flood stage from Edinburg, Miss., downstream to Pearl River, La., by the end of the month. The Pearl River reached a stage of 32.1 ft., 14.1 ft. above flood stage, at Jackson on Mar. 3. Elsewhere, downstream flooding was confined to farm and timber lands adjacent to the river. Cattle and equipment were removed from the flooded area before they were inundated by the rising river. Estimates of damage by the Corps of Engineers were placed at $962,300.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--Precipitation during February in Minnesota and Wisconsin was above normal for the second consecutive month. The heaviest precipitation occurred over eastern Minnesota, Wisconsin and northeastern Iowa. Observed totals ranged from one inch to over 3 inches.

The snow cover in the Upper Mississippi Basin at the end of February was considerably more than last year but less than in 1969, except in Wisconsin. Snow depths on Feb. 28, 1971, compared with that of other years are given in the following table:

COMPARATIVE SNOW DEPTHS (INCHES)

STATION	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956
(Minnesota)																
Bemidji	12	7	29	8	23	18	10	9	4	24	5	5	4	T	14	22
Duluth	25	18	30	7	24	12	21	12	10	23	8	17	9	3	22	--
Alexandria	26	7	29	4	18	1	4	T	2	17	0	4	1	0	4	12
New Ulm	12	8	19	T	10	T	3	T	2	17	0	T	T	0	0	6
Minneapolis	6	9	17	1	23	T	4	0	3	24	0	2	0	0	T	7
Rochester	11	9	12	T	6	0	1	0	3	13	2	3	13	0	T	6
(Wisconsin)																
Park Falls	29	15	18	4	23	3	20	7	16	33	6	17	10	3	16	20
Wausau	17	9	13	2	16	0	5	11	7	30	1	5	9	0	1	7
Portage	8	2	8	T	5	T	T	0	6	24	0	4	10	T	0	T

Major flooding occurred on the Maquoketa and Wapsipinicon Rivers in Iowa, the Pecatonica River in Wisconsin and Illinois, and on the Rock River in Illinois. Record stages were reached on the lower Rock at Joslin and Moline, Ill., on the 23d and 24th. The previous record stage at Joslin was 16.3 ft. on Feb. 13, 1966, compared to 17.7 ft. this year. The previous record stage at Moline was 14.9 ft. on Mar, 11, 1929, compared to 15.2 ft. in 1971. This major overflow was due to snowmelt accompanied by 1 to 2 inches of precipitation on the 18-19th. The flooding was affected by the movements of an unusually thick ice cover.

Heavy precipitation on the 17-18th plus snowmelt runoff caused flooding on streams in the Iowa, Skunk and Des Moines River Basins. Flooding began on the North Skunk at Sigourney, Iowa, and on the Raccoon at Perry, Iowa, on the 18th. The North Skunk and Skunk Rivers were out of their banks on the 18th-21st. Crests on both rivers were 2.5 to 5 ft. above flood stage. Near Cambridge, Iowa, ice jams caused the highest overflow since 1947. The Skunk River remained above flood stage at Oskaloosa and Brighton, Iowa, through the end of the month. The Iowa River with crests near 4 ft. over flood stage continued in flood at Wapello, Iowa, into March. Crests on the North Raccoon, South Raccoon, and Raccoon Rivers were 5.5 to 7 ft. above flood stage. The North Raccoon River remained above flood stage at Jefferson, Iowa, to Mar. 1, but the other streams receded within their banks on the 25th. Considerable ice action along these rivers during the high water caused the water level to fluctuate considerably as the ice jams formed and broke up. Crests along the Des Moines River were 1 to 3 ft. above flood stage. Flooding was generally restricted to low-lying

farm lands. Several homes at lower elevations were evacuated.

Moderate to heavy rains (1 to 2 inches) on the 21st-22d caused minor to moderate flooding in central Illinois. Substantial flooding occurred on the Big Muddy River which crested nearly 10 ft. above flood stage at Murphysboro, Ill., on the 27th. The Illinois River at Havana and Beardstown, Ill., crested slightly above bankfull stage early in March.

Very minor flooding occurred along the Mississippi River toward the end of the month from Hannibal, Mo., downstream to Winfield, Mo. There was also some local flooding upstream at Keithsburg, Ill., and Burlington, Iowa, between the 22d and 26th.

Missouri Basin.--Some lowland flooding occurred in the upper Missouri Basin in Montana from the 14th through the 17th due to melting snow and ice jams. Ice jammed on the Milk River downstream from Eastern Crossing and above Fresno Reservoir, flooding low lying areas on the 14th and 15th. Beaver Creek near Havre, Mont., rose above its banks and flooded the golf course. Peoples Creek near Dodson, Mont., overflowed and covered U.S. Highway 2 for a brief time. Spring Creek at Lewistown, Mont., overflowed during the weekend of the 13th. The Musselshell River in the Musselshell and Melstone, Mont., areas overflowed covering several county roads and fields. Two families near Musselshell were forced to evacuate their homes for a brief period.

Lowland flooding due to ice jams developed on the lower Yellowstone River during the 3d week of February. Flooding was confined mainly to farms along the river. Several ice jams were noted in the area from about 20 miles below Billings, Mont., downstream to the mouth of the river. Preliminary reports indicate that 200 to 300 head of cattle were drowned, several farm homes flooded and two bridges destroyed. Eighty trailer homes were evacuated in the Glendive, Mont., area. The total damages were estimated at $221,000.

A combination of warm temperatures, heavy rain, melting snow, frozen ground and ice jams caused considerable flooding in western Iowa, western Missouri and northeastern Nebraska. Mild weather from the 14th through the 19th with general rains on the 18-19th resulted in snowmelt and rapid runoff. Rising streams caused ice to break up. Most of the lowland flooding was due to ice jams. Rainfall ranged from 1 to 3.2 inches. Bazile Creek at Niobrara, Nebr., crested at a stage of 20.42 ft., the highest stage ever recorded. The previous highest stage of record was 19.96 ft. on June 16, 1957.

One person was killed when a bridge collapsed with his car on it near Center, Nebr. Some lowland flooding occurred on the Vermillion River at Wakonda, S. Dak. The lower reaches of the Rock and Little Rock Rivers in Iowa rose 2 to 3 ft. above flood stage on the 19th. The lower Big Sioux River from the mouth of the Rock River to below Akron, Iowa, ran 1 to 4 ft. over bankfull stage on the 21st to the 22d. The North Branch Elkhorn River at Pierce, Nebr., reached a record crest of 16.0 ft. on the 19th. The previous high water was 15.3 ft. in April 1881. Most other places along creeks and streams reported near record crests. Many communities without gages or records indicated the highest water in memory. Unprecedented lowland flooding occurred along the Elkhorn and other portions of the North Branch. Ice jams caused the Elkhorn River to cut numerous new channels, mainly in the West Point-Wisner, Nebr., region. A blizzard struck northeastern Nebraska on the morning of the 22d depositing up to 17 inches of snow over much of the flooded area. Snowmelt on the 24-25th caused additional overflow along the North Fork and Elkhorn and in the vicinity of ice jams in the Elkhorn. By the end of the month, most ice jams had been cleared and most streams were near or below normal. The heaviest damages were reported in the Elkhorn Basin in northeastern Nebraska. A total loss of approximately $5 million was reported by early March.

Warm temperatures beginning around the 10th caused the snow to melt rapidly and the ice in the rivers to break up in southwestern Iowa and northwestern Missouri. This warm weather was preceded by a snow and ice storm on the 4th and 5th which produced snow amounts of 4 to 6 inches over northwestern Missouri, southeastern Nebraska and southwest and south-central Iowa. This same storm produced a combination of snow, freezing rain and rain over west-central and central Missouri. Water amounts ranged from 3/4 to 1 1/4 inches. The Nishnabotna, as well as the East and West Forks in southwest Iowa, and the Grand River in central Missouri rose out of their banks on the 18-19th. The most extensive flooding occurred on the Nishnabotna River at Hamburg, Iowa, on the 18th-22d. The crest on the 19th was 27.0 ft., 9 ft. above bankfull stage. This was the highest stage reported in the last 20 years. Much ice and water was reported over roads and fields. Another heavy snowstorm on the 21st to the 23d produced snow amounts of 3 to 7 inches over the northern half of Missouri, and 6 to 12 inches over extreme northeast Kansas, southeast Nebraska and south-central and southwest Iowa. Just as most rivers were receding, the partial melting of the new snow caused the streams to rise again. Most rivers rose to around three-quarters to near bankfull stages, with the Grand River at Chillicothe and Sumner, Mo., reaching slightly above bankfull stage.

Snow melt and rain on the 18th produced substantial rises on the Big and Little Blue Rivers in Nebraska. Minor overflows occurred on Lincoln and Turkey Creeks, tributaries of the Big Blue in Nebraska, on the 20th-22d. The ice which was very heavy in the Big Blue Basin did not break up during this rise. A severe snow storm on the 21st to the 23d produced snow averaging 10 to 15 inches deep over the Blue Basin in Nebraska, the Smoky Hill below Cedar Bluff Reservoir, the Republican below Harlan County Lake, the upper Marais des Cygnes and most of the Kansas drainage.

The water equivalent of the snow, where it was 10 inches or more deep, was generally 1.5 to 2 inches and locally 2.5 inches. This snow was gradually depleted by the end of the month. The remaining snow was in a 50 to 70 mile strip from about Lincoln, Nebr., to Ellsworth, Kans., with average depths from 2 to 5 inches.

Minor flooding occurred on the Little Osage River near Horton, Mo., on the 28th and on the Osage River at Schell City, Mo., from the 26th into March.

The main stem of the Missouri River near Nebraska City, Mo., was near or slightly above bankfull stage from the 8th to the 13th due to ice fluctuations. The ice was extremely heavy after the very cold temperatures during the first 10 days of the month. Ice bridges from just north of Kansas City to about Nebraska City began to break up on the 18th and 19th. This resulted in the river rising to near or slightly above bankfull stage at most locations from around Nebraska City downstream to the mouth by the 25th.

Ohio Basin.--Minor flooding occurred in the upper portion of the Hocking River Basin in Ohio on the

22d-24th. This flooding was due to about 1.5 inches of rain on the 21st-22d. Damage was minor and consisted mostly of cutting off of highways and flooding of low valley land.

Minor flooding occurred on the 22d along the downstream reaches of the Miami, Little Miami and Whitewater Rivers in southwestern Ohio and southeastern Indiana. By the morning of the 24th, all were below flood stage.

Heavy rain on the 3d to the 5th over the lower Ohio Basin caused flooding on some streams in the Wabash and Cumberland Basins. Most of the streams were falling and at low levels prior to this rain. While extensive bottomland flooding occurred, little damage resulted. Three to 5 inches of snow fell over the lower Ohio Basin on the 7th and 8th followed by a warming trend and an average rainfall of about one inch on the 12th. Most of the rivers continued to rise, especially the Ohio which reached flood stage at Shawneetown, Ill., and Fords Ferry, Ky., on the 11th.

During the last 10 days of the month, the temperature averaged well above normal. Rainfall amounts between 1 and 2 inches occurred over the lower Ohio Basin on the 21st-23d. Amounts over 2.5 inches occurred along the upper Ohio Valley above Addison, Ky., (Dam 45). These rains caused considerable flooding in the lower portion.

White Basin.--The only flooding in the White Basin during February was on the Cache River at Patterson, Ark. It was receding in the beginning of the month from the January rains and fell below flood stage on the 1st. Additional rain on the 12-13th caused the Cache to rise above flood stage on the 14th. Additional rain on the 21st-22d caused the river to remain above flood stage the remainder of the month. It crested on Mar. 1, 1.6 ft. above flood stage. No damage resulted from the flooding.

Lower Mississippi Basin.--Heavy rains (2 inches) on the 21st caused sharp rises on the St. Francis River below Wappapello Reservoir to above flood stage on the 22d-25th at St. Francis, Ark., and Fisk, Mo., respectively. It receded below flood stage at Fisk on the 28th. Flooding continued at St. Francis to Mar. 4.

The Big Black River rose sharply from the heavy rains on the 23d and exceeded flood stage during the afternoon of the 26th. The river crested 10.3 ft. above flood stage at Bovina, Miss., on Mar. 4. Lowland flooding was general along the lower portion of the river from Pickens, Miss., downstream.

The Lower Mississippi River at Caruthersville, Mo., rose above flood stage on the 25th. It continued to rise into March. The stage was the highest observed since May 1970.

PACIFIC SLOPE DRAINAGE

Sacramento Basin.--The Sacramento River at the Tisdale Weir, Calif., continued overflowing from Jan. 16 to Feb. 7. Releases from major reservoirs were held at a minimum throughout the month.

Northern Coastal Basins.--The Snohomish River at Snohomish, Wash., and the Skagit River at Mt. Vernon, Wash., receded below flood stage on Feb. 1. The crests on Jan. 31 ranged up to 2.4 ft. above flood stage. Only minor damage resulted.

FLOOD STAGE DATA

(All dates in February unless otherwise specified) FEBRUARY 1971

River and station	Flood stage	Above flood stages -dates From-	To-	Crest* Stage	Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Michigan					
Red Cedar: Williamston, Mich.	7	20	22	8.6	20
East Lansing, Mich.	7	21	22	7.5	21
Grand: Eaton Rapids, Mich.	6	23	23	6.0	23
Grand Rapids (Comstock Park), Mich.	12	23	Mar. 4	15.3	Mar. 1
Lake Erie					
St. Marys: Decatur, Ind.	15	19	27	18.4	23
St. Joseph: Montpelier, Ohio	10	20	Mar. 2	14.2	21
Maumee: Ft. Wayne, Ind.	15	20 26	25 27	16.1 15.4	21 27
Sandusky: Freemont, Ohio	10	19 23	19 23	J10.0 10.0	19 23
Lake Ontario					
Canaseraga Creek: Groveland, N.Y.	11	27	28	12.4	27
Oatka Creek: Garbutt, N. Y.	5	28	Mar. 1	5.3	Mar. 1
Black Creek: Churchville, N. Y.	5	27	Mar. 3	7.8	Mar. 1
ATLANTIC SLOPE DRAINAGE					
Raritan: Manville, N. J.	12	13	14	13.6	14
Bound Brook, N. J.	8	13	14	8.5	14
Neshaminy Creek: Langhorne, Pa.	9	13	14	11.0	14
Perkiomen Creek: Graterford, Pa.	11	13	13	12.0	13
Schuylkill: Reading, Pa.	13	13 13	14 14	17.4 17.0	14 14
Brandywine: Chadds Ford, Pa.	9	13	14	12.8	14
Chemung: Chemung, N. Y.	12	28	28	14.2	28
Susquehanna: Bainbridge, N. Y.	13	28	28	14.4	28
Conklin, N. Y.	11	23	29	J11.7	28
Harrisburg, Pa.	17	15	16	18.0	16
Jackson: Covington, Va.	9	13	14	12.0	14
James: Lick Run, Va.	[illegible]	13 M	15 M	19.6 11.65	14 23
Buchanan, Va.	17	14	M	18.9	14
Bremo Bluff, Va.	19	14	16	21.8	15
Richmond (Westham), Va.	12	14	16	14.2	16
Roanoke: Williamston, N. C.	10	12	21	10.7	14,15,16
Tar: Greenville, N. C.	13	13	16	13.9	15
Neuse: Neuse, N. C.	14	8	13	16.0	11
Smithfield, N. C.	13	6	16	18.4	10
Goldsboro, N. C.	14	8 24	21 28	19.4 15.6	15 26
Kinston, N. C.	14	13 28	24 Mar. 17	16.7 14.0 17.6	18 28 Mar. 13
Cape Fear: Fayetteville, N. C.	35	9	11	38.1	10
William O. Huske L&D (nr), Tarheel, N. C.	42	7	15	53.3	10
Lock No. 2, Elizabethtown, N. C.	20	7	16	29.2	10
Lumber: Lumberton, N. C.	9	Jan. 30	1/	11.8 11.4	10 26-28
Little Pee Dee: Galivants Ferry, S. C.	9	10	20	9.5	14-15
Pee Dee: Cheraw, S. C.	30	9	10	34.2	9
Peedee, S. C.	19	9 25	22 Mar. 21	22.0 (19.7 (24.2	14 27-Mar.1 Mar. 10
Saluda: Chappells, S. C.	14	8	9	16.5	8
Broad: Blair, S. C.	14	7	10	21.4	8
Wateree: Lake Wateree, S. C.	100	9	11	101.4	10
Stevens Creek: Modoc, S. C.	18	7	9	23.8	8
Ogeechee: Scarboro, Ga.	8	12	20	# 9.0	16
Dover, Ga.	7	17	21	# 7.9	20
Eden, Ga.	9	20	24	# 9.7	22
Ocmulgee: Macon, Ga.	18	8	9	19.8	8

River and station	Flood stage	Above flood stages -dates From-	To-	Crest* Stage	Date
ATLANTIC SLOPE DRAINAGE	Ft.			Ft.	
Oconee: Milledgeville, Ga.	20	8	10	23.5	9
Mt. Vernon, Ga.	16	15	18	16.6	16
Altamaha: Charlotte, Ga.	15	17	21	15.75	19
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	10	17	17.4	12
		19	Mar. 22	#23.4	Mar. 8
Choctawhatchee: Newton, Ala.	19	22	22	19.7	22
Caryville, Fla.	12	24	27	13.0	25
Cahaba: Centreville, Ala.	23	22	22	#25.9	22
Alabama: Claiborne, Ala.	40	27	Mar. 17	48.3	Mar.10-11
Old Town Creek: Tupelo, Miss.	21	22	22	21.3	22
East Fork Tombigbee: Fulton, Miss.	16	22 27	25 Mar. 1	18.45 16.7	22 27
Tibbee: Tibbee, Miss.	23	23	Mar. 4	26.3	28
Noxubee: Macon, Miss.	26	28	28	26.5	28
Black Warrior: Oliver L&D, (Tuscaloosa), Ala.	47	22	24	51.7	22
Warrior L&D, Ala.	30	23	Mar. 10	36.4 36.4	26 Mar. 6
Tombigbee: Aberdeen, Miss.	34	23	Mar. 1	39.0	27
Columbus, Miss.	29	25	Mar. 5	33.4	Mar. 1
Gainesville, Ala.	36	23	Mar. 12	47.9	Mar. 6
Demopolis L&D, Ala.	48	23	Mar. 16	60.8	Mar. 7
Jackson L&D, Ala.	43	23	Mar. 24	56.4	Mar. 7
Chickasawhay: Enterprise, Miss.	20	22	24	21.5	23
Pearl: Edinburg, Miss.	20	24	Mar. 9	23.1	27
Jackson, Miss.	18	14 23	15 1/	18.05 32.1	14 Mar. 3
Monticello, Miss.	19	27	Mar. 23	26.7	Mar. 3
Bogalusa, La.	15	9 13 21 24	11 19 22 1/	15.7 16.5 15.3 19.6	10 16 21 Mar. 10
Pearl River, La.	12	27	1/	15.5	Mar. 8
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Maquoketa: Maquoketa, Iowa	13	19	21	21.4	20
Wapsipinicon: DeWitt, Iowa	10	19	28	11.9	23
Pecatonica: Martintown, Wis.	11	19	Mar 4	16.0	22
Freeport, Ill.	13	20	Mar. 1	16.3	20
Shirland, Ill.	12	19	Mar. 6	16.9	22
Rock: Rockton, Ill.	[illegible]	27	28	10.9	27
Rockford, Ill.	13.5	19	28	13.9	27
Joslin, Ill.	12	20	Mar. 3	17.7	23
Moline, Ill.	12	21	Mar. 3	15.2	24
Iowa: Marshalltown, Iowa	13	19	24	17.15	20
Wapello, Iowa	10	21	Mar. 5	14.3	22
North Skunk: Sigourney, Iowa	16	18	27	20.05	23
Skunk: Ames, Iowa	10	19	21	12.7	20
Oskaloosa, Iowa	15	19	Mar. 4	20.2	27
Brighton, Iowa	14	21	Mar. 6	16.8	26
Augusta, Iowa	15	19	21	18.2	19
North Raccoon: Jefferson, Iowa	10	19	Mar. 1	15.7	21
South Raccoon: Redfield, Iowa	14	19	22	21.1	19
Raccoon: Van Meter, Iowa	13	19	23	18.8	20
Perry, Iowa	12	18	25	17.2	21
Des Moines: Des Moines (SE 14th), Iowa	21	20	22	22.8	21
Tracy, Iowa	14	22	Mar. 5	15.6	26
Eddyville, Iowa	15	20	Mar. 5	18.0	27
Ottumwa, Iowa	10	25	Mar. 1	13.1	25

FLOOD STAGE DATA

(All dates in February unless otherwise specified) FEBRUARY 1971

River and station	Flood stage	Above flood stages -dates From-	To-	Crest* Stage	Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
Illinois: Havana, Ill.	14	23	Mar. 7	14.55	Mar. 3
Beardstown, Ill.	14	25	Mar. 7	14.6	Mar. 2-3
Big Muddy: Murphysboro, Ill.	16	15	Mar. 8	25.7	27
Mississippi: Keithsburg, Ill.	12	22	26	15.3	24
Burlington, Iowa	15	23	25	16.0	24
Hannibal, Mo.	16	26	Mar. 4	17.5	Mar. 1
Louisiana, Mo.	15	27	Mar. 3	16.25	Mar. 1
Dam 24, Clarksville, Mo.	25	27	Mar. 4	26.4	Mar. 1
Dam 25, Winfield, Mo.	26	28	Mar. 3	26.4	Feb. 28
Missouri Basin					
Yellowstone: Miles City, Mont	13	14	14	15.9	14
Glendive, Mont.	61	16	16	61.3	16
Yellowstone, Mont.	19	17	17	20.2	17
Bad: Fort Pierre, S. Dak.	16	16	18	18.25	17
Bazile Creek: Niobrara, Nebr.	B15	19	Mar. 2	20.4	19
				18.4	26
Vermillion: Wakonda, S. Dak.	14	M	M	15.8	19
Rock: Rock Valley, Iowa	11	19	21	13.6	19
Big Sioux: Hawarden, Iowa	15	19	22	19.1	21
Akron, Iowa	16	21	22	17.1	22
West Branch Floyd: Struble, Iowa	14	18	19	15.5	19
Floyd: Alton, Iowa	12	18	21	17.2	19
Le Mars, Iowa	20	18	20	22.6	19
Merrill, Iowa	12	19	20	16.0	19
James, Iowa	16	19	20	18.1	19
West Fork Little Sioux: Holly Springs, Iowa	18	19	20	21.8	20
Little Sioux: Spencer, Iowa	10	19	1/	13.8	19
Linn Grove, Iowa	12	19	28	15.5	23
Peterson, Iowa	16	22	25	16.4	25
Cherokee, Iowa	17	19	20	20.85	19
Correctionville, Iowa	19	18	22	22.2	20
Middle Loup: St. Paul, Nebr.	5.5	20	20	6.6	20
North Branch Elkhorn: Pierce(nr), Nebr.	12	18	22	16.0	19
Hadar(nr), Nebr.	12	19	M	E19.0	19
Elkhorn: Norfolk, Nebr.	10	20	M	E10.0	20
West Point, Nebr.	12	19	20	15.1	19
		23	25	14.3	23
Winslow, Nebr.	14	19	21	18.5	20-21
Platte: Louisville, Nebr.	9	20	20	12.1	20
West Fork Nishnabotna: Randolph, Iowa	19	18	18	20.0	18
East Fork Nishnabotna: Red Oak, Iowa	18	18	20	20.8	19
Nishnabotna: Hamburg, Iowa	18	18	22	27.0	20
Lincoln Creek: Seward(nr), Nebr.	15	20	20	#15.2	20
Turkey Creek: Wilber, Nebr.	11	20	22	#12.9	23
Grand: Chillicothe, Mo.	24	19	20	26.5	19
		27	28	25.3	27
Sumner, Mo.	26	18	22	31.1	20
		27	Mar. 2	30.6	28
Brunswick, Mo.	12	19	25	15.5	22
		27	Mar. 2	14.65	28
South Fork Chariton: Promise City, Iowa	18	19	19	18.3	19
Little Osage: Horton, Mo.	23	28	28	23.0	28
Osage: Schell City, Mo.	25	26	Mar. 3	27.5	Mar. 2
Missouri: Decatur, Nebr.	13	19	23	15.9	21
Nebraska City, Nebr.	18	8	10	18.4	9
		21	21	18.0	21
		22	23	18.6	22
St. Joseph, Mo.	17	19	19	19.0	19
		20	24	18.9	21
Missouri: Waverly, Mo.	18	24	25	18.0	24,25
Ohio Basin					
Hocking: Enterprise, Ohio	12	22	22	12.5	22
Athens, Ohio	120	22	24	23.3	23
Paint Creek: Bourneville, Ohio	10	22	24	12.3	22
Scioto: La Rue, Ohio	11	23	23	11.2	23
Prospect, Ohio	10	24	24	10.2	24
Circleville, Ohio	14	22	25	17.6	24
Piketon, Ohio	16	22	27	23.9	23
East Fork Little Miami: Perintown, Ohio	19	22	22	20.45	22
Little Miami: Milford, Ohio	12	22	22	13.8	22
Miami: Miamitown, Ohio	B16	22	23	19.9	22
Rough: Dundee, Ky.	25	22	24	#26.8	23
Green: Lock 4, Woodbury, Ky.	33	22	23	#33.6	23
Lock 2, Clahoun, Ky.	23	22	Mar. 3	#26.0	26
Embarrass: Ste. Marie, Ill.	18	24	25	18.6	25
Lawrenceville, Ill.	T15	23	Mar. 2	16.3	27
Eel: Bowling Green, Ind.	17	5	5	19.3	5
		23	24	19.2	23
Muscatatuck: Austin, Ind.	T16	5	7	19.3	6
		13	15	17.9	14
		18	25	23.5	23
East Fork White: Seymour, Ind.	14	20	25	17.15	23
Williams, Ind.	10	26	28	11.0	27
White: Anderson, Ind.	10	5	7	11.4	6
		F18	F23	11.5	20
Ravenswood, Ind.	6	20	21	6.5	21
Centerton, Ind.	603	20	23	604.8	23
Spencer, Ind.	14	6	7	15.2	6
		20	26	20.1	24
		28	28	14.1	28
Eliston, Ind.	18	6	8	20.2	7
		19	Mar. 2	25.4	24
Newberry, Ind.	18	24	28	19.6	25
Edwardsport, Ind.	15	8	10	16.9	9
		M	Mar. 4	21.9	26
Petersburg, Ind.	16	20	Mar. 6	23.1	28
Hazleton, Ind.	16	21	M	24.1	28
Zionsville, Ind.	7	20	20	D7.0	20
		22	22	7.85	22
Skillet Fork: Wayne City, Ill.	15	22	24	#16.8	23
Little Wabash: Wilcox, Ill.	16	7	7	#19.55	7
		19	Mar. 1	#20.4	24
Carmi, Ill.	27	23	Mar. 1	#28.2	27
Wabash: Bluffton, Ind.	10	20	21	10.6	20
		23	23	10.9	22
Wabash, Ind.	12	5	5	12.3	5
		20	20	12.4	20
		22	23	12.2	22
		25	27	12.5	23
LaFayette, Ind.	11	5	8	15.8	6
		19	Mar. 3	15.8	23
Montezuma, Ind.	14	6	8	16.1	7
		19	Mar. 5	20.5	23
Terre Haute, Ind.	14	6	8	14.4	7
		20	Mar. 5	18.0	24
Hutsonville, Ill.	20	23	Mar. 3	21.0	27
Riverton, Ind.	18	24	Mar. 2	18.7	27
Vincennes, Ind.	16	23	Mar. 5	18.6	28
Mt. Carmel, Ill.	17	22	Mar. 8	23.8	Mar. 2
New Harmony, Ind.	15	25	Mar. 8	#17.9	Mar. 3
Harpeth: Kingston Springs, Tenn.	15	6	6	16.8	6
		22	22	16.9	22
South Chickamauga Creek: Chickamauga(nr), Tenn.	10	2	7	12.95	6
		22	24	11.3	23
		26	28	11.9	27
Elk: Fayetteville, Tenn.	659	22	22	660.9	22

FLOOD STAGE DATA

(All dates in February unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
MISSISSIPPI SYSTEM	*Ft.*			*Ft.*	
Tennessee: Whitesburg, Ala.	560	22	22	560.1	22
		22	25	560.8	24
		26	Mar. 2	562.1	28
Florence, Ala.	419	22	23	419.9	22
Gilbertsville, Ky.	320	12	15	320.7	13
		22	Mar. 16	330.4	25
Ohio: Tell City, Ind.	38	23	Mar. 1	#40.6	25
Dam 47, Newburgh, Ind.	38	23	Mar. 4	#42.6	27
Dam 48, Cypress, Ind.	38	24	Mar. 5	#42.4	27
Mt. Vernon, Ind.	35	23	Mar. 7	#40.0	28-Mar.1
Dam 49, Uniontown, Ky.	37	24	Mar. 8	#42.6	Mar. 2
Shawneetown, Ill.	33	11	13	#33.4	12
		22	Mar. 16	#42.3	Mar. 2
Dam 50, Fords Ferry, Ky.	34	11	14	#35.7	13
		21	Mar. 17	#45.3	Mar. 3
Dam 51, Golconda, Ill.	40	26	Mar. 8	42.6	Mar. 3
Paducah, Ky.	39	24	Mar. 10	42.3	Mar. 4
Dam 52, Brookport, Ill.	37	23	Mar. 13	43.2	Mar. 4
Dam 53, Grand Chain, Ill.	42	23	Mar. 15	49.1	Mar. 4
Cairo, Ill.	40	23	Mar. 15	48.2	Mar. 5
White Basin					
Cache: Patterson, Ark.	7	Dec. 19	1	9.0	(Dec. 24
					(Dec. 28
		14	1	8.6	Mar. 1

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
MISSISSIPPI SYSTEM	*Ft.*			*Ft.*	
Lower Mississippi Basin					
St. Francis: Fisk, Mo.	20	25	28	20.4	26
St. Francis, Ark.	18	22	Mar. 4	19.5	23
Big Black: Bovina, Miss.	28	26	Mar. 24	38.3	Mar 4
Mississippi: New Madrid, Mo.	34	25	Mar. 12	37.5	Mar. 6
Caruthersville, Mo.	32	25	Mar. 14	36.5	Mar. 6-7
PACIFIC SLOPE DRAINAGE					
Sacramento Basin					
Sacramento: Tisdale Weir, Calif.	W45.5	Jan. 16	7	48.7	Jan. 19
Northern Coastal Basin					
Snohomish: Snohomish, Wash.	25	Jan. 31	1	27.4	Jan. 31
Skagit: Mt. Vernon, Wash.	21	Jan. 31	1	22.5	Jan. 31

* Provisional
1/ Continued at end of month
\# Highest stage observed
Record stage
B Bankfull
E Estimated
F Fluctuating stages briefly below flood stage on 19th & 21st-22d
J Ice jam
M Missing
T Tentative
D Well frozen
W Warning stage

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	ALBANY, N. Y. 1005 MB						ALBUQUERQUE, N. MEX. 835 MB						AMARILLO, TEXAS 888 MB						* ANCHORAGE, ALASKA 999 MB						* ANNETTE, ALASKA 1008 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	86	-5.8	-9.2	26	1.5	28	1,019	-1.1	-11.3	33	.8	28	1,095	-1.6	-7.8	29	1.8	28	45	-6.5	-11.3	36	.8	28	37	1.5	-1.5	13	3.3
1000	28	126			7	1.8	28	158					28	132					28	37			04	1.9	28	100			13	3.3
950	28	530	-5.3	-9.0	25	4.7	28	578					28	548					28	438	-7.0	-12.2	04	1.6	28	511	-1.3	-4.5	16	6.5
900	28	953	-7.2	-10.3	26	7.1	28	1,017					28	983					28	859	-7.8	-13.1	12	2.6	28	941	-3.6	-6.5	18	7.4
850	28	1,398	-8.5	-13.2	26	8.8	28	1,477					28	1,442	1.9	-8.0	29	3.6	28	1,302	-10.4	-15.1	14	4.1	28	1,391	-5.8	-9.3	20	8.0
800	28	1,868	-8.7	-13.7	26	11.4	28	1,964	.8	-15.2	30	3.1	28	1,930	.9	-9.8	29	4.8	28	1,767	-12.7	-17.0	15	5.6	28	1,864	-8.4	-12.0	22	8.6
750	28	2,368	-9.8	-16.4	26	13.6	28	2,479	-2.3	-16.1	30	6.9	28	2,447	-.8	-11.9	28	7.7	28	2,257	-14.9	-19.7	17	6.2	28	2,363	-10.8	-15.5	22	9.4
700	28	2,899	-11.3	-19.3	26	16.0	28	3,023	-6.1	-16.9	30	9.9	28	2,995	-3.6	-15.2	28	9.9	28	2,777	-17.6	-22.7	19	6.4	28	2,890	-13.8	-18.8	23	9.7
650	28	3,465	-13.9	-22.0	26	17.4	28	3,600	-9.2	-20.9	29	11.8	28	3,577	-7.4	-18.9	27	12.1	28	3,329	-20.7	-25.4	20	7.8	28	3,450	-17.0	-22.8	24	10.2
600	28	4,069	-17.0	-24.9	27	19.2	28	4,215	-12.6	-25.1	28	13.3	28	4,196	-11.2	-23.0	27	14.2	28	3,916	-24.3	-28.7	22	8.6	28	4,046	-21.0	-27.4	24	10.8
550	28	4,718	-20.4	-29.9	27	21.3	28	4,879	-16.3	-29.6	28	16.4	28	4,858	-15.7	-27.3	27	16.1	28	4,548	-27.9	-31.8	22	9.4	28	4,682	-25.1	-29.7	25	11.6
500	28	5,410	-25.2	-34.4	27	22.7	28	5,586	-20.8	-33.8	28	19.9	28	5,570	-20.3	-31.7	27	17.4	28	5,225	-32.3	-36.3	23	10.9	27	5,369	-29.5	-34.7	26	12.5
450	28	6,173	-30.4	-39.2	27	24.7	28	6,357	-25.6	-38.8	28	21.9	28	6,343	-25.7	-37.5	26	19.4	28	5,960	-37.4	-39.7	23	12.0	27	6,113	-34.7	-38.8	27	13.2
400	28	7,001	-36.2	-43.8	27	26.5	28	7,201	-31.9	-45.2	28	23.0	28	7,184	-32.6	-42.7	27	21.4	28	6,764	-43.0	-41.8	24	13.4	27	6,925	-40.6	-42.4	27	15.3
350	27	7,922	-42.0	-48.0	27	30.9	28	8,133	-39.2	-50.8	28	22.5	28	8,114	-39.4	-47.6	27	23.9	28	7,656	-48.7		23	13.5	27	7,825	-46.4		28	16.5
300	27	8,950	-47.6		27	34.1	28	9,169	-46.8		28	23.4	28	9,151	-46.8		27	26.7	28	8,655	-53.6		22	14.4	27	8,835	-51.5		28	17.8
250	26	10,138	-52.8		27	37.3	28	10,359	-53.3		27	25.2	28	10,342	-52.9		26	32.6	28	9,822	-55.2		24	14.8	27	10,009	-54.3		29	18.4
200	26	11,374	-53.5		27	35.1	28	11,789	-54.3		27	26.3	28	11,777	-52.8		27	33.5	28	11,254	-52.1		23	14.5	27	11,442	-53.0		28	15.5
175	26	12,433	-53.6		27	33.7	28	12,646	-54.5		27	28.9	28	12,638	-53.6		27	30.9	28	12,122	-50.7		24	13.8	27	12,304	-52.4		28	13.9
150	25	13,541	-53.7		27	31.2	27	13,625	-56.5		27	25.9	28	13,623	-56.4		27	29.5	28	13,127	-50.5		24	13.9	26	13,304	-51.6		28	13.6
125	24	14,579	-54.9		27	25.6	27	14,773	-60.3		27	23.1	28	14,772	-59.7		27	25.2	28	14,315	-50.8		24	13.7	26	14,482	-53.4		28	12.0
100	23	15,995	-57.3		27	23.0	27	16,151	-63.6		27	20.4	27	16,151	-62.9		27	19.8	28	15,767	-51.3		24	12.4	26	15,915	-54.3		28	10.4
80	22	17,398	-59.0		27	17.3	26	17,518	-64.4		27	13.4	25	17,522	-64.8		27	11.1	28	17,214	-52.6		24	12.4	24	17,337	-55.1		29	9.1
70	21	18,239	-58.8		27	13.1	25	18,334	-64.2		26	9.0	24	18,337	-64.5		26	10.2	27	18,071	-53.6		24	12.4	24	18,187	-56.5		29	7.5
60	21	19,205	-59.6		27	9.9	25	19,277	-64.1		26	5.7	23	19,281	-64.1		26	7.1	26	19,060	-54.5		24	12.0	23	19,161	-57.0		29	6.6
50	20	20,347	-60.5		29	7.4	21	20,398	-63.2		27	3.6	22	20,397	-63.7		27	6.9	26	20,224	-55.8		24	10.7	23	20,312	-58.2		29	6.3
40	17	21,738	-59.8		28	4.7	17	21,779	-62.5		27	5.0	20	21,775	-62.4		26	6.6	25	21,640	-57.5		25	10.6	21	21,723	-58.9		30	5.2
30	16	23,544	-58.3		29	2.2	13	23,559	-61.1		26	4.6	20	23,557	-61.2		27	4.7	25	23,449	-59.1		26	10.3	21	23,523	-60.2		31	4.5
25	15	25,701	-58.0		28	2.3	10	24,086	-60.2		27	4.3	19	24,692	-60.2		29	4.3	24	24,595	-59.9		26	10.0	21	24,659	-60.9		31	4.1
20	12	26,106	-57.2		26	3.3	9	26,071	-58.8				17	26,084	-59.1		27	3.7	22	25,987	-61.3		26	10.8	21	26,044	-61.8		32	4.8
15	9	27,934	-56.0										14	27,911	-57.1		27	9.1	18	27,759	-62.9		27	11.1	20	27,818	-62.4		31	5.3
10	6	30,547	-53.1										5	30,522	-50.5										14	30,328	-63.2		30	7.1
7																									11	32,551	-61.8			
5																									8	34,634	-59.8			

Standard pressure surface (mb)	ATHENS, GEORGIA 989 MB						* BARROW, ALASKA 1017 MB						BARTER IS., ALASKA 1016 MB						BETHEL, ALASKA 1000 MB						* BISMARCK, N. DAK. 954 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	246	2.3	-2.1	31	.9	28	8	-32.4	-34.1	32	.7	28	15	-34.5	-38.0	26	2.5	20	39	-20.4	-22.6	03	3.2	28	503	-13.1	-16.2	32	1.3
1000	28	151					28	129	-30.5	-33.2	35	1.2	28	123	-32.2	-38.8	27	2.4	20	36			20	.5	28	141				
950	28	569	4.6	-3.2	26	3.0	28	495	-28.1	-30.1	36	1.8	28	488	-28.2	-30.4	25	1.1	20	421	-15.9	-18.4	05	3.2	28	534			32	1.6
900	28	1,010	4.5	-4.8	25	6.0	28	885	-25.8	-28.4	01	1.6	28	880	-24.0	-26.1	15	1.1	20	831	-13.7	-17.2	09	1.8	28	950	-8.9	-13.2	32	5.0
850	28	1,475	3.7	-7.7	26	9.4	28	1,300	-24.7	-28.4	02	1.6	28	1,299	-21.8	-25.5	20	1.2	20	1,265	-14.2	-18.7	17	.6	28	1,395	-7.4	-13.7	32	7.0
800	28	1,967	2.3	-7.8	26	12.2	28	1,741	-25.2	-28.8	01	1.6	28	1,746	-21.7	-25.7	23	2.1	20	1,724	-15.9	-20.1	26	1.6	28	1,866	-8.8	-15.5	31	9.0
750	28	2,486	.4	-10.1	26	14.8	28	2,210	-26.1	-31.3	01	1.3	28	2,221	-22.7	-27.4	24	3.3	20	2,208	-18.2	-23.8	24	4.1	28	2,364	-10.6	-17.9	31	10.5
700	28	3,037	-1.9	-12.4	26	17.5	28	2,707	-27.8	-34.5	31	1.4	28	2,726	-24.4	-29.4	25	4.7	20	2,721	-20.8	-26.7	24	4.5	28	2,893	-13.3	-20.1	31	11.1
650	28	3,624	-4.8	-16.3	26	19.3	28	3,237	-30.0	-35.7	26	2.2	28	3,263	-26.9	-32.4	25	6.4	20	3,266	-23.5	-29.3	23	6.3	28	3,454	-16.1	-23.3	31	11.6
600	28	4,249	-8.7	-21.8	26	20.8	28	3,804	-32.9	-39.0	25	3.2	28	3,837	-29.5	-35.4	25	8.2	20	3,848	-26.9	-32.7	22	7.3	28	4,053	-19.3	-27.0	31	11.9
550	28	4,918	-13.1	-26.0	26	23.5	28	4,412	-36.1	-41.2	26	4.7	28	4,454	-32.8	-38.4	25	10.0	20	4,471	-30.4	-36.6	22	8.8	28	4,695	-23.2	-31.1	30	12.8
500	28	5,637	-18.1	-30.0	26	24.8	28	5,069	-39.8	-43.7	26	6.0	28	5,120	-36.7	-40.7	25	12.1	20	5,143	-34.4	-38.7	23	11.9	28	5,386	-28.0	-35.3	30	13.5
450	28	6,416	-23.6	-34.0	26	26.7	28	5,783	-43.9	-43.5	25	7.5	28	5,843	-41.0	-40.1	25	13.6	20	5,873	-39.0	-38.8	23	13.3	28	6,135	-33.2	-38.8	30	14.4
400	28	7,266	-30.1	-38.5	26	28.3	28	6,567	-48.2		24	8.7	28	6,635	-46.1		25	16.5	20	6,672	-44.2	-41.7	23	14.7	28	6,953	-39.0	-44.1	29	15.9
350	28	8,206	-37.1	-44.5	26	31.1	28	7,442	-51.7		24	8.7	28	7,517	-50.8		25	15.9	20	7,560	-49.3		23	14.9	28	7,859	-45.1		29	17.8
300	28	9,252	-44.6		26	34.9	27	8,431	-54.2		24	10.0	28	8,510	-54.0		25	17.4	20	8,558	-53.6		24	15.0	28	8,870	-51.9		29	18.4
250	28	10,452	-51.3		26	40.3	27	9,603	-52.7		25	9.8	28	9,680	-53.3		26	15.6	20	9,730	-52.8		24	13.9	28	10,042	-55.1		29	19.5
200	28	11,897	-52.8		27	46.1	27	11,049	-50.9		26	10.4	28	11,129	-50.3		26	16.0	20	11,180	-49.6		24	12.5	28	11,471	-52.4		29	17.4
175	28	12,754	-55.7		26	44.9	27	11,918	-51.1		26	11.3	27	12,000	-49.9		26	16.9	20	12,057	-48.8		24	11.6	28	12,337	-51.3		29	17.0
150	28	13,728	-59.1		27	42.2	27	12,921	-51.3		26	12.7	27	13,009	-49.8		26	17.0	20	13,069	-49.0		23	12.2	28	13,339	-51.6		29	15.8
125	28	14,859	-63.7		26	35.1	27	14,105	-51.7		26	13.8	27	14,201	-50.3		26	17.2	20	14,267	-49.1		23	12.0	28	14,517	-53.7		29	15.0
100	28	16,214	-67.2		26	27.2	27	15,550	-52.4		26	16.4	27	15,655	-51.1		26	18.3	20	15,729	-49.5		23	11.2	28	15,944	-56.0		29	12.4
80	28	17,554	-68.5		27	16.2	27	16,989	-53.7		26	17.1	26	17,106	-52.3		27	20.4	20	17,189	-50.3		23	10.8	28	17,360	-57.6		29	8.9
70	28	18,357	-67.7		27	12.3	27	17,846	-54.6		26	18.0	26	17,909	-52.9		27	21.6	20	18,058	-51.3		24	11.1	27	18,199	-58.1		30	8.3
60	28	19,289	-65.9		27	9.3	27	18,831	-55.4		26	19.1	26	18,962	-53.8		27	21.0	20	19,058	-52.5		24	11.8	26	19,168	-59.3		30	6.6
50	26	20,398	-64.0		28	6.4	27	19,991	-56.6		26	20.3	26	20,130	-55.0		27	20.8	20	20,233	-53.7		24	11.0	26	20,307	-59.9		31	5.9
40	25	21,769	-62.8		30	6.6	24	21,385	-58.1		26	21.3	25	21,549	-56.3		27	22.7	20	21,662	-55.1		24	12.0	26	21,699	-60.5		32	4.5
30	22	23,555	-60.7		29	3.8	18	23,169	-60.1		26	23.8	25	23,365	-58.9		27	23.4	18	23,493	-56.9		25	11.6	26	23,490	-60.8		33	2.4
25	22	24,695	-59.0		28	5.9	11	24,302	-61.8				24	24,506	-60.0		27	22.8	18	24,645	-58.2		25	11.6	26	24,622	-61.3		34	2.0
20	21	26,104	-56.7		26	6.9	5	25,776	-61.1				21	25,875	-61.5		27	23.8	17	26,037	-59.7		25	12.6	26	26,007	-61.2		32	2.6
15	17	27,937	-54.2		25	7.2							16	27,678	-62.8		27	22.6	10	27,871	-60.9				23	27,785	-60.9		29	4.4
10	16	30,582	-46.5		27	18.8																			22	30,321	-59.7		28	7.6
7	9	33,017	-38.3																						14	32,546	-36.9			

Standard pressure surface (mb)	BOISE, IDAHO 917 MB						* BROWNSVILLE, TEXAS 1014 MB						BUFFALO, N. Y. 987 MB						CAPE HATTERAS, N. C. 1018 MB						* CARIBOU, MAINE 992 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	871	.4	-5.4	14	.9	28	7	16.2	12.6	13	1.7	28	218	-4.2	-7.3	25	4.0	28	4	6.3	3.8	31	1.9	28	191	-12.5	-15.2	01	1.4
1000	28	169					28	120	16.8	13.6	13	3.4	28	114					28	151	8.7	2.3	28	2.8	28	123				
950	28	586					28	558	15.0	10.5	16	7.6	28	519	-5.0	-8.0	24	7.2	28	575	6.9	-2.2	26	5.2	28	517	-11.5	-14.4	28	1.8
900	28	1,022	1.4	-5.8	27	.5	28	1,015	13.6	4.8	18	7.8	28	943	-6.5	-9.5	25	10.6	28	1,018	5.1	-6.5	25	8.4	28	931	-11.8	-15.2	26	3.2
850	28	1,482	-.1	-8.0	30	4.8	28	1,496	12.5	-3.4	20	6.8	28	1,390	-7.7	-10.6	25	12.3	28	1,483	3.2	-8.4	25	11.2	28	1,369	-11.9	-16.9	26	6.0
800	28	1,965	-3.1	-9.8	30	6.6	28	2,003	10.8	-7.5	22	6.7	28	1,861	-8.7	-12.2	26	12.8	28	1,973	1.5	-11.3	25	13.5	28	1,833	-12.5	-17.9	26	8.2
750	28	2,473	-5.9	-13.3	30	8.5	28	2,539	8.6	-11.8	24	8.5	28	2,360	-10.3	-14.6	27	14.4	28	2,491	-.2	-13.0	26	16.2	28	2,325	-13.8	-19.1	26	10.2
700	28	3,011	-8.8	-16.8	30	9.2	28	3,106	5.5	-16.9	25	10.8	28	2,890	-12.1	-17.5	27	16.0	28	3,041	-2.6	-15.5	26	19.0	28	2,848	-15.5	-22.2	26	11.6
650	28	3,582	-12.0	-21.4	30	10.2	28	3,707	1.6	-19.4	26	12.1	28	3,455	-14.2	-20.6	27	16.8	28	3,626	-5.3	-20.4	26	21.5	28	3,405	-17.6	-25.5	26	13.0
600	28	4,190	-15.5	-25.2	31	11.6	28	4,340	-3.0	-22.9	26	13.3	28	4,059	-17.2	-22.7	26	18.2	28	4,251	-8.6	-23.3	26	23.5	28	4,002	-20.5	-28.7	27	15.2
550	28	4,842	-19.7	-28.9	30	13.5	28	5,028	-8.0	-26.6	26	15.4	28	4,707	-20.9	-27.6	27	20.8	28	4,920	-12.9	-27.0	26	26.0	28	4,641	-23.8	-32.3	27	17.2
500	28	5,543	-24.4	-33.0	30	14.6	28	5,761	-13.1	-31.9	26	17.4	28	5,405	-25.4	-32.3	26	22.6	28	5,640	-17.8	-30.7	26	28.7	28	5,332	-28.1	-35.1	27	19.8
450	28	6,301	-30.4	-37.2	30	15.6	28	6,555	-18.9	-36.1	26	20.3	28	6,162	-30.6	-37.2	27	21.7	28	6,419	-23.2	-35.8	26	30.2	28	6,081	-32.9	-40.6	27	21.4
400	28	7,128	-36.5	-42.8	30	16.0	28	7,421	-25.4	-42.2	26	23.6	28	6,988	-36.5	-41.7	26	21.7	28	7,271	-29.4	-40.4	26	33.0	28	6,900	-38.3	-44.2	27	24.0
350	28	8,044	-43.0	-47.6	30	17.3	27	8,379	-32.1	-47.5	26	27.8	28	7,905	-42.4	-44.4	26	25.8	28	8,214	-36.5	-45.0	26	33.8	28	7,811	-43.7	-50.4	27	26.5
300	28	9,065	-49.8		30	20.3	27	9,447	-40.1	-52.4	26	32.4	28	8,930	-48.5		26	30.8	28	9,262	-44.3		26	35.1	28	8,831	-49.4		26	28.2
250	28	10,242	-55.8		31	23.0	27	10,670	-47.1		26	38.0	28	10,117	-52.8		26	31.3	28	10,466	-50.7		27	36.8	28	10,015	-53.0		27	31.3
200	28	11,650	-56.8		31	21.3	27	12,132	-52.5		26	39.1	28	11,556	-52.6		26	29.7	28	11,906	-53.3		27	42.8	28	11,454	-52.5		27	28.1
175	28	12,508	-54.6		31	18.8	26	12,985	-56.8		25	39.2	28	12,420	-52.3		27	29.8	28	12,764	-54.7		27	46.0	28	12,319	-51.7		27	27.1
150	28	13,493	-55.6		30	17.4	25	13,949	-62.0		25	34.8	28	13,417	-53.0		27	27.1	28	13,744	-57.9		27	43.0	28	13,318	-52.4		27	24.6
125	26	14,648	-56.9		30	15.0	25	15,060	-68.2		25	31.1	28	14,587	-55.2		27	22.8	28	14,883	-61.6		27	36.6	28	14,693	-53.5		27	23.0
100	26	16,054	-58.7		29	11.3	21	16,379	-74.0		25	24.1	26	16,004	-57.4		27	18.8	28	16,254	-65.0		27	28.4	28	15,924	-54.9		27	18.0
80	24	17,449	-59.7		30	9.0	18	17,662	-76.5		25	16.1	25	17,407	-59.2		27	15.3	27	17,610	-66.1		27	18.9	27	17,340	-56.2		27	16.3
70	24	18,283	-60.2		30	6.8	18	18,436	-74.4		25	10.8	24	18,244	-59.4		27	12.2	27	18,421	-65.3		27	15.1	26	18,193	-56.5		27	13.5
60	24	19,243	-61.1		31	5.2	17	19,348	-68.3		25	5.0	23	19,206	-59.8		27	9.6	27	19,361	-64.5		27	11.6	26	19,169	-57.5		28	11.3
50	24	20,374	-61.1		31	3.7	15	20,459	-63.6		26	2.7	22	20,345	-60.0		28	7.5	27	20,479	-63.1		29	7.3	25	20,315	-57.8		28	9.5
40	22	21,757	-61.9		33	3.6	15	21,832	-62.7		28	2.1	19	21,733	-60.4				27	21,858	-61.4		29	6.0	24	21,719	-58.5		28	6.6
30	16	23,544	-61.7		36	3.4	14	23,612	-61.4		02	.4	15	23,520	-59.5				25	23,660	-58.3		28	5.4	24	23,527	-58.6		27	4.9
25	15	24,682	-60.8		36	2.3	13	24,748	-59.5		28	2.3	13	24,661	-58.8				25	24,812	-56.8		27	5.7	23	24,675	-58.4		26	5.3
20	12	26,071	-60.2		33	1.6	12	26,150	-55.7		31	6.3	13	26,067	-57.4				24	26,228	-55.0		26	6.8	22	26,084	-57.1		26	5.5
15	12	27,869	-59.7				9	28,013	-51.8				11	27,905	-56.3				23	28,075	-53.1		27	11.6	19	27,903	-57.3		26	8.3
10							9	30,696	-44.2				8	30,479	-54.8				17	30,719	-46.3		26	15.8	9	30,501	-55.2			
7							7	33,127	-33.4										7	33,105	-39.3									

See reference note at end of table

RAWINSONDE DATA

Average monthly values

CHARLESTON, S. C. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	13	[illegible]	2.3	26	1.1
1000	28	153	8.6	1.4	26	2.0
950	28	578	8.5	[illegible]	24	5.7
900	28	[illegible]	7.5	-1.9	24	9.1
850	28	[illegible]	6.1	-5.5	25	[illegible]
800	28	[illegible]	[illegible]	-7.9	25	13.8
750	28	[illegible]	[illegible]	-8.4	25	15.4
700	28	[illegible]	[illegible]	-12.3	26	16.7
650	28	3,657	-3.4	-17.4	26	18.8
600	28	[illegible]	-7.0	-21.4	26	20.8
550	28	[illegible]	-11.6	-26.4	26	22.2
500	28	5,682	-16.6	-31.0	25	24.7
450	28	6,466	-22.0	-35.9	26	26.5
400	28	7,321	-28.3	-40.5	26	28.7
350	28	8,268	-35.6	-45.5	26	31.0
300	28	9,319	-43.4		26	33.2
250	28	10,526	-50.1		26	39.4
200	27	11,966	-52.7		27	45.6
175	27	12,823	-55.5		27	43.8
150	27	13,799	-59.3		27	42.5
125	27	14,928	-64.1		27	36.8
100	27	16,280	-68.3		27	27.8
80	27	17,613	-69.6		27	19.9
70	27	18,412	-67.7		27	13.0
60	27	19,349	-66.6		27	10.8
50	27	20,453	-64.2		29	8.1
40	25	21,821	-62.5		30	5.7
30	24	23,616	-58.6		28	5.6
25	24	24,765	-57.4		28	5.4
20	23	26,183	-55.7		25	5.6
15	21	28,028	-52.1		25	9.0
10	14	30,663	-43.3		25	13.2
[illegible]	5	33,[illegible]	-40.6			

CHATHAM, MASS. — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	16	-1.6	-4.4	24	1.7
1000	27	119	-2.0	-7.3	18	3.1
950	27	527	-3.3	-9.5	27	6.9
900	27	954	-4.8	-11.5	27	8.6
850	27	1,403	-5.4	-12.8	27	10.5
800	27	1,878	-6.6	-15.2	26	12.6
750	27	2,381	-8.0	-17.7	26	14.7
700	27	2,916	-9.9	-20.2	26	16.6
650	27	3,485	-13.0	-24.5	26	19.1
600	27	4,093	-15.5	-27.7	26	22.2
550	27	4,744	-19.5	-31.0	26	22.9
500	27	5,446	-24.1	-34.7	26	25.1
450	27	6,207	-28.9	-39.1	26	27.4
400	27	7,040	-34.7	-43.4	26	30.2
350	27	7,964	-40.5	-47.3	26	32.3
300	27	8,998	-46.5		27	35.0
250	27	10,194	-51.6		27	36.7
200	27	11,636	-53.1		27	35.8
175	27	12,497	-52.9		27	34.1
150	27	13,490	-54.0		27	30.5
125	27	14,655	-56.3		27	27.5
100	27	16,063	-59.0		27	23.8
80	26	17,458	-59.6		27	17.4
70	26	18,293	-60.0		27	14.7
60	26	19,256	-59.7		28	11.4
50	24	20,403	-59.9		26	7.7
40	24	21,797	-59.8		26	5.4
30	24	23,601	-58.4		27	3.9
25	23	24,747	-57.5		27	5.3
20	20	26,147	-56.5		28	8.7
15	19	27,977	-55.1		28	10.7
10	16	30,580	-51.8		26	12.0

CHIHUAHUA, MEXICO — 855 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,428	5.4	-7.5	25	1.5
1000	28	125				
950	28	555				
900	28	1,004				
850	28	1,474	7.6	-8.1	26	2.1
800	28	1,976	8.3	-8.3	26	5.4
750	28	2,506	5.6	-11.1	27	8.3
700	28	3,067	2.7	-15.4	26	10.8
650	28	3,663	-.7	-19.2	26	11.9
600	28	4,297	-5.0	-22.4	26	13.0
550	28	4,975	-9.9	-25.9	27	14.6
500	28	5,702	-15.0	-29.9	27	17.5
450	28	6,491	-20.2	-33.9	25	19.7
400	28	7,353	-26.8	-38.8	27	19.6
350	28	8,305	-34.2	-45.7	27	22.4
300	28	9,362	-42.3	-49.9	27	22.9
250	28	10,573	-50.2		26	25.1
200	28	12,016	-53.6		26	28.1
175	26	12,873	-56.3		26	26.9
150	26	13,842	-60.7		26	24.6
125	25	14,961	-66.1		26	23.1
100	23	16,299	-70.5		26	18.1
80	21	17,618	-71.4			
70	20	18,405	-71.2			
60	19	19,331	-66.7			
50	19	20,444	-62.7			
40	19	21,822	-62.2		25	3.5
30	19	23,603	-61.1		26	4.8
25	19	24,740	-59.2		27	5.8
20	19	26,150	-56.0		27	6.8
15	18	27,995	-53.3		28	9.4
10	15	30,668	-44.2			

* COLD BAY, ALASKA — 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	30	-3.7	-5.4	23	.8
1000	27	-3			27	3.1
950	27	401	-5.9	-8.6	25	.9
900	27	823	-8.1	-10.9	28	.8
850	27	1,266	-9.6	-13.8	26	1.9
800	27	1,733	-11.1	-16.2	24	2.4
750	27	2,227	-13.7	-19.8	24	4.0
700	27	2,748	-16.5	-22.7	24	5.1
650	27	3,303	-19.2	-25.2	23	6.5
600	27	3,895	-22.6	-29.0	22	7.4
550	27	4,528	-26.8	-33.3	21	9.4
500	27	5,209	-31.2	-36.2	21	9.2
450	27	5,948	-36.3	-38.0	22	9.6
400	27	6,756	-41.8	-41.8	22	10.7
350	27	7,653	-47.3		22	12.7
300	27	8,658	-52.5		22	14.7
250	27	9,831	-53.7		21	14.1
200	27	11,273	-51.1		22	12.7
175	27	12,143	-50.2		21	13.3
150	26	13,145	-49.4		21	13.2
125	25	14,341	-49.8		21	12.7
100	24	15,791	-50.0		20	11.8
80	24	17,244	-51.3		21	11.2
70	23	18,109	-51.9		21	10.9
60	21	19,108	-53.0		21	9.8
50	20	20,283	-54.2		21	8.3
40	20	21,710	-55.6		21	7.2
30	20	23,537	-57.1		22	5.6
25	20	24,688	-57.9		22	4.6
20	19	26,100	-58.9		23	3.5
15	17	27,911	-59.7		26	4.3
10	14	30,431	-61.1		26	7.1
[illegible]	12	32,648	-62.1			

DAYTON, OHIO — 979 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	299	-2.9	-6.7	23	2.0
1000	28	130				
950	28	538	-2.7	-7.6	24	6.8
900	28	967	-3.3	-8.3	26	11.3
850	28	1,419	-3.8	-11.2	26	13.2
800	28	1,896	-5.4	-13.8	27	13.9
750	28	2,402	-7.0	-15.8	27	16.2
700	28	2,938	-9.1	-18.5	27	18.4
650	28	3,509	-11.6	-21.6	26	20.6
600	28	4,118	-14.8	-24.0	26	23.5
550	28	4,772	-18.8	-28.2	26	24.7
500	28	5,476	-23.1	-32.3	26	26.8
450	28	6,240	-28.1	-36.5	26	29.6
400	28	7,076	-33.9	-42.5	26	31.7
350	28	8,001	-40.5	-45.9	26	35.1
300	28	9,032	-47.8		26	36.5
250	28	10,222	-51.9		26	40.4
200	28	11,667	-51.9		26	38.9
175	28	12,532	-52.6		26	38.2
150	28	13,524	-54.4		27	33.7
125	28	14,686	-56.7		27	29.9
100	28	16,090	-60.1		27	24.1
80	28	17,477	-61.5		27	18.2
70	27	18,304	-61.4		27	14.1
60	26	19,261	-61.9		27	11.2
50	26	20,388	-62.2		28	8.5
40	25	21,768	-61.7		29	6.4
30	24	23,554	-60.9		29	4.5
25	24	24,692	-59.7		28	4.2
20	22	26,096	-58.4		27	4.0
15	17	27,919	-55.7		27	6.8

DEL RIO, TEXAS — 978 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	314	8.4	.4	16	1.9
1000	28	[illegible]				
950	28	[illegible]	9.7	.3	14	2.1
900	28	1,006	9.4	-1.8	19	3.5
850	28	1,479	8.6	-3.1	23	4.8
800	28	1,980	7.4	-8.5	26	7.1
750	28	2,510	5.6	-13.7	27	9.2
700	28	3,070	2.4	-17.1	26	11.4
650	28	3,665	-1.3	-20.2	26	13.9
600	28	4,298	-5.5	-24.2	26	16.5
550	28	4,974	-10.4	-27.4	26	17.5
500	28	5,700	-15.6	-31.8	26	20.7
450	28	6,487	-21.1	-37.3	26	22.4
400	28	7,345	-27.6	-42.4	26	26.5
350	28	8,295	-34.7	-47.4	26	29.8
300	28	9,350	-42.9	-50.3	26	32.9
250	28	10,559	-49.9		26	37.0
200	28	12,007	-52.9		26	41.7
175	27	12,861	-56.1		26	41.8
150	27	13,832	-60.2		26	37.8
125	27	14,954	-65.7		25	33.9
100	25	16,295	-70.3		26	26.0
80	25	17,612	-72.1		26	17.5
70	24	18,401	-70.6		25	11.2
60	23	19,323	-66.7		26	8.4
50	21	20,434	-62.5		26	6.1
40	21	21,812	-62.1		27	4.8
30	21	23,593	-61.3		28	3.8
25	19	24,727	-59.6		30	2.9
20	19	26,134	-56.8		28	5.6
15	18	27,983	-52.3		28	9.2
10	15	30,618	-46.1		27	18.9

DENVER, COLO. — 833 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,611	-4.9	-9.7	23	1.5
1000	28	146				
950	28	560				
900	28	993				
850	28	1,447				
800	28	1,927	-1.8	-11.9	29	3.9
750	28	2,439	-4.3	-15.1	30	6.0
700	28	2,979	-7.6	-18.3	31	8.0
650	28	3,552	-11.6	-20.8	31	10.4
600	28	4,161	-15.7	-23.6	31	11.6
550	28	4,812	-19.6	-28.6	30	12.2
500	28	5,513	-24.4	-33.5	29	12.6
450	28	6,272	-30.0	-37.6	29	12.9
400	27	7,099	-36.2	-42.2	29	14.4
350	27	8,015	-42.8	-46.1	29	15.2
300	26	9,046	-49.3		29	16.1
250	26	10,228	-53.6		29	18.7
200	26	11,659	-53.6		28	19.1
175	26	12,519	-53.4		28	19.5
150	26	13,509	-54.5		28	19.3
125	26	14,672	-56.6		28	17.4
100	26	16,074	-59.7		27	14.5
80	26	17,465	-61.1		28	10.5
70	26	18,294	-61.2		27	8.8
60	23	19,250	-61.7		28	6.6
50	22	20,379	-62.7		28	4.3
40	20	21,758	-62.9		30	4.1
30	17	23,539	-61.5		30	3.1
25	13	24,667	-60.8		29	3.7
20	11	26,051	-59.2		29	4.7
15	9	27,849	-58.6			

DODGE CITY, KANS. — 922 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	791	-3.6	-7.4	30	1.7
1000	27	139				
950	27	550				
900	27	980	-.6	-8.2	31	3.2
850	27	1,438	-.2	-10.7	32	6.6
800	27	1,922	-1.2	-12.9	31	6.8
750	27	2,435	-3.7	-13.6	30	7.3
700	27	2,977	-6.4	-16.2	29	9.4
650	27	3,553	-9.6	-19.2	28	10.9
600	27	4,167	-13.5	-23.9	28	13.4
550	27	4,823	-17.9	-28.5	28	15.8
500	27	5,529	-22.4	-33.3	27	17.8
450	27	6,295	-27.6	-38.6	27	20.1
400	27	7,132	-33.8	-43.6	27	22.0
350	27	8,057	-40.8	-48.2	26	24.6
300	27	9,087	-48.2		27	26.5
250	27	10,270	-54.2		26	29.6
200	26	11,695	-53.8		26	30.6
175	26	12,555	-53.2		26	29.8
150	26	13,545	-54.9		27	27.4
125	26	14,703	-57.5		27	24.1
100	24	16,100	-61.2		27	17.9
80	22	17,479	-62.9		27	13.3
70	21	18,298	-63.3		27	10.0
60	21	19,245	-63.2		27	8.3
50	20	20,369	-62.8		28	6.5
40	19	21,742	-62.5		30	3.8
30	13	23,520	-61.6		28	4.9
25	12	24,653	-61.0		28	6.1
20	11	26,044	-59.5			
15	5	27,856	-59.4			

EL PASO, TEXAS — 880 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,193	4.4	-10.9	26	1.6
1000	28	137				
950	28	564				
900	28	1,009				
850	28	1,478	7.1	-8.2	28	3.8
800	28	1,974	4.8	-9.7	28	7.6
750	28	2,497	1.6	-11.6	28	10.6
700	28	3,050	-1.5	-15.6	27	12.6
650	28	3,636	-4.7	-19.6	28	13.9
600	28	4,262	-8.3	-23.5	27	14.8
550	28	4,931	-12.9	-28.1	27	16.5
500	28	5,651	-18.2	-31.5	27	18.9
450	28	6,429	-23.9	-35.5	27	21.3
400	28	7,278	-29.8	-41.6	27	24.4
350	28	8,220	-36.4	-46.8	27	27.5
300	28	9,269	-43.9		27	30.0
250	28	10,473	-51.4		27	33.0
200	28	11,909	-53.5		26	36.1
175	28	12,765	-55.2		26	36.0
150	28	13,743	-58.4		27	32.0
125	28	14,878	-62.8		26	29.7
100	28	16,238	-67.2		26	22.5
80	28	17,582	-68.1		26	14.2
70	28	18,384	-67.9		26	11.6
60	26	19,318	-64.9		26	7.0
50	26	20,437	-63.1		26	5.0
40	25	21,814	-61.7		26	5.6
30	23	23,606	-60.5		26	6.0
25	21	24,751	-58.4		27	5.6
20	20	26,156	-57.5		27	8.0
15	17	27,981	-53.7		27	14.0

ELY, NEV. — 807 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,908	-4.3	-8.9	22	2.2
1000	28	184				
950	28	601				
900	28	1,037				
850	28	1,493				
800	28	1,974			23	1.8
750	28	2,488	-3.2	-12.2	32	3.3
700	28	3,030	-6.4	-16.1	32	6.4
650	28	3,607	-9.5	-19.4	32	9.2
600	28	4,221	-13.2	-22.9	31	10.5
550	28	4,878	-17.4	-27.3	31	12.4
500	28	5,586	-22.2	-33.2	31	13.7
450	28	6,352	-27.6	-36.1	31	15.1
400	28	7,188	-34.0	-41.6	31	16.2
350	28	8,112	-41.0	-46.5	31	17.6
300	27	9,144	-48.0		31	19.1
250	27	10,329	-54.6		30	21.8
200	27	11,746	-56.1		30	21.8
175	27	12,598	-55.0		30	20.4
150	26	13,589	-55.9		30	19.4
125	26	14,744	-58.2		30	17.4
100	26	16,138	-61.6		29	13.6
80	25	17,510	-62.2		29	10.6
70	24	18,333	-61.5		29	6.9
60	23	19,288	-61.9		30	5.3
50	22	20,416	-62.0		30	3.4
40	21	21,794	-62.1		32	2.8
30	21	23,576	-60.9		32	2.1
25	19	24,714	-59.9		31	2.0
20	18	26,114	-58.9		27	2.5
15	15	27,928	-57.4		27	5.0
10	6	30,545	-52.0			

EMPALME, MEXICO — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	12	9.9	1.4	33	1.5
1000	28	120	15.2	1.0	33	1.9
950	28	556	15.8	-2.2	33	2.3
900	28	1,014	14.0	-5.5	29	1.6
850	28	1,493	11.0	-9.4	27	2.5
800	28	1,996	8.9	-12.6	27	3.4
750	28	2,527	6.4	-16.2	27	4.6
700	28	3,089	2.9	-18.8	27	6.8
650	28	3,684	-1.0	-22.1	27	8.0
600	28	4,318	-5.3	-25.6	27	10.1
550	28	4,995	-9.4	-28.7	27	13.3
500	28	5,724	-14.5	-32.3	27	15.6
450	28	6,514	-20.0	-35.6	27	18.1
400	28	7,376	-26.8	-40.7	27	20.3
350	28	8,327	-34.3	-47.1	27	22.1
300	28	9,384	-42.6	-51.2	27	25.7
250	28	10,591	-51.0		26	27.9
200	28	12,025	-55.1		26	32.8
175	28	12,875	-57.6		26	32.9
150	28	13,842	-61.6		26	29.7
125	28	14,958	-66.9		26	26.6
100	27	16,290	-71.2		26	21.2
80	27	17,600	-73.7		27	14.5
70	26	18,383	-72.8		27	11.0
60	26	19,296	-69.5		27	8.1
50	26	20,394	-65.6		26	6.4
40	25	21,761	-63.4		26	5.9
30	25	23,536	-61.7		26	5.3
25	25	24,671	-59.6		27	6.8
20	22	26,084	-56.8		28	8.9
15	20	27,927	-53.6		27	14.1
10	13	30,571	-45.7			
5						
4						
3						
2						

* FAIRBANKS, ALASKA — 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	135	-20.8	-25.2	27	.4
1000	28	72				
950	28	456	-16.1	-20.0	11	.9
900	28	864	-15.0	-18.4	20	1.9
850	28	1,298	-14.2	-17.9	23	4.7
800	28	1,758	-14.9	-19.0	24	6.6
750	28	2,244	-16.9	-21.4	24	8.6
700	28	2,759	-19.6	-23.9	24	8.5
650	28	3,307	-22.6	-27.4	24	8.8
600	28	3,890	-26.2	-31.0	24	10.0
550	28	4,514	-30.1	-34.4	24	11.9
500	28	5,186	-34.6	-38.5	24	13.9
450	28	5,916	-39.2	-40.3	24	15.8
400	28	6,713	-44.7	-41.7	24	18.2
350	28	7,599	-50.0		25	20.2
300	28	8,593	-54.4		25	20.3
250	28	9,759	-54.4		25	17.8
200	28	11,199	-51.4		25	15.4
175	27	12,067	-50.6		25	14.5
150	27	13,073	-50.2		26	14.8
125	27	14,265	-50.1		26	14.8
100	27	15,720	-51.0		26	14.7
80	25	17,173	-52.5		26	14.3
70	25	18,031	-53.0		26	14.7
60	24	19,024	-54.1		26	15.2
50	24	20,191	-55.3		26	13.6
40	23	21,615	-57.2		27	14.3
30	19	23,424	-59.1		26	15.6
25	19	24,564	-60.2		26	14.4
20	14	25,935	-62.0		27	12.0
15	8	27,719	-63.2			

FLINT, MICH. — 984 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	236	-4.6	-8.2	24	2.7
1000	27	110				
950	27	514	-6.2	-10.1	26	4.8
900	27	936	-7.7	-11.1	26	7.8
850	27	1,380	-8.0	-12.4	26	9.9
800	27	1,851	-8.9	-14.5	27	10.8
750	27	2,350	-10.1	-17.0	27	12.3
700	27	2,880	-11.9	-20.2	27	13.7
650	27	3,444	-14.8	-23.2	27	14.6
600	27	4,046	-18.2	-26.6	27	15.6
550	27	4,692	-21.9	-30.2	26	18.4
500	27	5,387	-26.1	-34.1	26	20.1
450	27	6,142	-31.2	-38.0	26	21.5
400	27	6,967	-36.7	-43.1	26	24.4
350	27	7,882	-42.6	-45.7	26	26.7
300	27	8,906	-48.9		26	28.8
250	27	10,093	-52.5		26	27.0
200	27	11,535	-52.5		26	27.9
175	27	12,400	-51.7		27	27.0
150	27	13,398	-52.7		27	24.4
125	27	14,570	-55.1		27	21.2
100	27	15,987	-57.1		27	19.1
80	27	17,392	-59.1		27	15.4
70	27	18,228	-59.8		28	11.7
60	24	19,192	-60.2		28	10.7
50	23	20,327	-60.7		29	7.7
40	21	21,710	-61.1		29	6.7
30	20	23,500	-60.3		29	5.6
25	18	24,643	-59.6		29	5.3
20	15	26,044	-58.6		28	3.8
15	14	27,865	-56.8		26	6.5
10	10	30,462	-54.7			
[illegible]	5	32,798	-49.7			

FORT WORTH, TEXAS — 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	180	5.9	-1.1	27	.7
1000	28	127				
950	28	548	6.8	-2.7	24	3.2
900	28	993	6.8	-4.5	25	6.0
850	28	1,462	6.0	-7.5	26	7.7
800	28	1,957	4.3	-9.7	26	9.0
750	28	2,480	1.7	-12.5	26	11.2
700	28	3,033	-1.3	-16.5	27	13.3
650	28	3,620	-4.6	-19.4	26	15.5
600	28	4,246	-8.1	-22.4	26	18.3
550	28	4,916	-12.8	-26.7	26	20.2
500	28	5,635	-18.0	-30.5	26	23.1
450	28	6,415	-23.4	-36.7	26	26.8
400	28	7,266	-29.7	-42.2	26	29.5
350	28	8,207	-36.8	-46.3	26	32.5
300	28	9,254	-44.5		26	36.7
250	28	10,456	-50.8		26	39.9
200	28	11,902	-52.5		26	43.3
175	28	12,762	-54.6		26	42.5
150	26	13,738	-57.8		26	39.2
125	25	14,875	-62.3		26	33.6
100	24	16,238	-65.7		26	25.3
80	23	17,588	-66.5		27	15.7
70	22	18,398	-66.5		26	10.5
60	19	19,329	-64.8		26	7.6
50	19	20,449	-62.5		26	6.3
40	19	21,827	-62.3		27	5.6
30	19	23,610	-60.9		28	4.6
25	19	24,747	-59.6		28	4.1
20	19	26,149	-57.6		29	5.3
15	13	27,999	-54.4		27	10.1
10	6	30,662	-46.8			

GLASGOW, MONT. — 932 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	696	-10.9	-14.5	03	.7
1000	28	147				
950	28	545				
900	28	965	-6.2	-10.1	30	4.3
850	28	1,414	-5.3	-12.7	30	8.4
800	28	1,889	-7.0	-15.5	31	9.4
750	28	2,390	-9.6	-17.4	31	10.2
700	28	2,920	-12.7	-19.5	31	10.7
650	28	3,482	-15.9	-22.2	31	11.2
600	28	4,082	-18.9	-27.1	31	12.8
550	28	4,725	-22.9	-31.6	31	13.9
500	28	5,417	-27.8	-35.1	31	14.6
450	28	6,166	-33.1	-38.4	31	15.9
400	28	6,983	-39.2	-42.3	30	17.0
350	28	7,888	-45.9		31	18.0
300	28	8,897	-51.7		31	19.1
250	28	10,072	-54.2		31	19.5
200	28	11,506	-52.1		31	16.5
175	28	12,374	-50.8		30	15.6
150	28	13,378	-51.1		30	14.9
125	28	14,558	-53.1		30	12.9
100	28	15,988	-55.6		30	9.7
80	28	17,406	-56.6		30	8.5
70	28	18,252	-57.1		31	7.3
60	27	19,225	-58.5		31	6.4
50	27	20,369	-59.1		33	5.0
40	27	21,766	-59.7		34	3.7
30	22	23,563	-60.4		36	3.0
25	20	24,698	-60.6		36	7.1
20	14	26,090	-60.7		01	4.3
15	9	27,899	-60.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

FEBRUARY 1971

Standard pressure surface (mb)	GRAND JUNCTION, COLO. 850 MB						• GREAT FALLS, MONT. 884 MB						GREEN BAY, WIS. 986 MB						GREENSBORO, N. C. 985 MB						• GUAM, MARIANA IS. 998 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	1,472	-3.0	-9.8	10	2.2	28	1,118	-2.8	-9.2	23	5.2	28	210	-10.9	-13.6	25	1.1	28	275	-.3	-4.1	26	.8	28	111	24.6	22.2	08	4.5
1000	28	188					28	131					28	97					28	153					28	94				
950	28	584					28	545					28	493	-8.7	-11.0	29	2.8	28	567	3.0	-6.0	26	4.2	28	545	22.2	19.6	08	10.6
900	28	1,018					28	978					28	913	-8.8	-13.4	28	4.0	28	1,005	2.2	-7.5	26	8.0	28	1,013	19.4	15.0	08	10.6
850	28	1,474			11	2.3	28	1,432	-2.6	-11.9	25	9.0	28	1,355	-9.0	-15.2	28	6.3	28	1,466	1.2	-10.2	26	11.2	28	1,504	17.1	9.5	08	8.8
800	28	1,938	-1.7	-11.8	15	1.4	28	1,911	-5.1	-12.8	27	8.9	28	1,825	-9.1	-15.9	28	8.2	28	1,954	.1	-11.8	26	12.7	28	2,021	15.1	3.3	08	7.8
750	28	2,467	-4.8	-13.2	28	1.7	28	2,415	-8.1	-15.1	29	10.1	28	2,324	-10.5	-17.0	28	9.4	28	2,469	-1.5	-13.7	26	15.1	28	2,565	12.4	-2.4	08	7.6
700	28	3,008	-8.7	-15.4	28	5.5	28	2,947	-11.8	-18.6	29	12.2	28	2,852	-12.9	-20.2	28	10.6	28	3,016	-3.9	-18.6	26	17.9	28	3,141	9.6	-7.7	09	6.8
650	28	3,579	-11.9	-18.7	29	7.4	28	3,512	-14.5	-22.5	30	13.0	28	3,414	-15.7	-24.5	28	11.7	28	3,598	-6.4	-21.3	26	20.2	28	3,752	6.0	-11.9	09	6.3
600	28	4,188	-15.2	-23.7	30	9.5	28	4,114	-18.4	-26.7	31	12.8	28	4,015	-19.0	-27.4	28	12.7	28	4,220	-9.8	-24.5	26	23.3	28	4,403	2.1	-15.6	09	5.8
550	28	4,841	-18.9	-28.6	30	11.7	28	4,758	-22.4	-30.5	31	12.8	28	4,658	-22.8	-32.7	28	13.7	28	4,886	-14.1	-28.5	27	25.8	28	5,100	-2.2	-18.5	09	5.3
500	28	5,544	-24.0	-33.9	30	14.0	28	5,451	-27.4	-35.1	31	13.6	28	5,350	-27.3	-37.3	28	14.7	28	5,602	-19.3	-32.0	27	28.4	28	5,851	-6.2	-21.6	08	3.3
450	28	6,305	-29.5	-37.1	30	14.7	28	6,201	-32.9	-37.6	30	15.6	28	6,102	-32.1	-41.5	28	16.9	28	6,378	-24.5	-37.1	27	30.2	28	6,668	-10.8	-27.5	11	2.2
400	28	7,135	-35.4	-44.0	30	17.1	28	7,019	-39.1	-42.1	31	17.1	28	6,924	-37.7	-44.8	27	19.0	28	7,225	-30.7	-40.9	27	29.7	28	7,566	-16.6	-32.6	11	2.7
350	28	8,056	-41.7	-46.9	30	20.1	28	7,924	-45.6	-45.8	31	18.0	28	7,838	-43.5	-49.8	27	20.6	28	8,163	-37.7	-44.8	27	32.9	28	8,558	-23.1	-40.1	08	1.9
300	28	9,082	-48.6		30	22.7	28	8,936	-51.2		31	19.0	28	8,859	-48.5		27	23.1	28	9,206	-45.4		27	35.6	28	9,665	-31.8	-47.7	03	.8
250	28	10,295	-54.0		30	24.1	28	10,111	-55.2		29	20.4	28	10,049	-51.9		27	26.1	28	10,404	-51.6		27	38.8	28	10,929	-41.6		27	1.0
200	28	11,691	-54.6		29	22.9	28	11,534	-54.0		30	17.5	28	11,494	-51.1		27	24.8	27	11,843	-51.8		27	42.4	28	12,402	-54.0		18	1.1
175	28	12,550	-53.3		28	21.7	28	12,395	-52.5		29	15.2	28	12,366	-51.0		27	24.1	27	12,704	-54.3		27	38.8	28	13,246	-60.9		14	1.3
150	28	13,440	-54.5		28	18.7	28	13,390	-53.2		29	15.0	27	13,375	-51.9		27	22.1	27	13,685	-57.3		27	35.8	28	14,186	-68.9		13	2.2
125	28	14,699	-54.7		28	18.2	28	14,563	-54.2		30	12.2	27	14,552	-54.0		27	19.1	27	14,828	-61.0		27	31.8	27	15,256	-76.9		12	4.0
100	28	16,098	-60.5		27	14.0	28	15,986	-56.6		30	9.5	27	15,977	-56.5		27	16.4	26	16,202	-64.0		27	23.6	27	16,512	-84.2		12	7.1
80	24	17,477	-61.9		27	11.5	28	17,397	-57.8		29	7.7	27	17,385	-58.8		27	13.0	25	17,566	-65.3		28	18.8	24	17,742	-84.3		10	6.2
70	24	18,304	-61.7		27	8.7	28	18,237	-59.0		30	7.6	27	18,223	-58.8		27	11.5	25	18,380	-64.8		27	13.7	24	18,491	-78.2		10	5.7
60	24	19,258	-62.0		27	6.9	28	19,203	-59.4		31	6.0	26	19,191	-59.2		28	9.4	25	19,324	-63.7		27	11.8	22	19,385	-71.9		09	6.5
50	24	20,387	-62.5		29	4.2	28	20,343	-59.9		32	3.6	25	20,330	-60.2		29	5.6	24	20,445	-63.0		28	7.7	22	20,476	-66.1		10	11.1
40	23	21,760	-62.1		28	3.1	26	21,737	-60.5		34	3.0	24	21,723	-60.2		29	4.6	24	21,822	-61.8		29	5.8	21	21,843	-62.3		10	12.0
30	17	23,543	-61.5		29	2.4	24	23,526	-61.1		01	4.0	23	23,516	-60.3		30	3.7	23	23,614	-59.6		28	5.5	21	23,641	-56.8		09	2.5
25	16	24,687	-60.0		30	3.2	24	24,659	-61.1		02	4.2	23	24,652	-60.2		31	3.1	20	24,765	-58.2		27	7.4	20	24,805	-52.8		28	3.9
20	15	26,081	-59.5		27	4.1	21	26,055	-60.7		02	3.0	20	26,058	-58.8		30	4.4	18	26,166	-56.3		26	7.6	19	26,263	-48.9		28	10.1
15	8	27,889	-58.9				17	27,842	-60.9		33	2.8	17	27,874	-57.7		29	6.1	17	28,008	-53.8		26	9.0	19	28,173	-44.7		27	13.5
10							13	30,366	-58.7		28	5.2	8	30,452	-54.7				13	30,635	-48.5		26	19.2	18	30,919	-39.9		28	13.0
7							8	32,614	-57.7										5	33,050	-41.8				11	33,357	-39.0			
5																									5	35,682	-34.1			

Standard pressure surface (mb)	HILO, HAWAII 1017 MB						MUNTINGTON W. VA. 987 MB						• INTERNATIONAL FALLS, MINN. 969 MB						JACKSON, MISS. 1006 MB						JOHN F. KENNEDY INT. AP NY 1017 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	11	19.7	16.7	23	2.4	28	246	.0	-4.1	21	1.8	28	359	-15.5	-20.1	31	1.3	28	100	5.3	1.7	16	1.4	28	5	-.2	-5.4	29	1.8
1000	28	154	20.8	17.1	20	2.4	28	135					28	116					28	146			19	1.2	28	140	-.5	-7.7	28	2.1
950	28	596	17.7	14.9	14	4.9	28	548	.6	-5.3	24	6.6	28	506	-13.7	-18.1	30	1.9	28	568	6.2	-1.3	21	4.7	28	549	-2.3	-8.2	27	5.1
900	28	1,057	14.5	12.0	14	4.5	28	981	-1.0	-6.5	25	10.2	28	918	-12.7	-16.7	31	5.3	28	1,010	5.6	-4.7	23	6.2	28	977	-3.4	-10.1	28	8.4
850	28	1,538	11.9	7.2	14	3.3	28	1,436	-2.2	-9.2	26	12.5	28	1,355	-12.0	-17.2	32	6.7	28	1,478	5.5	-5.2	25	9.4	28	1,429	-4.4	-10.8	27	12.1
800	28	2,045	9.8	.4	12	3.8	28	1,917	-3.6	-10.3	26	15.2	28	1,819	-11.7	-18.4	32	7.6	28	1,973	3.9	-6.1	25	11.0	28	1,906	-6.0	-13.8	27	14.1
750	28	2,580	8.3	-7.9	11	4.1	28	2,426	-5.3	-12.4	26	17.1	28	2,313	-12.8	-20.7	32	8.4	28	2,495	1.6	-10.5	25	13.1	28	2,410	-7.1	-17.0	27	16.3
700	28	3,148	5.9	-14.0	09	3.8	28	2,986	-7.3	-14.9	26	18.5	28	2,837	-14.8	-22.8	31	8.8	28	3,049	-.7	-13.7	25	15.3	28	2,946	-9.0	-18.5	27	19.3
650	28	3,751	2.7	-17.8	08	3.8	28	3,541	-9.7	-18.1	26	20.2	28	3,390	-17.2	-24.9	31	9.7	28	3,638	-3.8	-17.6	25	17.2	28	3,517	-11.9	-21.8	27	21.0
600	28	4,394	-.9	-20.8	07	2.4	28	4,135	-13.0	-21.2	26	22.3	28	3,992	-20.4	-28.0	31	10.8	28	4,265	-7.7	-20.8	25	18.8	28	4,126	-15.1	-24.6	27	23.4
550	28	5,082	-5.5	-23.8	01	1.5	28	4,814	-16.9	-25.1	26	24.9	28	4,632	-24.2	-32.4	31	11.9	28	4,936	-12.3	-25.3	25	21.6	28	4,779	-19.1	-28.9	27	25.8
500	28	5,822	-10.6	-28.3	34	3.3	28	5,524	-21.2	-29.6	26	28.7	28	5,321	-28.8	-35.6	31	12.9	28	5,657	-17.5	-29.3	25	24.0	28	5,482	-23.3	-33.2	27	28.9
450	28	6,625	-15.4	-31.9	33	6.8	28	6,293	-26.4	-34.1	27	29.4	28	6,067	-33.8	-39.3	31	13.9	28	6,439	-22.7	-33.8	25	26.1	28	6,246	-28.2	-36.8	27	34.4
400	28	7,501	-22.3	-37.4	33	10.1	28	7,134	-32.4	-39.6	26	32.0	28	6,883	-39.5	-43.7	30	14.1	28	7,293	-28.7	-41.2	25	28.5	28	7,082	-33.6	-41.8	27	36.0
350	28	8,474	-28.5	-43.7	32	15.3	28	8,065	-39.4	-44.0	26	34.2	28	7,788	-45.5		30	15.6	28	8,238	-36.1	-45.9	26	29.5	28	8,010	-39.5	-44.5	27	39.1
300	28	9,558	-36.4	-51.1	32	19.3	28	9,101	-46.3		26	36.9	28	8,798	-51.8		29	19.3	28	9,289	-43.5		26	33.8	28	9,047	-46.0		27	41.7
250	28	10,800	-44.6		32	22.8	28	10,297	-52.0		26	41.5	28	9,970	-54.7		29	19.4	28	10,495	-50.2		26	39.2	28	10,244	-51.5		27	42.1
200	28	12,260	-54.6		31	24.5	28	11,737	-52.3		26	42.2	28	11,405	-51.8		28	17.1	28	11,944	-52.2		26	45.5	27	11,684	-52.8		27	40.8
175	28	13,105	-59.8		31	24.5	28	12,600	-53.2		27	41.6	28	12,273	-51.0		29	16.2	28	12,803	-55.0		26	43.2	27	12,547	-52.9		27	39.9
150	28	14,054	-65.9		31	19.9	28	13,589	-55.4		27	38.1	28	13,276	-51.4		29	16.1	28	13,779	-59.1		26	39.8	27	13,539	-54.0		27	35.4
125	28	15,144	-72.3		31	16.6	28	14,745	-58.4		27	31.0	28	14,458	-52.4		28	14.2	27	14,913	-64.1		26	35.1	27	14,703	-56.5		27	30.4
100	28	16,436	-77.8		31	9.7	28	16,138	-61.3		27	25.1	28	15,893	-54.6		29	12.3	27	16,264	-68.2		26	27.5	27	16,110	-59.0		27	26.5
80	28	17,712	-77.0		34	1.8	28	17,515	-63.4		27	18.8	28	17,315	-56.3		29	10.9	26	17,593	-69.8		26	18.6	27	17,505	-60.2		27	18.9
70	28	18,485	-74.7		09	2.0	28	18,337	-62.5		27	14.8	28	18,162	-57.0		29	9.8	26	18,390	-68.9		26	12.9	27	18,338	-60.3		27	16.2
60	27	19,388	-71.5		10	3.4	28	19,286	-62.7		27	11.1	28	19,137	-57.8		30	7.8	26	19,318	-66.6		26	8.6	27	19,299	-60.2		27	13.7
50	27	20,477	-66.5		11	2.6	28	20,414	-61.9		28	8.7	28	20,283	-59.1		30	5.7	26	20,428	-64.3		26	6.7	27	20,437	-60.0		28	8.0
40	27	21,842	-62.8		09	2.0	27	21,796	-61.8		29	6.7	28	21,680	-59.9		31	4.6	25	21,801	-63.0		29	7.3	27	21,830	-59.7		28	7.4
30	27	23,630	-59.4		06	.1	26	23,585	-59.6		29	5.6	28	23,474	-60.7		32	3.4	24	23,575	-62.2		30	6.1	25	23,638	-57.4		28	4.9
25	25	24,778	-57.1		26	4.4	25	24,729	-58.9		28	4.8	27	24,607	-61.3		32	2.9	23	24,711	-60.3		28	5.3	25	24,793	-56.1		27	4.7
20	27	26,200	-53.7		27	10.1	23	26,129	-57.2		27	6.0	26	25,991	-61.6		31	4.4	23	26,112	-57.2		28	5.9	23	26,221	-54.9		26	6.9
15	22	28,066	-49.1		27	15.0	17	27,959	-54.6		25	8.6	25	27,779	-61.3		31	3.7	22	27,944	-53.3		26	8.3	23	28,063	-53.8		26	12.3
10	21	30,757	-43.2		26	23.3	9	30,380	-49.6				22	30,314	-60.1		28	6.8	20	30,616	-45.2		26	18.5	19	30,694	-49.3		27	21.6
7	6	33,188	-38.0										18	32,554	-57.1		28	14.5	10	33,073	-36.4									
5													9	34,683	-53.5															

Standard pressure surface (mb)	JOHNSTON IS., PACIFIC AREA 1014 MB						KEY WEST, FLA. 1017 MB						KING SALMON, ALASKA 1000 MB						KODIAK, CAROLINE IS. 1005 MB						KOTZEBUE, ALASKA 1012 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	3	24.7	20.7	09	6.9	28	3	20.4	17.5	11	3.1	28	15	-11.8	-16.9	07	2.3	28	30	27.0	24.2	07	2.9	28	5	-28.0	-32.1	36	1.2
1000	28	122	23.1	18.7	09	7.5	28	150	19.9	16.4	11	3.9	28	11			13	.9	28	75	26.6	22.6	08	3.4	28	93	-24.3	-32.8	03	1.2
950	28	568	19.5	16.4	09	8.2	28	590	17.2	13.6	14	4.0	28	478	-8.3	-13.2	11	2.8	28	528	23.7	19.5	08	6.4	28	469	-22.2	-26.7	04	1.9
900	28	1,031	16.5	12.3	10	8.0	28	1,052	14.2	10.3	16	4.1	28	828	-8.6	-13.1	15	2.7	28	1,000	20.8	15.4	08	7.3	28	867	-21.1	-26.0	03	2.4
850	28	1,510	14.0	7.4	10	7.3	28	1,533	11.9	4.7	18	4.1	27	1,271	-9.2	-13.4	17	2.7	28	1,493	17.8	11.7	09	6.8	28	1,290	-20.4	-26.7	34	2.0
800	28	2,027	12.2	-.3	10	6.4	28	2,040	10.1	-2.9	21	4.1	27	1,739	-10.7	-15.7	20	3.5	28	2,010	15.5	7.9	09	7.2	28	1,739	-20.8	-27.4	36	.9
750	28	2,566	10.6	-7.9	10	5.7	28	2,572	7.9	-6.3	22	4.8	27	2,234	-12.8	-18.7	21	4.1	28	2,556	12.9	4.0	09	7.7	28	2,215	-22.3	-28.8	26	1.2
700	28	3,139	8.1	-12.0	09	4.7	28	3,142	5.7	-12.2	23	5.8	26	2,761	-15.4	-20.3	22	5.4	28	3,133	9.6	.1	09	8.1	28	2,720	-24.5	-31.0	24	2.2
650	28	3,747	5.4	-15.4	08	3.6	28	3,742	2.3	-16.4	24	6.2	26	3,317	-18.8	-23.9	22	5.9	28	3,745	6.2	-4.2	09	8.6	28	3,257	-26.9	-33.6	22	3.2
600	28	4,397	2.2	-19.1	08	3.0	28	4,387	-1.0	-21.6	25	7.9	26	3,910	-22.0	-28.8	23	6.6	28	4,397	2.5	-8.3	10	8.9	28	3,831	-30.0	-35.8	23	4.4
550	28	5,093	-2.4	-22.8	03	2.0	28	5,068	-5.7	-27.7	26	9.5	26	4,545	-26.1	-31.7	24	7.2	28	5,096	-1.3	-12.8	10	9.0	28	4,446	-33.4	-38.4	23	6.2
500	28	5,843	-7.3	-27.3	35	3.0	28	5,815	-11.0	-30.7	26	11.4	26	5,229	-30.6	-34.5	24	8.4	28	5,850	-5.3	-16.1	10	8.9	28	5,110	-37.3	-42.0	23	7.3
450	28	6,656	-12.2	-31.5	33	4.3	28	6,610	-17.0	-35.3	27	12.5	26	5,970	-35.4	-37.2	24	8.7	28	6,671	-9.9	-22.5	10	8.9	28	5,832	-41.4	-41.2	23	8.2
400	27	7,546	-18.3	-37.1	32	7.8	28	7,489	-23.4	-40.9	27	15.5	25	6,783	-41.1	-40.4	24	10.4	28	7,570	-15.4	-28.6	10	9.5	28	6,624	-45.9		23	10.3
350	28	8,532	-25.2	-42.4	31	9.8	28	8,451	-30.9	-47.2	27	19.8	25	7,682	-46.9		23	9.6	28	8,569	-22.1	-35.6	09	9.9	28	7,507	-50.1		23	11.0
300	23	9,631	-33.1	-49.0	31	12.1	28	9,529	-37.8	-53.5	27	24.9	25	8,688	-52.4		21	10.0	28	9,681	-30.5	-43.9	10	9.9	28	8,503	-53.1		23	11.2
250	28	10,888	-42.7		30	14.1	28	10,769	-44.5		26	29.9	25	9,861	-53.8		22	12.1	28	10,949	-40.8	-53.5	10	11.7	28	9,861	-51.8		23	11.5
200	28	12,358	-53.9		30	14.3	28	12,238	-52.3		27	32.7	25	11,301	-51.6		22	13.0	28	12,427	-53.4		11	14.1	28	11,136	-49.3		24	11.0
175	24	13,203	-60.4		30	14.5	28	13,092	-57.7		27	30.2	25	12,172	-49.5		22	13.2	28	13,273	-60.2		11	15.8	28	12,012	-49.2		24	11.1
150	26	14,148	-67.1		31	14.1	28	14,050	-64.0		26	28.0	25	13,183	-49.2		22	12.8	28	14,217	-67.9		11	16.1	28	13,023	-49.2		24	11.0
125	27	15,228	-74.2		31	10.8	28	15,148	-70.7		26	23.1	24	14,375	-49.8		23	12.8	27	15,290	-76.2		10	17.3	28	14,218	-49.8		24	12.2
100	27	16,506	-80.9		31	6.4	28	16,453	-75.8		26	15.3	23	15,831	-49.9		22	13.1	27	16,553	-82.3		10	15.8	28	15,675	-50.6		25	12.9
80	25	17,758	-79.8		36	1.4	26	17,735	-76.9		26	9.7	23	17,286	-51.2		23	12.0	27	17,801	-80.5		09	9.2	28	17,126	-51.8		23	13.2
70	25	18,823	-76.1		09	2.4	28	18,805	-75.2		26	6.5	23	18,149	-51.8		23	11.5	27	18,562	-76.0		08	5.8	28	17,990	-52.8		25	14.5
60	28	19,422	-71.5		09	4.3	28	19,410	-69.1		27	3.2	20	19,146	-53.2		23	10.2	27	19,462	-72.1		08	8.7	28	18,984	-53.4		25	14.9
50	27	20,515	-65.7		10	5.6	28	20,513	-64.4		33	3.7	19	20,314	-54.1		23	9.9	27	20,547	-67.6		09	16.9	28	20,154	-54.8		25	15.1
40	25	21,884	-62.0		10	6.2	28	21,890	-61.1		35	3.6	19	21,741	-55.5		24	8.9	26	21,916	-60.4		09	20.2	28	21,575	-56.6		25	16.0
30	21	23,379	-58.1		04	1.2	28	23,688	-58.4		01	3.0	18	23,567	-57.0		25	7.4	25	23,748	-52.6		10	2.2	28	23,392	-58.6		25	16.9
25	21	24,830	-55.2		29	3.8	26	24,837	-56.1		29	.6	17	24,717	-58.0		25	8.2	25	24,932	-50.5		26	8.3	27	24,531	-59.9		25	17.0
20	24	26,278	-50.5		27	9.2	26	26,267	-52.5		25	5.6	16	26,120	-58.8		25	7.0	24	26,390	-48.4		26	13.2	23	25,918	-61.4		26	19.4
15	21	28,165	-46.8		27	14.4	26	28,150	-46.8		26	11.6	16	27,932	-59.9				22	28,303	-44.8		27	16.2	13	27,759	-62.0		25	22.2
10	11	30,884	-41.4		26	20.0	26	30,858	-38.7		26	19.4							19	31,045	-41.0		26	14.3						
7	13	33,325	-36.0				6	33,273	-34.3										12	33,476	-36.5									

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KWAJALEIN, MARSHALL IS. — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	4	26.4	23.1	07	7.2
1000	28	82	25.8	22.5	07	8.3
950	28	531	22.4	19.8	08	9.8
900	28	1,002	19.2	16.3	08	10.1
850	28	1,493	16.9	10.6	09	9.4
800	28	[illegible]	15.3	5.0	09	8.6
750	28	2,554	13.0	-.7	09	8.8
700	28	3,132	10.2	-5.8	08	8.6
650	28	[illegible]	6.4	-8.6	09	8.6
600	28	4,396	2.8	-12.8	09	7.9
550	28	5,095	-1.2	-17.6	09	8.1
500	28	5,849	-5.3	-23.9	09	9.7
450	28	6,669	-10.0	-29.0	09	9.8
400	28	7,567	-15.9	-34.3	08	7.7
350	28	8,560	-22.7	-40.7	07	5.9
300	28	9,672	-31.2	-46.8	05	3.6
250	28	10,937	-41.5	-55.3	06	1.3
200	28	12,411	-53.6	-65.4	06	.7
175	28	13,256	-60.5		08	2.1
150	28	14,199	-67.9		09	3.8
125	[illegible]	15,275	-75.9		08	7.0
100	25	16,538	-83.4		08	9.3
80	25	17,772	-82.5		10	9.8
70	25	18,530	-77.1		09	5.9
60	25	19,422	-73.7		09	7.8
50	25	20,499	-69.3		09	15.2
40	[illegible]	21,854	-62.4		09	19.0
30	25	23,662	-55.2		03	1.2
25	[illegible]	24,836	-51.3		27	9.0
20	21	26,194	-48.0		27	16.0
15	20	28,208	-44.3		27	16.3
10	20	30,955	-39.9		27	15.2
7	18	33,390	-38.3		26	6.8
5	9	35,728	-34.1			

LAKE CHARLES, LA. — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	5	8.8	5.4	09	1.2
1000	28	137	10.5	4.9	15	1.5
950	28	564	9.5	1.7	21	3.2
900	28	1,013	8.6	.1	24	5.1
850	28	1,485	7.4	-3.2	25	7.8
800	28	1,983	5.3	-7.4	25	8.9
750	28	2,509	3.8	-12.6	26	9.9
700	28	3,067	1.5	-17.6	26	12.6
650	28	3,660	-1.8	-20.0	26	15.1
600	28	4,292	-6.1	-22.7	26	18.2
550	28	4,968	-10.6	-25.7	26	19.2
500	28	5,693	-15.8	-30.3	26	20.5
450	28	6,479	-21.3	-36.5	26	23.3
400	28	7,337	-27.6	-42.1	26	26.1
350	28	8,287	-34.6	-47.1	26	29.6
300	28	9,343	-42.6	-49.3	26	33.6
250	28	10,556	-48.9		26	38.4
200	28	12,010	-52.8		26	41.8
175	28	12,867	-55.8		26	40.3
150	28	13,839	-59.9		26	38.2
125	28	14,963	-65.3		26	33.7
100	28	16,304	-70.1		26	24.9
80	26	17,626	-71.6		26	17.3
70	26	18,415	-70.7		26	12.2
60	26	19,338	-66.9		26	7.9
50	26	20,450	-63.4		27	5.5
40	25	21,826	-62.4		28	6.0
30	25	23,604	-61.9		30	4.1
25	24	24,738	-60.4		28	3.5
20	23	26,141	-56.9		27	5.8
15	18	27,967	-52.9		27	10.9
10	10	30,654	-44.6			

LANDER, WYO. — 824 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,697	-6.2	-12.2	26	.6
1000	26	160				
950	28	573				
900	28	1,004				
850	28	1,456				
800	28	1,933	-4.3	-12.8	28	1.1
750	28	2,440	-6.2	-15.7	31	4.0
700	28	2,977	-9.2	-19.3	31	7.6
650	28	3,547	-13.0	-22.4	31	8.7
600	28	4,152	-17.1	-26.8	31	10.3
550	28	4,799	-21.7	-31.3	31	11.3
500	28	5,495	-26.1	-36.6	31	13.2
450	28	6,250	-31.1	-40.3	31	16.1
400	28	7,075	-37.3	-44.9	31	17.8
350	28	7,987	-43.8	-48.0	31	18.0
300	28	9,006	-49.8		30	18.6
250	28	10,185	-54.6		29	20.1
200	28	11,610	-54.0		29	19.1
175	28	12,470	-52.7		29	17.1
150	28	13,464	-53.5		28	16.2
125	28	14,634	-54.9		28	13.4
100	26	16,049	-58.2		28	9.5
80	26	17,449	-59.2		28	7.0
70	26	18,285	-59.9		27	6.0
60	25	19,240	-60.9		28	5.0
50	25	20,373	-60.8		29	3.4
40	24	21,759	-61.4		29	2.2
30	22	23,540	-60.8		34	1.7
25	20	24,675	-60.2		34	2.1
20	15	26,067	-59.0		31	2.4
15	11	27,869	-58.6			

* LIHUE KAUAI, HAWAII — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	36	21.5	17.9	06	.5
1000	28	155	21.6	18.0	09	1.1
950	28	598	18.2	15.7	11	2.6
900	28	1,060	15.0	12.2	13	3.0
850	28	1,542	12.0	7.1	13	3.2
800	28	2,049	10.2	-.2	12	3.2
750	28	2,585	8.4	-7.7	12	2.1
700	28	3,152	5.7	-13.6	15	1.8
650	28	3,755	2.9	-16.3	21	1.4
600	28	4,399	-.7	-19.5	27	2.2
550	28	5,088	-5.0	-23.2	28	4.1
500	28	5,630	-10.1	-26.4	29	6.6
450	28	6,633	-15.7	-31.2	30	10.1
400	28	7,511	-21.8	-37.9	30	15.3
350	28	8,485	-28.1	-43.4	30	19.4
300	28	9,572	-35.6	-50.0	31	21.4
250	28	10,817	-44.1		31	24.6
200	28	12,278	-54.9		30	26.4
175	28	13,122	-59.8		30	25.8
150	28	14,074	-65.1		30	23.4
125	28	15,167	-71.8		30	20.2
100	27	16,467	-77.4		30	14.4
80	27	17,750	-75.7		29	5.0
70	27	18,526	-73.7		22	1.1
60	27	19,434	-70.8		12	2.2
50	27	20,530	-65.4		16	1.2
40	27	21,901	-62.0		22	.4
30	26	23,691	-59.4		30	2.6
25	26	24,838	-57.4		28	4.6
20	25	26,263	-52.8		28	10.0
15	25	28,136	-49.0		28	12.8
10	24	30,839	-41.9		27	17.7
7	20	33,286	-34.5		27	19.4
5	12	35,684	-28.6			

LITTLE ROCK, ARK. — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	79	3.3	-.8	33	.6
1000	28	137	3.5	-3.1	29	.8
950	28	554	3.2	-2.9	24	4.9
900	28	992	3.0	-4.6	26	7.3
850	28	1,454	2.0	-6.1	26	8.9
800	28	1,943	1.0	-9.2	27	11.3
750	28	2,461	-1.0	-11.3	27	12.8
700	28	3,009	-3.5	-15.0	26	14.8
650	28	3,591	-6.3	-18.2	26	17.3
600	28	4,213	-9.7	-22.2	26	19.2
550	28	4,879	-14.2	-27.0	26	20.9
500	28	5,596	-19.2	-32.2	26	22.7
450	28	6,372	-24.5	-36.6	26	26.1
400	28	7,218	-31.0	-40.9	26	28.3
350	28	8,155	-37.8	-45.0	26	30.5
300	28	9,198	-45.0		26	33.1
250	28	10,399	-51.2		26	37.5
200	28	11,841	-52.5		26	41.2
175	28	12,703	-53.7		26	40.0
150	28	13,687	-56.9		26	36.9
125	28	14,831	-61.0		26	31.7
100	25	16,194	-64.0		27	23.5
80	25	17,556	-65.4		26	16.9
70	21	18,361	-65.1		27	13.2
60	20	19,303	-63.6		27	8.5
50	18	20,420	-62.9		28	6.2
40	17	21,799	-62.3		28	6.6
30	14	23,577	-61.1		30	6.3
25	13	24,702	-60.3		30	6.2
20	8	26,088	-59.5			
15	6	27,911	-56.2			

MCGRATH, ALASKA — 995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	103	-22.3	-23.7	32	.7
1000	28	64			30	.4
950	28	445	-17.9	-19.9	08	.7
900	28	852	-15.2	-17.2	18	1.9
850	28	1,286	-13.2	-17.8	20	3.7
800	28	1,748	-14.3	-19.3	20	4.7
750	28	2,235	-16.4	-21.9	22	4.8
700	28	2,752	-19.1	-25.4	22	6.9
650	28	3,300	-22.2	-28.1	22	8.4
600	28	3,884	-25.6	-31.6	23	9.7
550	28	4,510	-29.6	-34.4	23	11.4
500	28	5,184	-34.0	-38.2	23	13.7
450	28	5,915	-38.6	-40.4	23	16.2
400	28	6,715	-43.8	-40.8	23	18.3
350	28	7,605	-49.0		23	18.2
300	28	8,604	-53.4		23	18.5
250	28	9,773	-54.2		23	16.3
200	28	11,217	-50.8		23	13.8
175	26	12,071	-49.4		23	12.5
150	26	13,083	-49.2		24	12.3
125	26	14,278	-49.7		23	12.7
100	26	15,738	-49.9		24	12.9
80	26	17,193	-51.3		24	12.9
70	26	18,059	-52.3		24	13.3
60	26	19,055	-52.9		24	13.7
50	26	20,227	-54.6		24	13.8
40	26	21,650	-56.2		25	14.2
30	19	23,475	-58.3		26	13.8
25	15	24,655	-58.7			
20	9	26,070	-59.7			

* MAJURO, MARSHALL IS. — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	3	28.4	23.6	07	6.7
1000	28	85	26.6	19.1	07	7.9
950	28	537	23.1	17.6	08	9.7
900	28	1,007	20.1	14.1	09	10.4
850	28	1,498	17.2	10.3	09	9.9
800	28	2,014	15.4	4.6	09	8.8
750	28	2,560	13.1	.4	09	8.3
700	28	3,138	10.3	-4.1	09	7.8
650	28	3,751	6.8	-6.1	09	8.4
600	28	4,404	3.0	-10.4	09	8.3
550	28	5,104	-.6	-16.7	09	9.0
500	28	5,859	-4.8	-22.7	09	10.1
450	28	6,682	-9.0	-26.9	09	10.0
400	28	7,584	-14.8	-32.8	08	7.6
350	28	8,584	-21.8	-38.9	08	6.2
300	28	9,697	-30.1	-45.9	07	4.1
250	28	10,968	-40.3	-53.9	05	3.2
200	28	12,451	-52.5		07	2.5
175	28	13,300	-59.3		08	3.2
150	28	14,248	-66.9		07	5.5
125	28	15,330	-74.3		08	8.0
100	28	16,606	-80.9		08	9.8
80	27	17,856	-80.2		09	8.7
70	27	18,622	-74.7		09	6.6
60	27	19,530	-70.2		09	9.9
50	27	20,629	-64.4		10	17.4
40	26	22,016	-57.4		09	15.4
30	26	23,868	-50.5		27	5.1
25	23	25,051	-48.8		28	10.8
20	21	26,530	-45.7		27	16.0
15	19	28,450	-42.6		27	17.8
10	17	31,201	-39.0		27	14.0
7	11	33,677	-33.9			

* MEDFORD, OREG. — 975 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	401	1.4	-.4	25	.1
1000	28	191				
950	28	606	2.6	1.0	25	.8
900	28	1,044	2.6	-1.4	24	1.9
850	28	1,506	1.0	-6.6	26	4.2
800	28	1,992	-1.2	-11.0	28	6.4
750	28	2,504	-3.8	-14.4	29	8.6
700	28	3,046	-7.1	-17.1	30	10.0
650	28	3,620	-10.4	-20.8	29	11.5
600	28	4,232	-14.1	-23.8	30	12.6
550	28	4,887	-18.3	-28.3	30	14.2
500	28	5,592	-22.9	-33.0	30	17.0
450	28	6,357	-28.0	-36.4	30	19.1
400	28	7,192	-34.0	-42.1	30	20.6
350	28	8,118	-40.3	-47.2	30	21.7
300	28	9,150	-47.9		30	24.7
250	28	10,334	-54.7		31	25.4
200	28	11,747	-58.2		30	24.0
175	28	12,589	-57.1		30	22.5
150	28	13,566	-57.0		30	21.3
125	28	14,716	-58.9		30	18.7
100	28	16,109	-61.0		30	13.4
80	28	17,495	-61.4		30	9.4
70	28	18,322	-62.1		31	8.0
60	28	19,275	-62.1		32	6.6
50	27	20,401	-62.3		34	4.4
40	27	21,779	-62.3		35	3.7
30	27	23,557	-62.2		35	3.2
25	25	24,685	-61.6		01	2.9
20	24	26,072	-61.0		34	1.3
15	21	27,860	-59.9		29	1.4
10	15	30,415	-55.7		28	7.2
7	11	32,697	-51.9		26	17.1

MERIDA, MEXICO — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	11	19.4	17.3	10	1.5
1000	28	124	20.9	17.7	11	4.5
950	28	567	18.7	15.7	13	7.6
900	28	1,031	17.1	9.3	14	5.5
850	28	1,518	14.8	5.5	15	2.5
800	28	2,029	12.8	-.9	21	1.9
750	28	2,568	9.8	-5.9	24	3.1
700	28	3,138	6.8	-12.7	25	3.5
650	28	3,744	4.2	-18.8	25	4.4
600	28	4,390	.4	-21.6	26	5.9
550	28	5,082	-4.1	-25.0	27	7.2
500	28	5,826	-9.3	-29.5	26	9.5
450	28	6,632	-14.8	-33.8	26	11.4
400	28	7,512	-21.3	-39.1	26	13.7
350	28	8,486	-28.5	-45.1	25	16.7
300	28	9,570	-36.1	-51.5	25	19.9
250	28	10,815	-43.9		24	24.7
200	28	12,290	-51.4		25	24.8
175	28	13,146	-57.3		25	21.3
150	28	14,105	-63.9		24	17.2
125	27	15,205	-71.0		23	12.2
100	27	16,503	-77.5		23	6.1
80	26	17,772	-79.8		22	4.3
70	26	18,532	-77.4		21	2.5
60	26	19,428	-71.9		23	1.0
50	26	20,525	-64.4		03	1.1
40	26	21,900	-61.8		04	3.5
30	26	23,686	-60.0		03	4.3
25	25	24,834	-56.5		01	2.9
20	22	26,261	-52.5		26	5.0
15	10	28,164	-47.1			

MIAMI, FLA. — 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	4	19.1	15.4	11	1.6
1000	28	157	18.6	13.9	12	2.9
950	28	597	15.9	12.6	15	4.5
900	28	1,054	13.4	9.6	17	4.3
850	28	1,534	10.6	4.9	20	4.6
800	28	2,039	9.4	-.8	22	4.9
750	28	2,573	7.6	-6.5	23	5.9
700	28	3,139	4.8	-11.1	24	6.5
650	28	3,739	1.7	-14.9	25	8.3
600	28	4,380	-1.9	-20.4	25	9.7
550	28	5,067	-6.2	-23.2	26	11.5
500	28	5,804	-11.8	-27.6	26	12.8
450	28	6,603	-17.1	-32.5	26	14.1
400	28	7,475	-23.8	-38.0	27	17.3
350	28	8,439	-31.0	-44.2	27	20.8
300	28	9,514	-37.6	-50.6	27	27.2
250	28	10,754	-44.2	-54.8	27	33.4
200	28	12,227	-51.4		27	34.7
175	28	13,084	-56.6		27	34.8
150	28	14,049	-62.5		27	32.7
125	28	15,156	-69.2		27	27.8
100	[illegible]	16,469	-74.8		27	20.2
80	28	17,756	-77.0		27	13.5
70	28	18,529	-74.2		26	7.9
60	28	19,438	-69.5		28	3.6
50	28	20,541	-63.9		32	3.1
40	25	21,916	-61.2		34	4.7
30	25	23,714	-58.6		35	3.5
25	23	24,862	-56.7		34	2.1
20	23	26,287	-53.5		26	4.1
15	21	28,155	-48.7		25	11.6
10	16	30,849	-41.0		26	16.4

MIDLAND, TEXAS — 914 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	874	2.0	-6.9	24	.8
1000	28	141				
950	28	561				
900	28	1,000	5.1	-6.1	24	1.9
850	28	1,469	6.6	-7.5	25	5.2
800	28	1,966	5.2	-11.0	27	7.6
750	28	2,491	2.8	-14.0	27	10.5
700	28	3,045	-.6	-16.2	27	13.5
650	28	3,633	-4.4	-19.1	26	15.7
600	28	4,258	-8.6	-23.2	26	17.3
550	28	4,927	-12.9	-27.3	26	19.4
500	28	5,647	-17.7	-32.5	26	21.2
450	28	6,427	-23.2	-36.9	26	24.8
400	28	7,279	-29.6	-42.4	26	26.3
350	28	8,221	-36.5	-48.3	26	29.3
300	28	9,269	-44.5		26	32.6
250	28	10,471	-51.6		26	34.2
200	28	11,908	-53.5		26	38.5
175	28	12,764	-55.1		26	38.1
150	28	13,741	-59.0		26	33.0
125	28	14,874	-63.1		26	27.9
100	28	16,233	-67.0		27	21.9
80	28	17,572	-68.7		26	12.6
70	27	18,372	-67.5		26	10.1
60	24	19,301	-65.8		25	7.9
50	24	20,417	-63.2		26	5.3
40	24	21,792	-62.4		26	6.7
30	23	23,577	-60.8		27	5.9
25	23	24,714	-59.3		27	5.5
20	23	26,118	-57.9		27	5.3
15	21	27,946	-54.9		27	10.5
10	12	30,596	-45.9			

MONETT, MO. — 963 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	438	-1.2	-5.4	18	1.1
1000	28	136				
950	28	547	-1.6	-6.4	25	1.0
900	28	980	-.1	-8.5	26	6.2
850	28	1,438	-.3	-11.7	28	9.8
800	28	1,921	-2.2	-12.1	28	11.8
750	28	2,432	-4.3	-16.0	28	13.2
700	28	2,973	-6.8	-18.2	28	15.6
650	28	3,549	-9.4	-20.9	27	18.1
600	28	4,164	-13.2	-24.3	27	20.0
550	28	4,822	-16.8	-28.4	27	22.6
500	28	5,531	-21.7	-32.9	26	25.2
450	28	6,299	-26.9	-38.2	26	27.5
400	28	7,138	-32.9	-43.7	26	29.4
350	28	8,067	-39.6	-46.6	26	31.8
300	28	9,102	-47.0		26	33.5
250	28	10,292	-52.8		26	35.2
200	27	11,727	-53.4		26	37.0
175	27	12,587	-53.7		26	37.0
150	26	13,574	-56.2		26	37.0
125	26	14,725	-59.4		27	29.0
100	26	16,110	-62.6		26	22.2
80	26	17,479	-64.4		27	15.9
70	26	18,296	-64.0		27	12.7
60	26	19,239	-64.5		27	10.3
50	25	20,355	-63.4		28	6.6
40	24	21,730	-62.8		28	6.2
30	18	23,508	-62.1		30	4.7
25	18	24,640	-60.7		28	4.2
20	17	26,035	-59.5		27	4.6
15	16	27,850	-56.5		28	7.5
10	7	30,523	-48.1			

MONTGOMERY, ALA. — 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	57	4.7	.5	30	.6
1000	28	151	6.1	-.5	27	.2
950	28	572	6.9	-1.4	25	2.8
900	28	1,017	6.6	-3.6	25	6.4
850	28	1,486	5.9	-4.6	25	9.1
800	28	1,981	3.9	-5.7	25	11.6
750	28	2,504	1.5	-8.2	26	13.5
700	28	3,057	-.5	-12.2	26	15.7
650	28	3,646	-3.8	-17.5	26	18.0
600	28	4,275	-7.3	-21.6	26	20.0
550	28	4,947	-11.5	-26.6	26	22.4
500	28	5,671	-16.4	-30.7	26	23.8
450	28	6,456	-21.7	-35.1	26	25.5
400	28	7,312	-27.9	-41.1	26	28.8
350	28	8,260	-35.3	-45.8	26	29.6
300	28	9,313	-43.2	-48.4	26	32.3
250	28	10,522	-49.5		26	39.0
200	28	11,976	-52.1		26	44.5
175	28	12,834	-55.2		26	43.5
150	28	13,810	-58.9		26	42.0
125	28	14,941	-64.0		26	36.5
100	27	16,294	-68.2		26	27.6
80	27	17,629	-69.2		27	17.8
70	27	18,429	-68.3		27	12.9
60	26	19,359	-66.0		27	9.4
50	25	20,475	-63.2		28	6.4
40	25	21,850	-62.2		30	7.8
30	21	23,640	-59.3		30	5.7
25	21	24,786	-57.8		28	5.1
20	19	26,195	-55.5		27	6.4
15	17	28,039	-52.3		26	9.2
10	15	30,728	-43.5		27	17.4

NASHVILLE, TENN. — 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	180	.9	-4.8	22	1.3
1000	28	145				
950	28	558	1.1	-6.4	24	5.2
900	28	992	.1	-8.1	25	8.4
850	28	1,450	-.2	-11.7	26	10.1
800	28	1,934	-1.5	-12.5	26	11.6
750	28	2,448	-3.0	-14.6	26	14.4
700	28	2,992	-4.9	-15.9	27	17.0
650	28	3,572	-7.6	-18.8	27	19.9
600	28	4,191	-10.9	-20.9	27	23.3
550	28	4,855	-15.1	-24.6	26	26.2
500	28	5,569	-20.0	-30.7	26	28.4
450	28	6,342	-25.2	-34.6	26	30.5
400	28	7,187	-31.4	-40.8	26	32.6
350	28	8,121	-38.4	-46.0	26	34.6
300	28	9,160	-46.3		26	37.5
250	28	10,354	-52.1		26	42.5
200	28	11,794	-52.9		26	44.9
175	28	12,654	-54.0		26	45.5
150	28	13,636	-57.9		27	42.4
125	28	14,779	-60.7		27	35.8
100	28	16,159	-63.0		26	25.6
80	28	17,522	-65.4		26	18.8
70	28	18,335	-64.9		27	14.0
60	28	19,276	-64.5		28	10.3
50	25	20,395	-63.2		27	7.6
40	25	21,770	-62.3		28	7.4
30	24	23,555	-60.3		29	4.9
25	24	24,695	-59.2		28	5.5
20	24	26,099	-57.7		27	6.2
15	24	27,929	-54.2		27	7.7
10	22	30,561	-48.4		26	17.2
7	12	32,925	-43.4			

* NOME, ALASKA — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	[illegible]	-24.6	-28.6	02	2.9
1000	27	75	-21.3	-27.8	02	2.2
950	27	456	-19.8	-25.6	06	1.9
900	27	857	-19.8	-25.9	05	1.2
850	27	1,282	-19.0	-25.8	36	.6
800	27	1,733	-19.8	-27.2	35	.9
750	27	2,210	-21.5	-28.9	30	.9
700	27	2,717	-23.6	-30.7	26	1.6
650	27	3,255	-26.3	-33.6	25	2.8
600	27	3,830	-29.5	-36.7	24	3.5
550	27	4,447	-33.1	-40.5	23	4.9
500	27	5,111	-37.0	-42.9	23	6.1
450	27	5,834	-41.3	-40.9	23	7.3
400	27	6,625	-45.9		23	9.1
350	27	7,509	-49.9		22	10.8
300	27	8,506	-53.1		23	10.8
250	27	9,682	-52.3		23	10.9
200	27	11,134	-49.9		23	9.9
175	27	12,008	-49.5		24	9.3
150	27	13,018	-49.7		24	9.8
125	27	14,211	-49.8		24	10.2
100	26	15,669	-50.6		23	10.6
80	26	17,121	-51.4		24	11.4
70	26	17,987	-52.2		23	11.9
60	26	18,982	-53.3		24	12.9
50	26	20,154	-54.5		24	13.3
40	26	21,579	-55.9		25	14.0
30	26	23,400	-58.2		25	14.9
25	25	24,546	-59.5		25	14.0
20	25	25,938	-61.0		25	15.8
15	23	27,703	-63.0		26	17.9
10	18	30,174	-65.3		26	19.1
7	10	32,309	-66.6			

See reference note at end of table. Note: Data for Monterrey, Mexico at end of table.

RAWINSONDE DATA

Average monthly values

NORTH PLATTE, NEBR. 914 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	847	-8.0	-11.3	33	2.5
1000	28	142				
950	28	546				
900	28	969	-5.9	-11.7	32	4.0
850	28	1,419	-4.1	-12.3	33	7.9
800	29	1,897	-4.9	-14.0	32	9.5
750	28	2,403	-6.4	-16.2	32	11.1
700	28	2,940	-8.9	-18.3	31	11.5
650	28	3,511	-12.2	-21.5	31	12.1
600	28	4,118	-16.1	-24.5	30	12.7
550	28	4,768	-20.3	-28.7	29	12.8
500	28	5,467	-25.0	-33.7	29	14.0
450	28	6,225	-30.2	-37.5	29	15.1
400	28	7,053	-36.5	-40.7	28	16.2
350	28	7,968	-43.1	-45.5	28	17.1
300	28	8,990	-49.3		28	19.0
250	28	10,171	-54.0		28	21.1
200	28	11,605	-52.7		28	22.1
175	28	12,468	-52.1		28	21.6
150	28	13,465	-53.3		27	20.8
125	28	14,633	-55.9		27	18.2
100	27	16,043	-58.6		28	16.1
80	27	17,439	-60.2		28	12.9
70	27	18,272	-60.4		28	10.6
60	27	19,231	-61.2		28	7.6
50	27	20,362	-61.5		28	5.6
40	25	21,745	-61.6		29	4.4
30	20	23,531	-60.9		30	3.8
25	18	24,668	-60.7		30	3.0
20	13	26,057	-60.4		31	3.8
15	10	27,855	-59.5			
10						
7						
5						

OAKLAND, CALIF. 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	6	7.7	5.3	32	.7
1000	27	170	8.4	3.3	33	1.6
950	27	594	8.3	-.8	35	3.9
900	27	1,041	7.8	-7.1	35	6.2
850	27	1,511	5.9	-11.9	34	7.1
800	27	2,005	3.5	-14.4	34	7.1
750	27	2,526	.6	-17.2	33	8.6
700	27	3,076	-2.9	-19.6	33	9.9
650	27	3,659	-6.4	-23.0	32	11.6
600	27	4,280	-10.2	-26.9	32	13.5
550	27	4,945	-14.4	-30.4	32	15.6
500	27	5,661	-19.1	-35.5	32	19.0
450	27	6,436	-24.8	-38.7	31	20.8
400	27	7,282	-31.1	-43.3	31	22.5
350	27	8,218	-38.3	-48.5	31	23.5
300	27	9,257	-46.6		31	27.4
250	27	10,443	-55.4		31	29.7
200	27	11,850	-58.8		31	29.3
175	27	12,692	-56.7		30	27.6
150	27	13,668	-57.9		29	22.5
125	26	14,811	-61.2		30	20.6
100	26	16,186	-64.1		30	16.2
80	26	17,548	-64.9		30	11.7
70	26	18,364	-64.3		31	8.6
60	26	19,307	-64.5		32	6.5
50	26	20,422	-64.1		32	4.6
40	26	21,791	-63.3		35	2.7
30	24	23,564	-61.9		36	1.9
25	23	24,698	-61.1		29	1.4
20	20	26,095	-60.3		28	3.1
15	19	27,897	-58.2		27	6.0
10	16	30,484	-51.8		27	13.9
7	7	32,797	-47.9			
5						

OMAHA, NEBR. 965 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	403	-7.4	-10.1	32	1.7
1000	28	125				
950	28	527	-6.6	-10.4	31	3.7
900	28	952	-4.9	-10.1	31	6.4
850	28	1,401	-5.2	-11.1	31	7.7
800	28	1,877	-6.3	-12.6	30	8.6
750	28	2,361	-7.8	-15.5	30	9.6
700	28	2,916	-10.1	-19.7	29	10.4
650	28	3,484	-13.0	-22.9	29	11.4
600	28	4,091	-16.3	-27.0	29	13.1
550	28	4,740	-20.4	-30.2	29	13.6
500	28	5,440	-25.0	-35.3	29	14.7
450	28	6,198	-30.0	-38.9	29	18.3
400	28	7,027	-35.8	-43.4	28	19.4
350	28	7,946	-41.7	-47.5	28	19.9
300	27	8,975	-48.1		27	23.1
250	27	10,162	-53.0		27	25.5
200	26	11,599	-52.7		27	28.1
175	26	12,464	-51.6		27	24.2
150	25	13,462	-52.6		27	22.3
125	25	14,633	-55.3		27	20.5
100	25	16,048	-57.8		28	16.0
80	24	17,448	-59.7		28	13.5
70	23	18,278	-59.9		28	10.7
60	23	19,239	-60.8		27	9.2
50	22	20,372	-60.9		28	8.3
40	19	21,754	-61.8		28	5.3
30	17	23,545	-60.7		28	3.3
25	15	24,681	-59.8		29	4.3
20	14	26,076	-59.3		29	4.1
15	12	27,887	-57.5		27	5.8
10						
7						
5						

+ PAGO PAGO, AMERICAN SAMOA 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	5	28.3	24.4	02	1.7
1000	28	80	27.1	21.0	01	2.1
950	28	533	23.8	18.5	01	3.6
900	28	1,004	20.7	15.3	01	3.6
850	28	1,497	17.8	11.7	02	3.3
800	28	2,014	15.4	8.3	02	2.6
750	28	2,560	12.6	4.6	01	1.9
700	28	3,136	9.4	1.4	02	1.9
650	28	3,748	6.1	-1.8	01	2.4
600	28	4,400	2.4	-5.0	01	2.9
550	28	5,099	-1.3	-9.8	36	2.8
500	28	5,854	-5.3	-16.1	34	2.7
450	28	6,674	-9.9	-20.9	34	3.0
400	28	7,574	-15.5	-26.9	32	3.4
350	28	8,572	-22.3	-34.3	30	3.2
300	28	9,683	-30.6	-42.9	28	3.1
250	28	10,951	-41.0	-50.2	26	2.9
200	28	12,427	-53.7		27	5.3
175	28	13,272	-60.7		26	7.8
150	28	14,214	-68.4		25	8.0
125	28	15,290	-74.9		24	6.0
100	28	16,571	-78.4		15	1.1
80	28	17,847	-76.2		09	9.9
70	28	18,622	-73.6		09	15.7
60	28	19,532	-69.8		09	20.8
50	28	20,633	-64.3		09	25.7
40	28	22,016	-59.2		09	27.9
30	26	23,844	-53.9		09	24.7
25	25	25,024	-51.1		09	23.0
20	22	26,479	-47.3		09	20.5
15	19	28,400	-41.8		09	20.8
10	13	31,131	-39.5			
7	5	33,569	-34.6			
5						

* PEORIA, ILL. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	200	-5.0	-8.3	25	2.2
1000	28	120				
950	28	523	-5.7	-8.7	27	5.0
900	28	948	-5.4	-9.8	27	7.0
850	28	1,397	-5.0	-12.1	28	8.9
800	28	1,873	-6.2	-13.9	28	10.5
750	28	2,376	-8.9	-17.5	28	12.0
700	28	2,910	-10.7	-20.9	28	14.2
650	28	3,478	-13.2	-22.7	27	14.9
600	28	4,084	-16.4	-26.3	27	16.7
550	28	4,734	-20.0	-30.3	27	18.4
500	28	5,434	-24.4	-34.5	27	22.1
450	28	6,194	-29.7	-38.7	26	25.3
400	28	7,023	-35.7	-43.3	26	28.6
350	28	7,943	-41.9	-47.7	26	30.3
300	28	8,970	-47.9		26	31.7
250	28	10,159	-52.5		26	33.7
200	28	11,599	-52.2		27	32.9
175	28	12,464	-52.2		27	31.6
150	28	13,459	-53.5		27	29.2
125	28	14,624	-56.2		27	25.9
100	28	16,031	-59.2		27	21.0
80	28	17,420	-61.6		27	16.7
70	27	18,248	-61.4		27	13.2
60	27	19,202	-61.9		28	10.3
50	27	20,329	-62.2		28	7.0
40	26	21,705	-62.4		28	5.9
30	25	23,485	-61.4		30	3.9
25	25	24,618	-60.4		30	4.6
20	25	26,012	-59.4		30	4.0
15	23	27,826	-57.1		28	5.9
10	22	30,424	-52.3		27	13.3
7	18	32,762	-46.5		26	23.7
5	7	35,038	-39.9			

* PITTSBURGH, PA. 972 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	359	-2.8	-6.4	24	2.4
1000	28	130				
950	28	538	-2.8	-7.5	25	4.9
900	28	966	-4.0	-8.6	25	9.7
850	28	1,416	-5.7	-10.1	26	12.1
800	28	1,890	-7.0	-12.0	26	13.4
750	28	2,393	-8.7	-14.3	26	15.8
700	28	2,926	-10.4	-17.8	26	17.8
650	28	3,494	-12.5	-22.2	26	20.0
600	28	4,102	-15.7	-25.3	27	22.4
550	28	4,754	-19.4	-28.9	27	24.1
500	28	5,457	-23.7	-32.4	27	25.6
450	28	6,219	-28.7	-36.9	27	27.6
400	28	7,052	-34.5	-42.0	27	29.7
350	27	7,970	-41.0	-46.0	26	33.3
300	27	9,001	-47.5		26	36.8
250	27	10,191	-52.5		26	39.8
200	26	11,634	-53.4		27	39.7
175	25	12,487	-53.0		26	37.7
150	25	13,479	-54.2		27	33.2
125	24	14,633	-56.9		27	28.2
100	22	16,035	-59.5		27	23.7
80	19	17,424	-60.9		27	16.3
70	19	18,253	-61.5		27	13.8
60	18	19,208	-61.4		27	11.3
50	17	20,328	-62.0		28	9.8
40	16	21,718	-61.4		28	5.9
30	14	23,509	-59.9		27	5.3
25	13	24,651	-58.4		27	3.4
20	12	26,071	-57.0		20	3.4
15	11	27,901	-55.4		22	5.6
10	10	30,505	-50.4		26	11.4
7	9	32,868	-45.3			
5	5	35,092	-40.9			

+ PONAPE, CAROLINE IS. 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	39	27.5	23.3	06	3.5
1000	28	72	26.7	21.3	06	4.0
950	28	525	23.4	18.6	07	7.7
900	28	995	20.0	15.6	08	9.3
850	28	1,486	17.0	11.7	09	8.9
800	28	2,003	15.2	6.7	09	8.8
750	28	2,548	13.1	1.9	09	9.2
700	28	3,125	9.5	-2.3	09	8.9
650	28	3,737	6.1	-5.6	09	9.4
600	28	4,389	2.5	-9.0	08	10.4
550	28	5,087	-1.2	-11.6	09	9.6
500	28	5,841	-5.5	-16.2	09	9.5
450	28	6,662	-9.6	-22.9	09	10.5
400	28	7,563	-14.9	-29.3	09	9.4
350	28	8,563	-21.7	-36.3	09	8.0
300	28	9,677	-29.9	-44.3	09	7.8
250	28	10,949	-40.2	-52.6	10	6.6
200	28	12,430	-52.8		09	6.3
175	28	13,279	-59.5		08	7.7
150	28	14,227	-67.0		07	9.1
125	28	15,308	-74.6		08	10.6
100	26	16,576	-82.7		09	13.3
80	26	17,816	-80.9		10	9.9
70	25	18,578	-75.9		09	7.3
60	24	19,479	-72.6		09	10.2
50	24	20,563	-67.4		09	18.9
40	20	21,929	-59.6		09	18.9
30	20	23,764	-52.7		27	2.8
25	20	24,949	-50.6		28	8.1
20	20	26,413	-47.8		27	14.5
15	17	28,320	-45.2		27	15.9
10	16	31,047	-40.7		27	12.1
7	10	33,496	-36.9			
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PORTLAND, MAINE 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	20	-7.8	-11.7	32	1.4
1000	28	125	-6.2	-10.5	33	1.5
950	28	527	-6.6	-11.0	29	1.8
900	28	948	-7.8	-12.2	27	3.3
850	28	1,392	-8.8	-14.9	26	5.9
800	28	1,862	-9.2	-16.1	26	8.6
750	28	2,361	-10.0	-19.7	25	12.2
700	28	2,891	-12.0	-22.7	26	14.9
650	28	3,455	-14.5	-24.6	26	17.0
600	28	4,058	-17.6	-28.5	26	18.4
550	28	4,705	-21.6	-32.4	26	20.4
500	28	5,401	-25.7	-36.9	26	23.4
450	28	6,157	-30.7	-40.8	27	24.0
400	28	6,984	-36.4	-45.3	27	25.6
350	28	7,901	-42.1	-48.3	27	27.7
300	28	8,929	-47.8		27	30.3
250	28	10,120	-51.9		27	31.6
200	28	11,564	-52.7		26	30.7
175	28	12,426	-52.6		26	29.0
150	28	13,422	-53.0		27	27.2
125	28	14,593	-54.7		27	23.4
100	28	16,012	-57.4		26	19.3
80	28	17,419	-58.2		27	14.0
70	28	18,260	-58.5		27	13.1
60	28	19,229	-58.6		28	10.6
50	28	20,373	-59.1		28	7.3
40	27	21,767	-59.3		27	5.8
30	25	23,575	-58.4		28	2.5
25	25	24,724	-57.6		26	5.3
20	23	26,134	-57.0		26	6.5
15	20	27,965	-56.2		26	8.7
10	14	30,539	-53.4			
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* QUILLAYUTE, WASH. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	58	3.4	1.9	17	.7
1000	28	145	3.6	1.1	16	.9
950	28	562	2.6	-1.3	20	4.2
900	28	997	.3	-4.7	23	5.5
850	28	1,454	-1.7	-6.8	23	7.5
800	28	1,935	-4.2	-10.2	24	8.1
750	28	2,441	-6.9	-13.6	25	8.6
700	28	2,977	-9.5	-17.7	26	9.9
650	28	3,546	-12.9	-20.8	26	12.2
600	28	4,153	-16.5	-24.7	27	13.1
550	28	4,801	-21.1	-28.6	27	14.3
500	28	5,498	-25.9	-32.8	27	16.1
450	28	6,254	-30.8	-35.4	28	18.0
400	28	7,080	-36.9	-39.8	28	19.0
350	28	7,994	-43.2	-43.6	28	21.4
300	28	9,014	-50.1		28	22.0
250	28	10,189	-55.7		29	25.6
200	28	11,604	-56.1		29	22.7
175	27	12,448	-54.6		29	19.6
150	27	13,434	-55.0		29	17.7
125	27	14,596	-56.4		29	14.3
100	26	16,004	-58.1		29	11.3
80	25	17,402	-58.6		29	8.4
70	25	18,240	-59.0		30	6.9
60	25	19,206	-59.6		31	6.5
50	24	20,347	-60.7		31	5.1
40	21	21,737	-61.8		34	3.9
30	20	23,521	-61.9		35	3.8
25	19	24,650	-62.0		03	2.9
20	19	26,030	-62.0		04	2.7
15	18	27,812	-61.6		04	1.7
10	13	30,350	-60.4		27	3.6
7	6	32,601	-57.1			
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RAPID CITY, S. DAK. 901 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	966	-7.6	-12.3	33	3.3
1000	28	146				
950	28	552				
900	28	975			34	3.5
850	28	1,426	-4.1	-11.6	32	8.9
800	28	1,903	-5.9	-14.3	32	10.5
750	28	2,406	-8.1	-16.1	32	10.7
700	28	2,940	-10.7	-18.2	31	12.0
650	28	3,506	-13.9	-21.4	31	11.9
600	28	4,110	-17.5	-25.1	31	12.3
550	28	4,756	-21.9	-29.5	31	13.0
500	28	5,451	-26.9	-34.7	30	14.3
450	28	6,203	-32.1	-38.6	29	14.4
400	28	7,024	-38.2	-43.7	29	15.5
350	28	7,934	-44.6		28	15.3
300	28	8,949	-50.6		29	16.8
250	28	10,125	-55.0		29	17.7
200	28	11,552	-53.3		29	18.2
175	28	12,416	-51.9		29	18.1
150	27	13,413	-52.4		29	16.8
125	27	14,586	-55.2		29	14.2
100	27	16,002	-57.4		29	11.9
80	26	17,406	-58.6		29	9.7
70	26	18,244	-59.4		29	7.6
60	25	19,205	-60.4		29	6.2
50	25	20,339	-61.4		30	5.8
40	24	21,721	-61.7		30	4.5
30	23	23,503	-61.6		32	2.3
25	19	24,636	-61.4		29	2.2
20	17	26,023	-60.2		30	3.2
15	5	27,821	-60.0			
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ST CLOUD, MINN. 975 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	316	-12.4	-16.4	32	1.2
1000	28	123				
950	28	517	-10.5	-13.3	33	3.1
900	28	935	-9.0	-13.7	33	5.2
850	28	1,378	-8.6	-15.8	32	6.9
800	28	1,848	-9.1	-17.7	31	8.2
750	28	2,346	-10.7	-20.1	31	9.1
700	28	2,875	-12.9	-21.5	31	9.8
650	28	3,437	-15.7	-23.5	31	10.6
600	28	4,037	-19.0	-26.1	31	11.2
550	28	4,680	-22.8	-30.1	31	11.7
500	28	5,373	-27.2	-32.6	30	12.9
450	28	6,125	-32.3	-38.1	30	13.7
400	28	6,945	-38.2	-42.4	30	15.9
350	28	7,854	-44.5		30	15.3
300	28	8,869	-50.8		29	17.1
250	28	10,045	-54.4		28	19.3
200	28	11,478	-52.0		28	17.9
175	27	12,339	-50.9		27	17.4
150	27	13,341	-51.7		28	17.0
125	27	14,519	-53.5		28	15.6
100	27	15,945	-56.1		28	12.9
80	27	17,358	-57.7		28	11.5
70	27	18,200	-58.7		28	9.0
60	27	19,167	-59.4		29	7.3
50	27	20,307	-60.2		29	6.8
40	24	21,703	-60.8		31	4.6
30	20	23,494	-61.0		31	2.8
25	[illegible]	24,628	-60.8		32	3.1
20	19	26,016	-60.3		32	3.8
15	12	27,820	-59.0		31	4.8
10						
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* ST PAUL IS., ALASKA 1002 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	10	-9.0	-10.7	02	5.5
1000	28	25			35	7.1
950	28	421	-10.4	-12.0	03	4.9
900	28	837	-11.3	-13.9	03	4.1
850	28	1,275	-12.7	-16.6	02	2.9
800	28	1,736	-14.6	-20.2	36	2.1
750	28	2,223	-16.5	-22.3	03	1.3
700	28	2,739	-19.0	-25.7	21	.6
650	28	3,288	-21.8	-29.2	22	2.0
600	28	3,874	-25.2	-33.6	22	3.3
550	28	4,501	-29.0	-36.1	22	4.8
500	28	5,177	-33.2	-38.3	22	7.2
450	28	5,911	-37.6	-40.8	21	9.1
400	28	6,715	-42.5	-42.5	21	11.7
350	28	7,609	-47.8		21	13.9
300	27	8,602	-52.7		21	13.4
250	27	9,778	-53.2		20	9.8
200	27	11,225	-50.3		20	9.1
175	27	12,098	-49.6		20	9.2
150	27	13,108	-49.2		21	9.6
125	27	14,305	-49.2		20	9.2
100	27	15,768	-49.1		21	9.9
80	27	17,228	-50.4		21	9.4
70	27	18,098	-51.0		21	9.4
60	27	19,100	-51.8		21	9.1
50	27	20,278	-53.2		22	8.7
40	26	21,709	-54.9		22	7.6
30	26	23,539	-56.6		23	8.2
25	25	24,691	-57.1		23	8.0
20	23	26,096	-58.2		24	9.6
15	17	27,898	-59.6		25	12.7
10	8	30,361	-61.2			
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SALEM, ILL. 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	174	-1.9	-5.7	26	2.1
1000	28	126				
950	28	534	-2.7	-7.1	26	6.1
900	28	963	-3.0	-9.1	27	8.9
850	28	1,416	-3.0	-11.4	27	10.5
800	28	1,896	-4.1	-12.3	27	12.1
750	28	2,404	-5.8	-16.1	27	14.1
700	28	2,942	-7.9	-19.1	27	17.0
650	28	3,516	-10.4	-22.3	27	20.0
600	28	4,128	-13.8	-25.5	27	22.8
550	28	4,784	-17.8	-29.8	26	25.8
500	28	5,491	-22.5	-33.7	26	26.0
450	28	6,257	-27.5	-38.4	26	29.9
400	28	7,094	-33.6	-42.5	26	32.3
350	28	8,021	-40.1	-47.5	26	31.9
300	28	9,054	-47.5		26	32.4
250	27	10,241	-52.7		27	35.9
200	26	11,680	-52.8		27	31.2
175	26	12,543	-52.7		26	30.4
150	26	13,535	-54.8		27	25.6
125	25	14,694	-58.5		27	26.9
100	25	16,087	-61.2		27	22.2
80	25	17,467	-63.0		27	12.6
70	25	18,289	-63.0		26	14.5
60	24	19,240	-63.2		27	9.2
50	24	20,363	-62.6		27	6.2
40	21	21,740	-62.9		28	6.5
30	[illegible]	23,519	-61.3		31	2.9
25	20	24,653	-59.9		28	5.3
20	20	26,050	-58.8		29	5.3
15	18	27,865	-56.2		28	8.3
10	16	30,477	-50.8		27	18.7
7	9	32,833	-44.7			
5	5	35,175	-37.5			

SALEM, OREG. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	61	2.7	.6	19	2.3
1000	28	169	4.4	2.9	20	2.7
950	28	587	3.8	.1	22	4.6
900	28	1,026	2.4	-3.8	24	6.4
850	28	1,487	.3	-7.2	26	8.1
800	28	1,971	-2.2	-10.0	26	9.0
750	28	2,481	-5.1	-13.7	27	9.7
700	28	3,020	-8.0	-16.3	27	10.7
650	28	3,593	-11.5	-20.0	28	11.5
600	28	4,202	-15.3	-22.6	28	12.7
550	28	4,854	-19.5	-28.0	28	13.9
500	28	5,556	-24.3	-31.8	29	15.5
450	28	6,316	-29.7	-34.9	29	17.0
400	28	7,145	-35.8	-38.5	30	18.7
350	28	8,064	-41.9	-45.3	30	22.2
300	28	9,091	-48.5		30	25.1
250	28	10,274	-54.7		30	25.1
200	28	11,689	-57.0		30	22.6
175	28	12,537	-56.0		29	20.8
150	28	13,519	-56.1		29	19.9
125	28	14,675	-57.2		30	16.3
100	28	16,080	-59.1		29	11.0
80	27	17,476	-60.3		30	9.7
70	27	18,309	-60.0		31	8.2
60	26	19,267	-61.2		32	5.9
50	26	20,399	-61.3		33	4.8
40	24	21,782	-61.8		35	3.8
30	22	23,567	-62.0		01	3.4
25	19	24,704	-61.5		03	3.2
20	18	26,090	-61.5		07	3.8
15	11	27,891	-60.9			
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SALT LAKE CITY, UTAH 871 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	1,288	-.8	-5.5	16	1.0
1000	28	170				
950	28	588				
900	28	1,024				
850	28	1,483	.1	-8.3	22	.9
800	28	1,967	-2.4	-10.4	27	2.0
750	28	2,477	-6.0	-13.4	29	3.3
700	28	3,013	-9.3	-16.9	31	6.3
650	28	3,583	-12.3	-20.4	31	8.8
600	28	4,192	-15.3	-25.3	31	10.9
550	28	4,844	-19.2	-29.2	31	12.8
500	28	5,547	-24.0	-34.2	31	13.7
450	28	6,307	-29.4	-37.6	30	15.6
400	28	7,137	-36.1	-42.1	31	16.5
350	28	8,054	-42.5	-45.7	31	18.5
300	28	9,077	-49.7		31	19.9
250	28	10,254	-55.4		31	21.9
200	28	11,673	-54.9		30	20.9
175	28	12,530	-54.1		29	18.4
150	28	13,516	-55.6		29	17.9
125	28	14,671	-58.1		29	16.9
100	28	16,069	-59.7		29	12.7
80	28	17,460	-60.8		29	8.8
70	28	18,289	-61.8		29	7.4
60	27	19,242	-61.6		29	5.2
50	27	20,370	-62.4		30	4.1
40	26	21,749	-62.1		30	3.0
30	22	23,534	-61.6		32	2.6
25	21	24,666	-60.2		33	2.5
20	18	26,068	-59.4		33	1.8
15	[illegible]	27,883	-57.9		27	2.2
10	12	30,455	-55.6			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

SAN DIEGO, CALIF. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	124	8.0	5.4	[illegible]	.5
1000	28	139			[illegible]	.7
950	28	608	11.4	-.6	32	.9
900	28	1,[illegible]	10.3	-4.9	32	[illegible]
850	28	1,492	7.7	-8.8	31	4.2
800	28	1,[illegible]	[illegible]	[illegible]	32	6.3
750	28	2,514	2.8	-16.0	32	[illegible]
700	28	3,[illegible]	-.4	-20.8	32	8.8
650	28	3,[illegible]	-3.5	-24.1	31	10.6
600	28	4,[illegible]	[illegible]	-26.1	31	[illegible]
550	28	4,[illegible]	-11.7	-29.9	30	15.4
500	28	5,[illegible]	-17.0	-33.5	30	17.8
450	28	6,461	-22.9	-38.9	30	19.4
400	28	7,313	-29.9	-44.2	30	19.9
350	28	8,252	[illegible]	-49.4	30	21.8
300	28	9,296	-45.4		30	21.2
250	28	10,[illegible]	-53.1		29	24.9
200	28	11,[illegible]	-56.4		28	28.0
175	28	12,[illegible]	-56.8		28	26.2
150	28	13,[illegible]	-59.3		28	23.4
125	28	14,[illegible]	-63.0		28	22.5
100	28	16,[illegible]	[illegible]		28	18.2
80	28	17,571	-68.1		28	14.0
70	28	18,375	-67.3		29	10.4
60	28	19,307	-66.5		29	6.0
50	28	20,415	-64.7		29	3.0
40	[illegible]	21,780	-63.6		27	3.0
30	[illegible]	23,563	-60.3		29	3.8
25	[illegible]	24,701	-59.7		27	3.7
20	[illegible]	26,[illegible]	-58.1		26	7.1
15	[illegible]	27,929	-54.9		27	11.8
10	11	30,547	[illegible]			
7						
5						

SAN JUAN, P. R. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	6	23.0	18.6	11	3.0
1000	28	148	22.8	18.7	09	6.1
950	28	594	19.4	16.2	08	8.5
900	28	1,057	16.0	12.6	08	8.7
850	28	1,540	12.7	8.1	08	7.3
800	28	2,048	10.5	3.1	09	6.4
750	28	2,584	8.4	-3.6	08	5.3
700	28	3,153	6.5	-11.0	06	4.1
650	28	3,757	3.4	-16.6	06	4.2
600	28	4,402	.1	-20.5	05	4.2
550	28	5,094	-4.2	-24.9	03	3.9
500	28	5,838	-9.3	-29.4	36	4.7
450	28	6,644	-14.6	-33.8	33	7.2
400	28	7,525	-21.0	-38.8	32	9.4
350	28	8,501	-27.8	-44.3	30	13.2
300	28	9,590	-34.8	-50.0	30	17.3
250	28	10,844	-42.3	-54.9	30	20.7
200	28	12,318	-53.0		29	18.7
175	28	13,168	-58.8		30	17.7
150	28	14,[illegible]	-65.3		31	14.3
125	28	15,214	-71.7		32	10.4
100	28	16,509	-78.0		34	6.8
80	28	17,772	-80.8		01	4.7
70	28	18,529	-78.1		03	3.7
60	28	19,425	-71.5		03	2.6
50	25	20,525	-64.3		02	1.8
40	23	21,[illegible]	-61.1		06	2.6
30	22	23,[illegible]	[illegible]		09	2.9
25	22	24,863	-54.7		27	.2
20	21	26,305	-50.1		25	5.0
15	19	28,[illegible]	-45.7		25	11.7
10	14	30,932	-40.9		26	21.3

* SAULT STE MARIE, MICH. 984 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	221	-12.4	-14.8	11	1.0
1000	28	95				
950	28	489	-10.4	-13.9	13	.8
900	28	905	-10.8	-14.4	26	1.8
850	28	1,345	-11.3	-16.6	27	5.3
800	28	1,809	-12.2	-18.1	27	6.7
750	28	2,302	-13.4	-20.1	27	8.2
700	28	2,825	-15.2	-22.5	27	8.9
650	28	3,383	-17.7	-25.3	27	10.0
600	28	3,978	-20.7	-28.1	27	11.5
550	28	4,617	-24.1	-31.4	27	13.5
500	28	5,307	-28.4	-35.4	27	15.3
450	28	6,055	-33.2	-39.4	27	17.4
400	28	6,873	-38.6	-43.7	27	19.1
350	28	7,782	-44.0		27	21.0
300	28	8,802	-49.2		27	22.1
250	28	9,988	-52.6		26	20.2
200	28	11,433	-51.6		27	21.3
175	28	12,300	-51.0		27	20.8
150	28	13,303	-51.4		27	20.5
125	28	14,483	-52.8		27	17.9
100	28	15,917	-54.9		27	14.9
80	28	17,336	-56.7		28	12.3
70	28	18,182	-57.3		28	10.4
60	28	19,155	-58.0		28	9.1
50	26	20,303	-58.7		28	6.6
40	28	21,702	-59.4		29	5.0
30	28	23,503	-59.2		30	3.9
25	27	24,642	-58.8		30	3.3
20	26	26,045	-58.8		29	3.5
15	23	27,851	-57.9		28	6.3
10	21	30,420	-55.7		26	10.8
7	15	32,719	-52.1		26	19.6

* SHEMYA, ALASKA 1000 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	38	-2.0	-6.5	02	6.5
1000	28	36			36	3.6
950	28	442	-4.7	-7.9	02	6.2
900	28	865	-8.1	-9.9	02	6.0
850	28	1,306	-11.3	-13.4	03	5.2
800	28	1,769	-14.1	-17.5	03	4.5
750	28	2,257	-16.6	-21.4	04	3.2
700	28	2,773	-19.3	-24.9	03	3.0
650	28	3,320	-22.5	-28.8	01	2.0
600	28	3,904	-26.0	-32.9	01	3.0
550	28	4,529	-29.9	-36.6	36	4.2
500	28	5,202	-34.5	-39.1	35	3.8
450	28	5,931	-39.1	-39.7	35	4.3
400	28	6,730	-44.4	-43.6	34	4.0
350	28	7,616	-50.1		33	4.4
300	28	8,607	-55.4		32	3.8
250	28	9,766	-56.0		30	3.7
200	28	11,197	-52.7		26	3.6
175	28	12,062	-51.4		25	4.8
150	28	13,065	-50.6		24	5.0
125	28	14,254	-50.5		24	5.4
100	27	15,708	-50.4		23	6.7
80	26	17,159	-51.2		22	8.2
70	26	18,027	-51.4		22	7.3
60	26	19,027	-51.8		22	8.0
50	26	20,206	-52.8		22	8.1
40	24	21,646	-53.8		22	8.3
30	23	23,492	-55.2		22	9.2
25	21	24,661	-55.1		23	9.0
20	21	26,084	-55.8		24	9.1
15	18	27,903	-57.5		24	9.3
10	16	30,472	-58.3		25	12.9
7	11	32,700	-58.3			

* SHREVEPORT, LA. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	79	5.8	2.6	13	.6
1000	28	132			17	1.2
950	28	554	6.5	.3	20	4.4
900	28	998	6.1	-1.4	24	5.7
850	28	1,466	4.8	-3.0	26	8.7
800	28	1,959	2.9	-5.6	26	9.4
750	28	2,480	1.3	-10.8	26	11.6
700	28	3,033	-1.0	-15.2	26	14.3
650	28	3,620	-4.4	-17.7	27	16.9
600	28	4,246	-8.1	-20.8	26	19.2
550	28	4,917	-12.6	-25.0	26	21.5
500	28	5,637	-17.6	-28.9	26	24.0
450	28	6,417	-23.4	-34.2	26	25.2
400	28	7,268	-29.8	-40.0	26	27.4
350	28	8,208	-36.9	-45.5	26	29.7
300	28	9,256	-44.2		26	35.4
250	28	10,460	-50.6		26	38.4
200	28	11,908	-52.6		26	42.3
175	27	12,761	-55.1		26	42.8
150	27	13,738	-58.6		26	37.9
125	26	14,865	-63.0		26	34.6
100	26	16,224	-67.0		26	25.5
80	26	17,566	-68.8		26	14.0
70	26	18,364	-69.0		26	10.7
60	26	19,293	-65.7		26	9.6
50	24	20,406	-63.6		27	6.8
40	24	21,778	-63.2		28	7.3
30	23	23,552	-62.2		29	6.3
25	23	24,681	-61.2		29	5.4
20	22	26,078	-58.3		29	5.2
15	20	27,913	-54.2		29	6.8
10	19	30,559	-45.8		26	17.0
7	17	33,002	-35.7		27	28.3
5	13	35,399	-28.9			

SPOKANE, WASH. 932 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	720	-.9	-4.5	21	2.5
1000	28	151				
950	28	564				
900	28	[illegible]	-.3	-4.3	23	4.4
850	28	1,454	-2.0	-8.0	25	5.5
800	28	1,935	-4.0	-11.5	26	6.0
750	28	2,442	-6.4	-15.0	28	7.7
700	28	2,978	-9.7	-18.6	28	9.5
650	28	3,546	-13.5	-21.4	29	9.9
600	28	4,151	-17.2	-25.9	29	11.5
550	28	4,798	-21.3	-30.9	29	12.8
500	28	5,495	-25.9	-34.2	29	15.1
450	28	6,249	-31.2	-38.5	29	16.1
400	28	7,074	-37.2	-43.5	29	17.3
350	28	7,987	-43.5	-46.0	30	20.0
300	28	9,007	-49.6		30	21.8
250	28	10,185	-55.3		30	24.2
200	28	11,605	-55.3		30	21.8
175	28	12,462	-53.2		30	18.6
150	28	13,456	-53.4		30	16.3
125	28	14,625	-55.1		30	14.1
100	28	16,044	-57.1		30	11.4
80	28	17,455	-57.8		30	8.3
70	28	18,296	-58.4		30	7.6
60	28	19,264	-59.1		31	5.9
50	28	20,406	-59.5		33	4.9
40	27	21,798	-60.5		34	3.8
30	27	23,588	-60.9		02	3.3
25	27	24,722	-60.9		02	3.1
20	26	26,114	-60.9		02	3.0
15	17	27,885	-60.1		02	2.5
10	10	30,439	-58.6			
7	5	32,676	-56.7			

* SWAN ISLAND, W. I. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	10	24.6	21.4	09	5.0
1000	27	123	23.9	20.0	09	5.8
950	27	571	20.3	17.8	10	7.3
900	27	1,036	17.4	13.6	10	7.1
850	27	1,523	14.3	9.3	11	6.3
800	27	2,033	11.9	5.1	11	5.3
750	27	2,572	9.2	.7	12	4.6
700	27	3,141	6.6	-5.5	13	3.7
650	27	3,747	3.8	-11.7	11	1.9
600	27	4,394	.8	-17.7	14	.7
550	27	5,087	-3.1	-23.9	28	1.6
500	27	5,835	-7.8	-27.7	27	3.2
450	27	6,645	-13.6	-32.0	27	5.5
400	27	7,529	-20.3	-37.7	28	7.7
350	27	8,507	-27.3	-44.1	28	12.3
300	27	9,596	-35.3	-50.8	26	16.5
250	27	10,843	-43.8		26	19.6
200	27	12,314	-52.9		27	15.7
175	27	13,163	-59.3		27	11.0
150	27	14,112	-66.6		25	6.6
125	27	15,195	-73.3		24	2.5
100	27	16,483	-78.4		13	2.7
80	26	17,745	-81.1		11	4.1
70	26	18,500	-78.2		10	3.2
60	26	19,394	-72.2		07	3.1
50	25	20,486	-65.4		08	3.8
40	25	21,857	-61.8		08	4.5
30	25	23,651	-58.6		07	4.3
25	25	24,805	-55.3		04	1.7
20	25	26,244	-51.0		30	4.3
15	22	28,135	-45.7		27	13.3
10	22	30,876	-39.7		27	22.1
7	14	33,333	-33.4		28	19.7
5	10	35,707	-29.3			

TAMPA, FLA. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	8	13.1	10.0	11	1.1
1000	28	157	14.6	8.9	14	2.6
950	28	591	13.4	6.1	18	5.3
900	28	1,046	11.5	4.6	21	5.9
850	28	1,522	9.5	1.3	23	6.8
800	28	2,024	7.7	-3.0	24	6.8
750	28	2,555	5.8	-7.6	25	7.9
700	28	3,117	3.3	-14.1	25	9.8
650	28	3,714	.2	-18.7	25	11.1
600	28	4,351	-3.6	-22.3	25	12.8
550	28	5,033	-8.1	-26.5	25	14.8
500	28	5,765	-13.4	-31.4	26	17.2
450	28	6,560	-18.8	-36.1	26	19.6
400	28	7,426	-25.2	-41.0	26	22.3
350	28	8,385	-32.3	-46.5	26	25.2
300	28	9,452	-39.6	-51.1	27	30.1
250	28	10,682	-45.5		27	35.6
200	27	12,147	-52.1		27	39.9
175	27	13,004	-56.4		27	38.6
150	25	13,973	-61.4		26	35.0
125	23	15,083	-67.8		27	30.7
100	23	16,406	-73.3		27	23.7
80	21	17,707	-74.9		27	13.6
70	21	18,487	-72.7		27	9.0
60	20	19,402	-68.6		27	6.0
50	20	20,506	-64.3		31	5.4
40	17	21,884	-61.8		32	5.1
30	17	23,679	-58.8		32	4.2
25	15	24,826	-57.0		30	1.7
20	13	26,256	-52.9		25	6.2
15	12	28,127	-48.6		26	10.1
10	8	30,858	-40.1			

TOPEKA, KANS. 983 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	268	-4.8	-7.7	29	1.1
1000	28	130				
950	28	536	-2.9	-8.0	28	2.5
900	28	965	-3.0	-9.0	29	5.8
850	28	1,417	-3.2	-10.9	28	7.2
800	28	1,897	-4.2	-12.7	28	8.6
750	28	2,404	-6.1	-15.3	28	11.3
700	28	2,942	-8.4	-18.9	28	12.6
650	28	3,514	-11.5	-23.4	28	13.2
600	28	4,123	-15.0	-26.5	28	16.0
550	28	4,775	-19.4	-30.6	28	18.1
500	28	5,478	-23.7	-35.4	28	19.9
450	28	6,240	-28.7	-39.7	28	21.6
400	28	7,074	-34.4	-44.1	28	23.6
350	28	7,997	-41.0	-47.9	27	26.9
300	28	9,027	-47.8		27	26.5
250	28	10,215	-53.2		27	28.9
200	28	11,653	-52.3		27	27.0
175	28	12,519	-52.2		27	26.0
150	28	13,511	-54.2		27	25.3
125	28	14,673	-57.1		27	21.8
100	28	16,075	-60.1		27	17.6
80	28	17,462	-61.4		27	14.4
70	28	18,290	-61.9		27	12.1
60	28	19,243	-62.2		28	9.2
50	26	20,371	-62.0		28	7.5
40	22	21,750	-62.2		28	6.1
30	22	23,533	-60.6		29	4.4
25	17	24,670	-60.5		30	3.8
20	13	26,072	-58.8			
15	8	27,890	-57.1			

+ TRUK, CAROLINE IS. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	2	28.1	23.7	06	3.7
1000	28	80	27.5	21.3	07	4.6
950	28	534	23.9	18.7	08	7.6
900	28	1,005	20.7	14.4	09	8.4
850	28	1,497	17.7	10.6	09	8.2
800	28	2,015	15.6	6.0	09	8.7
750	28	2,561	13.2	.8	09	9.1
700	28	3,138	10.3	-3.3	09	8.7
650	28	3,751	6.8	-7.5	09	9.1
600	28	4,405	3.1	-12.1	09	9.4
550	28	5,105	-1.0	-14.7	09	8.9
500	28	5,859	-4.9	-20.5	09	9.2
450	28	6,681	-9.2	-24.5	09	10.0
400	28	7,583	-14.8	-30.4	09	9.5
350	28	8,584	-21.5	-37.0	09	8.9
300	28	9,698	-30.0	-44.6	09	7.3
250	28	10,969	-40.3	-52.5	10	6.4
200	28	12,451	-52.8		09	8.5
175	28	13,299	-59.6		09	9.6
150	28	14,246	-67.3		10	9.5
125	28	15,324	-75.4		09	10.5
100	28	16,589	-83.2		09	14.8
80	28	17,830	-80.5		10	10.5
70	28	18,595	-75.2		09	6.7
60	28	19,498	-71.4		09	9.2
50	28	20,589	-66.0		09	17.3
40	27	21,965	-58.6		09	17.9
30	26	23,808	-51.7		29	1.6
25	26	24,997	-49.7		27	9.0
20	25	26,470	-46.8		27	14.6
15	2[illegible]	28,398	-43.5		27	15.8
10	17	31,147	-38.7		27	14.5
7	11	33,623	-34.1			

* TUCSON, ARIZ. 924 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	789	5.3	-6.2	16	3.5
1000	28	139				
950	28	563				
900	28	1,009	10.1	-6.8	18	2.6
850	28	1,482	7.7	-9.0	25	3.0
800	28	1,979	4.5	-10.9	26	4.2
750	28	2,501	1.6	-13.9	27	5.6
700	28	3,053	-1.6	-17.2	27	7.8
650	28	3,640	-4.6	-20.6	28	9.7
600	28	4,265	-8.5	-24.5	28	12.8
550	28	4,934	-13.0	-28.5	28	14.7
500	28	5,653	-18.5	-32.2	28	17.4
450	28	6,430	-24.2	-36.6	27	20.1
400	28	7,277	-30.7	-42.1	27	21.6
350	28	8,215	-37.4	-48.2	27	23.9
300	27	9,257	-45.3		28	24.2
250	27	10,453	-52.7		28	27.0
200	27	11,885	-54.2		27	28.6
175	27	12,739	-55.5		27	28.0
150	27	13,717	-58.4		27	25.2
125	26	14,855	-62.8		27	21.8
100	26	16,215	-67.1		27	17.3
80	26	17,555	-68.6		27	11.9
70	26	18,358	-67.5		27	8.4
60	26	19,288	-66.4		27	6.1
50	26	20,401	-63.5		27	4.4
40	25	21,774	-63.1		26	4.9
30	25	23,554	-61.0		26	4.4
25	25	24,690	-60.0		27	5.7
20	25	26,092	-57.4		27	6.1
15	21	27,927	-54.1		27	10.6
10	19	30,550	-47.6		27	18.8
7	13	32,[illegible]	-40.3		27	25.7

* VANDENBERG AFB, CALIF. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	100	7.9	4.2	02	1.9
1000	28	157	9.3	3.2	01	3.1
950	28	585	10.5	-1.3	36	7.2
900	28	1,035	9.9	-6.0	36	7.3
850	28	1,508	7.7	-9.8	35	8.0
800	28	2,005	5.2	-13.4	34	8.5
750	28	2,528	2.0	-16.7	34	9.9
700	28	3,081	-1.1	-18.4	33	11.7
650	28	3,669	-4.0	-21.6	33	13.5
600	28	4,296	-7.4	-24.5	32	14.8
550	28	4,968	-12.0	-28.3	32	15.9
500	28	5,690	-17.2	-32.5	31	17.0
450	28	6,471	-23.1	-36.9	31	18.8
400	28	7,322	-29.8	-42.4	31	20.7
350	28	8,262	-37.2	-47.2	31	22.2
300	28	9,306	-45.1		31	24.5
250	28	10,499	-53.8		31	26.2
200	28	11,916	-57.7		30	28.3
175	28	12,760	-57.4		30	26.8
150	28	13,731	-58.8		29	23.0
125	28	14,867	-62.1		29	22.0
100	28	16,237	-65.0		29	16.4
80	28	17,592	-66.1		30	10.8
70	28	18,402	-66.2		30	9.1
60	28	19,338	-65.5		31	6.2
50	27	20,453	-63.9		32	3.9
40	27	21,824	-62.7		32	2.7
30	23	23,602	-61.1		29	2.5
25	21	24,739	-59.8		28	3.4
20	20	26,141	-58.5		26	4.7
15	16	27,962	-56.3		26	10.3
10	15	30,581	-49.1			
7	5	32,989	-39.9			

VICTORIA, TEXAS 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	33	10.4	6.7	12	1.1
1000	28	125	12.2	6.4	14	2.2
950	28	556	11.6	5.7	18	5.9
900	28	1,008	10.6	2.4	20	5.2
850	28	1,483	9.3	-3.3	23	6.7
800	28	1,985	7.8	-7.4	25	7.4
750	28	2,515	5.4	-13.7	26	8.8
700	28	3,076	3.0	-17.1	26	11.6
650	28	3,672	-.6	-18.9	26	14.0
600	28	4,306	-5.1	-22.3	26	16.3
550	28	4,983	-10.0	-25.8	26	18.6
500	28	5,711	-14.8	-31.3	26	20.5
450	28	6,500	-20.3	-36.5	26	22.4
400	28	7,362	-26.6	-41.2	26	25.4
350	28	8,316	-33.6	-47.0	26	29.1
300	28	9,376	-41.8	-48.1	26	33.9
250	28	10,592	-48.4		26	39.2
200	27	12,044	-52.5		26	42.2
175	27	12,901	-55.8		26	39.5
150	27	13,872	-60.3		26	37.9
125	27	14,993	-66.1		26	33.4
100	27	16,329	-70.9		26	23.7
80	27	17,643	-72.9		26	16.0
70	27	18,430	-70.9		26	11.3
60	26	19,350	-67.4		26	6.9
50	25	20,461	-63.0		26	4.9
40	26	21,838	-62.3		28	3.7
30	26	23,619	-61.4		28	4.1
25	26	24,753	-60.1		29	3.9
20	25	26,155	-56.7		29	5.5
15	24	27,996	-52.9		28	9.0
10	21	30,656	-44.7		27	18.7
7	10	33,096	-36.0			

* WAKE IS., PACIFIC AREA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	5	24.2	20.1	05	3.9
1000	28	117	23.1	18.4	06	4.4
950	28	563	19.5	17.1	06	4.5
900	28	1,027	16.6	13.8	08	3.0
850	28	1,513	14.2	9.2	11	2.2
800	28	2,024	12.2	3.9	17	1.3
750	28	2,563	10.6	-.9	24	2.6
700	28	3,135	7.7	-6.0	26	4.8
650	28	3,743	4.5	-11.1	27	7.0
600	28	4,391	1.4	-15.4	27	8.3
550	28	5,086	-2.8	-20.3	27	10.6
500	28	5,835	-7.6	-24.7	27	11.4
450	28	6,648	-11.9	-29.7	27	14.0
400	28	7,540	-17.6	-35.1	27	15.8
350	28	8,531	-24.0	-41.3	27	17.4
300	28	9,634	-32.2	-48.2	28	18.1
250	28	10,895	-41.8		28	18.4
200	28	12,369	-53.4		28	18.0
175	27	13,216	-59.9		28	17.4
150	26	14,161	-67.0		28	17.3
125	26	15,243	-74.4		28	14.7
100	24	16,518	-81.5		27	11.2
80	24	17,767	-80.9		25	5.0
70	24	18,528	-76.0		24	.8
60	23	19,433	-69.4		10	4.4
50	23	20,537	-64.2		10	6.7
40	22	21,912	-62.0		09	6.7
30	21	23,703	-59.2		08	2.7
25	21	24,857	-55.0		30	1.9
20	21	26,299	-50.2		30	7.4
15	19	28,190	-46.0		28	11.5
10	17	30,914	-40.1		28	16.3
7	9	33,368	-35.5			

* WALLOPS IS., VA. NASA 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	4	.6	-1.9	24	1.0
1000	28	142	2.8	-4.7	26	2.0
950	28	558	2.6	-5.9	26	6.5
900	28	994	.8	-7.9	26	9.1
850	28	1,452	-1.0	-10.1	25	11.3
800	28	1,935	-2.1	-11.7	26	14.5
750	28	2,447	-3.7	-14.0	26	17.1
700	28	2,989	-6.4	-16.7	26	19.4
650	28	3,567	-8.3	-20.9	26	23.5
600	28	4,184	-11.7	-23.9	26	25.3
550	28	4,846	-15.8	-27.2	26	27.5
500	28	5,558	-20.7	-32.0	26	30.9
450	28	6,329	-25.8	-36.1	26	32.7
400	28	7,172	-31.7	-41.2	26	34.2
350	28	8,106	-38.6	-44.8	26	33.6
300	28	9,145	-46.0		26	33.2
250	28	10,343	-51.5		26	36.3
200	26	11,780	-53.2		26	38.1
175	26	12,640	-53.6		26	38.7
150	26	13,626	-56.1		26	34.1
125	25	14,773	-59.5		26	28.4
100	25	16,158	-63.0		26	24.3
80	24	17,526	-63.9		26	17.3
70	24	18,345	-63.6		26	13.1
60	23	19,295	-62.8		27	11.2
50	23	20,421	-62.2		27	9.3
40	23	21,802	-61.4		27	6.1
30	23	23,596	-58.8		27	5.1
25	23	24,745	-57.3		26	4.6
20	22	26,159	-56.3		26	4.1
15	21	27,994	-54.2			
10	18	30,633	-46.4			
7	5	33,014	-41.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	WASHINGTON DULLES INT. AP 1007 MB						WAYCROSS, GA. 1013 MB						WINNEMUCCA, NEV. 871 MB						WINSLOW, ARIZ. 850 MB						YAKUTAT, ALASKA 1005 MB					
					Resultant Wind						Resultant Wind					Resultant Wind						Resultant Wind						Resultant Wind		
	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	28	85	-2.1	-6.6	27	1.9	28	44	6.8	3.9	22	.7	27	1,312	-3.1	-8.5	20	1.2	28	1,487	-3.2	-10.4	24	.8	28	12	-4.6	-6.9	10	2.1
1000	28	140			26	2.2	28	149	8.4	2.0	21	1.1	27	285					28	180					28	50			11	3.8
950	28	551	-.3	-7.5	26	5.8	28	574	9.0	.1	21	5.1	27	619					28	596					28	459	-1.9	-5.8	13	6.3
900	28	983	-1.6	-8.5	26	8.5	28	1,022	8.0	-2.4	23	7.4	27	1,052					28	1,030					28	887	-4.7	-7.0	15	7.1
850	28	1,437	-2.6	-9.6	27	11.2	28	1,493	7.0	-2.8	24	9.6	27	1,509	.7	-8.5	23	1.2	28	1,486			29	1.1	28	1,335	-7.4	-9.5	15	7.5
800	28	1,918	-3.7	-11.8	27	13.1	28	1,990	5.0	-5.3	25	10.9	27	1,995	-1.3	-10.2	29	3.1	28	1,974	1.9	-10.3	29	3.9	28	1,806	-9.7	-12.7	17	6.8
750	28	2,426	-5.3	-14.3	26	15.0	28	2,515	3.2	-8.3	25	13.2	27	2,507	-4.4	-12.8	30	5.1	28	2,492	-1.6	-13.2	30	5.2	28	2,302	-12.4	-16.2	19	6.4
700	28	2,956	-7.3	-17.9	26	17.3	28	3,072	.5	-13.1	25	15.4	27	3,047	-7.5	-15.5	31	7.2	28	3,038	-5.2	-16.8	29	6.8	28	2,826	-15.5	-19.9	20	6.4
650	28	3,541	-9.9	-20.0	27	19.3	28	3,663	-2.4	-18.7	25	17.2	27	3,620	-10.8	-19.1	31	8.4	28	3,618	-7.5	-20.0	29	8.5	28	3,382	-18.8	-24.1	20	7.3
600	28	4,154	-13.2	-23.0	26	22.2	28	4,294	-6.1	-23.0	25	18.9	27	4,232	-14.3	-23.5	31	10.1	28	4,237	-11.0	-23.8	30	10.1	28	3,974	-22.5	-28.4	22	8.7
550	28	4,812	-17.1	-27.3	26	24.1	28	4,970	-10.5	-26.9	25	21.7	27	4,886	-18.5	-28.2	31	11.7	28	4,900	-15.6	-28.0	30	12.9	28	4,608	-26.4	-32.1	23	10.2
500	28	5,521	-21.6	-31.0	26	27.6	28	5,696	-15.5	-31.3	26	24.5	27	5,590	-23.6	-33.8	30	14.1	28	5,611	-20.5	-33.7	29	15.8	28	5,291	-30.8	-35.1	24	10.5
450	28	6,289	-26.7	-35.0	26	30.8	28	6,483	-20.7	-36.0	26	25.1	27	6,352	-29.2	-37.0	30	15.3	28	6,383	-26.2	-38.2	29	17.1	28	6,031	-35.7	-39.0	24	12.0
400	28	7,130	-32.7	-40.7	26	32.9	28	7,343	-27.1	-41.1	26	27.1	27	7,183	-35.4	-41.8	30	15.7	28	7,224	-32.4	-43.2	29	18.8	28	6,841	-41.0	-41.8	25	13.6
350	28	8,059	-39.6	-44.6	26	36.4	28	8,295	-34.2	-46.6	26	29.9	27	8,104	-41.6	-45.5	31	18.0	28	8,155	-39.3	-48.3	29	20.3	28	7,741	-48.4		26	15.8
300	28	9,095	-46.8		26*	37.7	28	9,353	-42.1	-50.3	26	32.6	27	9,130	-49.0		31	18.2	28	9,190	-46.7		29	23.4	28	8,750	-51.8		26	17.3
250	28	10,288	-52.1		26	39.9	28	10,368	-48.4		26	40.5	27	10,311	-54.7		31	21.5	28	10,381	-53.6		28	26.7	28	9,924	-53.6		26	18.5
200	28	11,726	-53.6		27	41.7	28	12,028	-52.1		26	44.5	27	11,727	-56.1		31	21.1	28	11,809	-54.6		28	28.8	28	11,365	-51.4		26	17.5
175	28	12,585	-53.9		27	41.2	28	12,885	-55.4		26	43.6	27	12,578	-55.1		30	19.7	28	12,665	-54.5		28	26.9	27	12,227	-50.8		26	15.8
150	28	13,572	-55.6		27	37.9	28	13,859	-59.5		26	41.7	27	13,561	-56.0		30	18.4	28	13,647	-56.8		28	24.6	27	13,232	-50.1		25	17.3
125	28	14,727	-58.2		27	34.2	28	14,987	-64.2		27	36.7	27	14,714	-58.7		30	15.5	28	14,793	-60.5		27	22.3	27	14,423	-50.1		25	15.0
100	27	16,122	-61.1		27	25.6	28	16,335	-69.0		26	28.0	26	16,108	-61.7		30	12.8	28	16,170	-63.9		27	17.5	27	15,878	-51.2		25	13.8
80	27	17,501	-62.8		27	19.4	28	17,663	-70.5		27	18.7	26	17,489	-61.9		30	10.5	28	17,532	-65.4		28	12.7	27	17,325	-52.5		25	13.5
70	27	18,323	-63.1		27	17.4	28	18,459	-68.5		27	13.5	24	18,317	-62.0		31	8.3	28	18,345	-64.8		27	9.5	27	18,187	-53.1		26	12.0
60	27	19,273	-62.6		27	11.8	27	19,388	-66.4		26	7.9	23	19,265	-62.3		31	7.0	26	19,282	-64.6		27	7.1	27	19,177	-54.8		26	10.4
50	26	20,397	-62.0		28	10.9	27	20,500	-63.7		29	7.6	22	20,395	-62.8		32	4.2	25	20,399	-63.7		27	4.6	26	20,336	-56.0		26	9.3
40	26	21,779	-61.5		28	6.7	26	21,875	-61.6		31	6.4	18	21,763	-62.5		34	3.0	23	21,776	-62.9		27	4.3	24	21,752	-57.2		27	7.9
30	26	23,570	-59.4		28	4.8	25	23,669	-59.0		29	5.8	17	23,538	-61.8		35	3.2	21	23,558	-61.1		27	3.4	24	23,568	-58.3		28	7.3
25	25	24,715	-58.2		26	5.5	23	24,820	-57.6		27	6.2	14	24,663	-60.8		31	1.9	20	24,690	-60.2		26	4.6	23	24,711	-59.5		29	7.2
20	25	26,125	-56.9		25	6.2	22	26,233	-55.5		25	6.4	10	26,039	-59.7				19	26,089	-58.5		27	6.5	23	26,104	-60.7		28	7.8
15	25	27,953	-55.3		25	8.7	20	28,086	-51.6		25	10.0	7	27,857	-58.5				14	27,914	-56.8		27	10.3	15	27,882	-62.0		28	9.6
10	23	30,546	-51.3		27	15.4	17	30,764	-43.5		26	18.0							5	30,562	-50.0				8	30,469	-62.3			
7	7	32,902	-44.6				5	33,240	-35.5																					

Standard pressure surface (mb)	YAP, CAROLINE IS. + 1007 MB						YUCCA FLAT, NEV. 881 MB						YUMA, ARIZ. 1000 MB						ISLA GUADALUPE, MEXICO + 1017 MB						MONTERREY, MEXICO + 960 MB					
					Resultant Wind						Resultant Wind						Resultant Wind						Resultant Wind						Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	28	14	27.4	23.7	09	4.2	28	1,198	-.9	-7.0	32	1.3	19	131	9.0	-8.0	35	.7	21	23	17.4	12.7	32	8.1	28	423	24.2	5.9	11	2.6
1000	28	78	26.6	21.3	08	5.5	28	171					19	127					21	163	14.0	3.7	32	7.4	28	92				
950	28	530	23.0	18.7	08	9.9	28	588					19	559	13.8	-5.5	34	3.7												
900	28	1,000	19.8	15.0	08	10.0	28	1,024					19	1,012	11.0	-7.4	34	4.3												
850	28	1,491	17.1	10.8	09	9.1	28	1,486	5.0	-9.1	34	3.6	19	1,486	8.2	-8.9	33	4.2	21	1,532	12.0	-13.4	34	5.9	28	1,494	14.3	-1.5	13	2.5
800	28	2,007	14.9	5.9	09	8.9	28	1,979	2.2	-11.3	34	4.3	19	1,983	5.2	-11.1	32	4.1												
750	28	2,552	12.5	.8	09	9.5	28	2,497	-.7	-14.3	33	4.9	19	2,507	2.2	-13.7	31	4.7												
700	28	3,128	9.4	-2.0	09	9.6	28	3,045	-3.7	-18.1	33	5.9	19	3,061	-.6	-18.0	31	6.1	21	3,139	5.0	-20.2	31	7.5	28	3,111	6.4	-14.5	25	8.7
650	28	3,739	6.2	-5.9	10	9.9	28	3,626	-7.2	-21.4	32	7.5	19	3,649	-4.2	-21.8	30	7.4												
600	28	4,391	2.6	-10.9	10	9.1	28	4,245	-11.3	-25.3	32	8.8	19	4,275	-8.3	-25.4	29	9.8												
550	28	5,090	-1.3	-13.6	09	8.1	28	4,907	-15.8	-29.4	32	11.7	19	4,945	-12.8	-30.2	29	11.9												
500	28	5,844	-5.6	-17.3	09	8.3	28	5,619	-21.0	-33.2	31	13.8	19	5,664	-18.0	-33.4	29	14.4	18	5,790	-13.1	-34.3			28	5,771	-12.9	-30.5	26	18.9
450	28	6,663	-10.1	-22.7	09	7.9	28	6,389	-26.6	-38.8	31	14.9	19	6,442	-24.1	-38.4	29	16.1												
400	28	7,562	-15.6	-28.7	09	8.4	28	7,228	-33.3	-42.9	31	17.7	19	7,290	-31.0	-44.2	29	16.8												
350	28	8,580	-22.3	-35.9	09	8.1	28	8,155	-40.0	-47.0	30	20.5	19	8,225	-38.4	-49.1	29	18.8												
300	27	9,669	-30.7	-44.2	10	8.3	28	9,190	-46.9		31	22.3	19	9,265	-46.0		28	23.5	17	9,472	-41.6	-54.5			28	9,463	-39.6	-50.9	25	27.1
250	27	10,937	-40.9	-52.0	11	9.2	28	10,379	-53.8		30	22.3	19	10,461	-52.3		28	26.0												
200	27	12,414	-53.4		11	10.6	28	11,799	-56.6		29	24.7	15	11,904	-56.3				16	12,127	-55.0				28	12,150	-52.4		25	34.9
175	27	13,260	-60.3		11	11.0	28	12,649	-55.4		29	25.0																		
150	27	14,203	-68.2		10	11.2	28	13,630	-56.6		29	21.0							16	13,956	-58.5				28	13,968	-62.0		25	35.2
125	27	15,277	-76.1		10	12.7	28	14,779	-59.5		29	20.4																		
100	27	16,539	-83.4		10	14.9	28	16,163	-63.0		29	15.3							15	16,460	-67.3				28	16,404	-73.0		26	22.8
80	27	17,779	-81.0		09	9.8	28	17,532	-64.4		29	11.0																		
70	27	18,541	-76.6		09	6.4	28	18,349	-64.2		29	7.9																		
60	27	19,436	-72.7		08	7.9	28	19,294	-63.5		29	5.0																		
50	26	20,524	-66.6		09	16.7	28	20,416	-63.0		29	2.9																		
40	26	21,896	-60.1		09	19.9	28	21,790	-62.8		29	.8							14	20,645	-62.8				27	20,506	-62.4		24	3.0
30	24	23,721	-54.3		10	5.1	26	23,571	-61.0		32	.7							14	23,840	-57.3				27	23,678	-60.5		25	1.2
25	22	24,896	-51.0		25	6.1	22	24,705	-60.2		30	2.1																		
20	22	26,357	-48.3		26	12.3	21	26,101	-59.0		25	2.9																		
15	20	28,273	-44.6		27	15.7	14	27,921	-56.7		27	5.8																		
10	18	31,007	-40.4		26	15.7	8	30,492	-53.5																					
7	14	33,468	-36.1																											
5	8	35,846	-33.6																											

Note: All observations scheduled at 1200 G.C.T. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.C.T.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun. FEBRUARY 1971

TUCSON, ARIZ.

Date	Sun's zenith distance								
	A M				*	P M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Feb.									
1-----	0.90	1.00	1.10	1.30	1.36	1.26	1.11	0.95	----
2-----	.93	1.03	1.12	1.29	1.31	1.28	1.09	.98	0.88
3-----	.83	.94	1.03	1.11	----	----	----	----	----
4-----	1.00	1.09	1.18	1.35	1.41	1.29	1.13	1.02	.92
5-----	.85	.98	1.12	1.27	1.33	----	----	----	----
6-----	----	.99	1.12	1.26	1.35	1.26	1.03	.90	.80
7-----	.93	1.05	1.15	1.32	1.42	1.30	1.14	1.02	.94
8-----	----	----	1.14	1.27	----	----	1.09	.99	.87
9-----	.88	1.02	1.15	----	----	----	----	----	.97
10----	----	----	----	----	1.34	1.26	1.06	.93	.83
11----	----	----	1.03	----	1.24	1.19	1.01	----	----
12----	.77	.87	1.00	1.19	1.27	1.10	.89	.75	.64
13----	.79	.87	1.03	1.19	1.27	1.15	.99	.87	.77
14----	.87	.97	1.07	1.23	1.34	1.13	.93	.87	.76
15----	.89	.99	1.10	1.23	1.30	1.16	1.01	.87	.76
16----	.87	.91	1.03	----	----	----	----	----	----
17-23-				Instrument inoperative					
24----	----	----	----	.93	1.13	.92	----	----	----
25----	.67	.77	.88	1.08	1.19	1.10	.89	.81	.70
27----	----	----	----	1.17	----	1.18	.98	.85	.76
28----	.80	.89	1.02	1.18	1.29	1.12	.92	.81	.71
Averages	0.86	0.96	1.07	1.21	1.30	1.18	1.02	0.90	0.81

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance								
	A M				*	P M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Feb.									
2-----	----	----	----	1.29	----	1.30	1.17	1.02	----
3-----	0.98	1.08	1.18	1.32	----	----	----	----	----
4-----	----	(.93)	(1.05)	(1.18)	1.26	1.21	1.06	.98	(0.87)
5-----	1.03	1.14	1.24	(1.36)	1.44	1.38	1.25	1.15	1.05
6-----	(1.00)	(1.07)	1.22	1.37	----	----	(1.21)	(1.09)	1.01
7-----	----	----	----	----	----	(1.33)	1.20	1.05	.92
8-----	1.06	1.16	1.24	1.38	1.45	1.37	1.18	1.05	1.01
9-----	1.06	1.15	1.26	1.40	1.42	1.36	1.21	1.13	1.02
11----	.82	1.05	1.15	1.30	1.33	1.26	1.11	1.04	.96
12----	(.94)	(1.06)	----	(1.33)	1.42	1.28	1.13	1.06	.94
13----	1.01	1.10	1.21	1.32	1.41	1.32	1.18	1.08	.99
14----	----	----	----	1.38	1.42	1.35	1.23	1.13	1.03
16----	----	----	----	(1.26)	(1.35)	----	----	----	----
19----	.93	1.03	1.17	1.30	1.43	1.34	1.19	1.07	.94
20----	(.81)	(.96)	----	----	----	----	----	----	----
21----	----	----	----	----	----	1.28	1.17	----	.95
22----	1.08	1.21	1.22	----	----	----	----	1.10	1.01
23----	----	----	----	(1.31)	----	(1.27)	----	----	----
24----	.88	1.00	1.12	1.29	1.41	1.30	1.17	1.03	.93
25----	.94	1.03	1.16	1.29	1.43	1.31	1.15	.99	.83
26----	1.03	1.16	1.29	1.42	1.52	1.41	1.25	1.15	.98
27----	1.03	1.14	1.25	1.38	1.49	1.35	1.20	1.08	.97
28----	1.03	1.13	1.22	1.34	(1.35)	(1.26)	(1.17)	(.86)	(.79)
Averages	0.99	1.11	1.21	1.34	1.42	1.32	1.18	1.07	0.97

OMAHA, NEBR.

	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Feb.									
5-----	----	0.96	1.04	1.20	HS1.15	----	----	----	----
6-----	0.87	----	----	----	----	----	----	----	----
8-----	.94	H 1.01	H 1.08	H 1.33	1.40	HS1.36	HS1.19	HS1.08	HS0.98
9-----	.99	1.09	----	----	----	----	----	----	----
12----	----	----	----	----	HS1.38	HS1.34	----	----	----
14----	----	----	----	----	----	----	----	.94	HS .82
23----	----	----	----	----	1.33	HS1.24	----	----	----
25----	HS .82	HS .93	HM1.02	HM1.21	HM1.31	HM1.14	----	----	----
27----	----	----	----	----	HS1.34	HS .94	----	----	----
28----	HS1.02	HS1.06	HS1.20	----	----	----	----	----	----
Averages	0.95	1.01	1.09	1.25	1.32	1.20	1.19	1.01	0.96

MADISON, WIS.

	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Feb.									
6-----	S 0.91	S 1.01	S 1.14	----	S 1.36	(1.33)	S 1.18	S 1.09	S 0.96
8-----	S .92	S 1.02	----	S 1.33	S 1.35	(1.30)	S 1.14	S 1.01	S .88
13----	S .96	S 1.07	S 1.19	S 1.35	S 1.38	S 1.34	S 1.19	S 1.05	S .95
17----	----	----	----	----	S 1.33	S 1.30	S 1.13	S 1.02	S .92
25----	----	M .88	M .96	M 1.15	M 1.29	M 1.23	M 1.07	M .93	M .81
Averages	0.93	1.00	1.04	1.28	1.34	1.30	1.14	1.02	0.90

( ) Clouds present
HS Slight haze
HM Moderate haze
H Haze
S Slight haze - indeterminable
M Moderate haze - indeterminable
* Values corresponding to true solar noon

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

FEBRUARY 1971

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	338	374	289	396	406	388	407	433	429	---	421	428	433	432	405	418	---	228	465	177	413	401	468	488	496	529	531	496				411
AMES IOWA	249	124	102	38	280	289	304	303	287	229	248	272	284	106	248	97	297	13	66	88	128	63	261	366	359	46	206	351				204
ANNETTE ALASKA	83	40	115	149	162	111	56	61	31	116	18	87	17	37	86	103	116	65	127	13	18	21	190	166	177	146	215	146				96
APALACHICOLA FLORIDA	397	242	170	357	265	398	39	186	457	461	449	332	189	485	467	461	440	444	408	363	338	199	504	376	132	215	280	201				330
ARGONNE NAT. LAB.	244	119	72	34	213	310	187	328	309	190	189	54	293	112	182	226	246	40	116	51	138	30	109	304	373	59	73	409				179
ASTORIA OREGON	84	155	51	155	154	257	256	253	9	58	249	103	118	18	153	241	151	176	143	288	71	161	90	152	205	69	238	354				158
ATLANTA GEORGIA	377	260	61	35	378	396	70	82	430	431	416	187	123	439	286	374	247	397	225	314	87	287	477	453	423	56	473	192				264
BARROW ALASKA	4	4	6	5	9	16	7	21	14	29	33	31	38	---	51	---	53	27	28	52	48	60	72	74	62	56	87					34
BETHEL ALASKA	---	---	---	---	---	115	56	64	---	116	97	142	124	111	115	203	201	128	90	115	115	213	213	198	241	120	141	142				139
BISMARCK N.DAK.	282	144	152	280	227	302	318	329	273	300	---	329	243	265	204	333	351	153	227	274	334	353	324	380	316	78	352	363				277
BLUE HILL MASS.	222	224	232	205	2	209	169	6	45	251	231	193	29	126	213	275	259	180	282	2	23	15	12	110	109	275	6	306				150
BOISE IDAHO	261	210	298	46	377	302	320	324	203	242	320	304	296	245	163	319	115	314	136	374	360	299	349	122	139	305	86	301				255
BROOKINGS SOUTH DAK.	267	159	77	172	225	295	287	300	222	222	141	157	142	250	211	258	309	116	69	244	242	119	361	349	334	78	80	361				216
BROWNSVILLE TEXAS	30	210	369	362	467	338	194	541	505	122	524	523	534	475	514	502	366	---	314	262	399	---	---	---	220	538	---	475				382
BURLINGTON VERMONT	189	233	316	283	72	207	202	268	172	233	184	96	37	115	192	344	211	317	396	67	59	228	92	379	300	399	85	207				210
CAPE HATTERAS N.C.	384	374	278	62	---	362	197	48	385	410	394	282	156	405	412	401	432	449	385	176	381	328	438	459	384	396	110	---				326
CARIBOU MAINE	262	227	291	291	139	212	252	102	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				---
CHARLESTON S.C.	380	331	105	128	144	372	76	175	424	418	415	116	66	453	307	412	393	409	305	102	281	211	472	459	363	198	220	150				282
CLEVELAND OHIO	---	276	167	39	95	216	---	68	323	203	214	32	115	366	149	230	61	159	154	19	79	67	104	120	375	172	396	398				177
COLUMBIA MISSOURI	346	81	34	37	345	347	245	390	---	349	238	179	398	163	347	180	402	298	142	83	38	73	180	383	286	261	466	309				244
DAVIS CALIFORNIA	105	207	374	322	309	285	242	334	167	281	334	208	355	208	395	242	389	303	438	441	349	273	467	440	467	479	378	465				331
DODGE CITY KANSAS	186	331	346	220	304	253	289	329	397	357	111	397	345	---	357	373	229	93	382	105	114	352	479	472	474	453	498	220				314
E. LANSING MICHIGAN	253	283	133	39	131	270	184	171	235	288	261	108	377	220	143	304	196	170	61	44	143	27	101	169	419	212	108	176				187
EL CENTRO CALIF. NPF	339	354	360	363	361	346	374	387	391	398	386	391	395	387	355	238	292	412	417	420	438	398	279	442	444	451	466	460				384
EL PASO TEXAS	341*	330*	305	439	424	374	406	425	452	455	458	460	470	---	---	---	---	---	---	---	---	---	465*	469	387	497	511	447	548				433*
ELY NEVADA	226	126	392	176	352	388	385	389	410	335	391	384	377	378	252	382	266	272	195	408	474	269	464	499	423	395	419	288				347
EPPLEY NEWPORT R.I.	283	292	283	---	36	220	222	60	125	298	288	288	59	184	216	325	305	237	306	---	---	67	33	143	---	351	31	272				205
FAIRBANKS ALASKA	42	21	15	55	7	10	25	13	20	18	13	17	38	29	24	36	17	31	27	20	45	58	115	152	170	120	98	96				48
FLAMING GORGE UTAH	329	100	222	226	261	301	298	205	379	127	330	353	313	383	208	399	258	108	167	156	310	---	---	---	---	---	---	---				259
FORT WORTH TEXAS	290	125	117	348	397	206	87	425	418	415	400	434	431	381	425	384	184	175	431	440	118	478	435	267	77	470	308	247				318
FRESNO CALIFORNIA	156	49	236	319	303	134	336	334	304	221	257	319	315	315	359	128	303	364	385	428	380	325	360	416	456	444	209	272				301
GAINESVILLE FLORIDA	353	267	387	250	129	303	65	267	447	495	447	430	434	503	443	465	465	357	310	400	366	151	400	473	82	404	237	323				345
GENEVA NEW YORK	217	238	133	120	118	158	91	105	180	173	152	60	48	248	145	271	62	289	144	86	68	106	126	113	269	224	287	324				163
GLASGOW MONTANA	145	189	206	185	263	259	197	226	263	202	259	265	187	237	182	301	316	197	144	239	329	354	341	255	227	206	364	357				246
GRAND JUNCTION COLO.	266	185	124	290	311	358	319	313	372	260	371	373	336	408	256	403	137	202	170	185	451	424	425	441	221	461	485	280				315
GREAT FALLS MONTANA	170	93	---	83	237	148	146	293	206	121	272	121	134	215	257	287	178	329	103	316	355	341	350	310	94	301	308	195				221
GREENSBORO N.C.	387	356	152	33	17	387	39	31	402	414	398	278	84	438	284	419	305	430	299	178	173	30	405	453	326	95	300	450				270
INDIANAPOLIS INDIANA	276	257	54	27	216	321	107	144	---	335	246	41	430	210	220	346	270	139	49	46	118	68	102	222	171	92	417	443				199
LAKE CHARLES LA.	102	73	150	138	464	419	245	485	469	500	202	326	509	483	428	470	385	407	234	105	234	543	522	479	206	290	531	373				349
LAKELAND FLORIDA	249	283	385	390	277	291	215	189	489	490	360	419	333	510	472	444	448	329	358	424	384	279	347	478	370	450	360	404				372
LANDER WYOMING	285	172	201	309	238	277	288	254	304	270	320	289	316	283	246	357	249	131	235	231	402	414	422	387	359	274	435	435				299
LAS VEGAS NEVADA	353	350	367	329	295	376	390	388	395	383	393	398	408	369	150	275	319	416	254	203	433	397	423	444	454	487	494	466				372
LEXINGTON KENTUCKY	353	333	57	73	184	332	---	---	394	391	278	92	111	343	209	344	296	287	155	145	157	246	68	282	131	53	442	315				233
LITTLE ROCK ARKANSAS	323	70	78	52	368	321	59	406	411	397	115	117	433	371	383	187	236	321	226	435	51	204	460	447	364	362	470	397				288
LOS ANGELES CALIF.	147	124	354	296	312	309	312	256	380	411	388	347	394	386	233	38	345	382	186	450	436	433	459	456	449	494	498	495				349
MADISON WISCONSIN	265	146	163	68	239	327	286	341	331	222	274	290	366	159	308	207	344	71	51	---	---	---	---	326	399	127	120	428				244
MANHATTAN KANSAS	237	97	18	48	339	343	369	296	345	329	186	368	336	235	321	232	285	155	47	87	28	194	427	455	231	316	444	136				247
MATANUSKA ALASKA	43	103	96	60	24	17	67	37	19	65	82	60	71	101	51	80	40	62	58	24	55	96	69	201	209	176	66	50				74
MEDFORD OREGON	147	247	207	64	97	185	221	184	112	229	289	123	238	142	247	141	257	59	211	331	121	197	221	210	296	236	186	238				194
MIAMI FLORIDA	273	318	177	425	394	229	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	348	405	361	423	415	311				---
MIDLAND TEXAS	180	391	---	434	431	372	325	461	457	---	388	457	467	438	548	458	273	464	513	462	293	433	---	359	526	468	383	520				420
NASHVILLE TENNESSEE	360	134	35	79	358	366	281	---	376	390	311	---	228	265	369	375	316	368	93	413	30	385	127	434	161	71	462	378				276
NEW YORK CENTRAL PRK	250	302	206	107	9	284	139	51	151	313	301	296	22	218	247	345	164	350	228	45	148	30	41	196	214	255	277	403				200
NORTH OMAHA NEBRASKA	329	201	59	49	352	372	373	385	313	309	305	370	276	184	319	269	306	20	31	98	90	114	379	432	419	---	435	370				265

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	369	145	44	46	317	366	60	56	367	387	352	190	46	356	329	387	249	386	172	399	73	176	135	422	283	49	451	385				250
OKLAHOMA CITY OKLA.	305	66	66	51	374	208	135	389	406	350	157	363	399	264	403	342	354	98	422	312	60	344	461	345	351	472	431	101				287
PAGE ARIZONA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	390	206	392	359	---	262	273	423	422	---	457	326	456	509				---
PHOENIX ARIZONA	352	348	319	370	365	374	391	394	409	395	371	407	404	404	401	297	135	355	408	391	439	350	327	436	445	482	476	470				383
PORTLAND MAINE	254	228	282	280	58	269	211	70	182	286	265	206	56	74	311	330	288	265	316	46	160	163	86	333	193	343	33	320				211
PROSSER WASHINGTON	189	220	208	158	260	242	260	268	75	134	244	182	236	46	208	272	203	91	246	287	109	133	148	309	245	170	176	309				201
RAPID CITY S.DAK.	225	247	221	270	245	231	338	210	317	212	299	293	155	205	234	183	238*	99	294	249	360	356	---	---	210	304	307	398				258*
RENO NEVADA	267	265	293	157	150	325	348	344	300	303	334	290	309	229	372	174	109	395	268	391	254	235	231	348	279	422	373	267				287
RICHLAND 25 NW WASH.	212	235	222	226	277	254	271	280	54	268	225	219	280	62	184	293	225	57	184	302	125	123	128	275	273	184	131	329				211
RIVERSIDE CALIFORNIA	250	115	369	371	325	367	393	419	451	452	447	---	---	422	119	96	311	439	130	475	504	349	508	503	444	527	452	523				375
RUSTON LOUISIANA	342	117	161	---	---	363	220	401	399	395	218	122	421	390	175	301	294	276	121	250	98	453	434	305	285	306	458	442				298
SAINT CLOUD MINN.	277	90	140	119	283	303	312	313	209	196	148	334	293	196	281	190	335	211	78	316	306	186	377	370	360	59	309	446				251
SALT LAKE CITY	275	36	22	135	252	274	336	342	346	171	356	336	334	355	84	370	148	---	84	405	428	401	372	421	355	226	422	199				277
SAN ANTONIO TEXAS	184	44	83	401	435	252	356	473	404	454	401	474	465	456	465	397	212	251	472	287	497	524	300	85	153	505	511	167				347
SANTA MARIA CALIF.	146	121	378	349	362	367	380	330	400	397	401	376	406	315	352	86	376	425	334	449	437	425	429	447	468	482	453	430				369
SAULT STE MARIE MICH	260	---	177	77	67	227	286	293	252	---	134	279	331	201	254	---	123	---	96	143	347	239	---	371	296	109	167	207				214
SEATTLE TACOMA WASH.	31	103	61	150	159	231	241	238	40	69	112	198	116	27	88	171	158	40	110	287	97	155	82	214	263	90	91	318				141
SPOKANE WASHINGTON	179	80	187	165	269	201	258	260	49	132	136	153	196	111	199	283	183	115	218	206	124	109	54	201	252	292	227	259				176
STERLING VIRGINIA	299	309	188	31	75	330	59	44	326	338	329	317	34	375	174	195	210	350	234	316	243	20	---	136*	441	---	---	---				224*
TALLAHASSEE FLORIDA	374	337	240	266	178	360	41	156	415	427	417	342	249	437	422	411	400	408	229	326	223	146	458	423	224	150	251	115				301
TAMPA FLORIDA	246	183	389	390	231	332	204	215	215	471	335	433	233	482	470	447	412	372	376	448	425	309	361	456	368	458	431	395				360
TUCSON ARIZONA	367	370	308	391	371	387	402	380	409	410	394	402	406	413	413	340	335	273	444	175	443	415	415	400	461	467	464	496				391
WAKE ISLAND PACIFIC	414	506	472	510	515	493	518	---	544	549	509	281	326	474	424	392	---	548	500	577	513	478	287	158	223	364	493	520				446

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska.

FEBRUARY 1971

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-87	-86	-83	-21	-16	-17	-32	- 8	7	-78	-42	-11	-23	-16	-16	-45	-40	-39	-33	-42	-32	-33	-70	-124	-104	-75	-11	-18				-41

The measurement is made with a Csiro Funk net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (λ 3900 A) at Ames, Iowa.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg
Langleys. . .	8.78	5.92	4.83	2.27	11.54	11.64	11.44	11.94	11.25	10.06	10.20	10.46	10.85	6.02	10.36	5.72	10.85	.88	3.35	4.63	6.41	3.65	12.43	14.7[illegible]	14.31	2.79	-	-				8.35

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

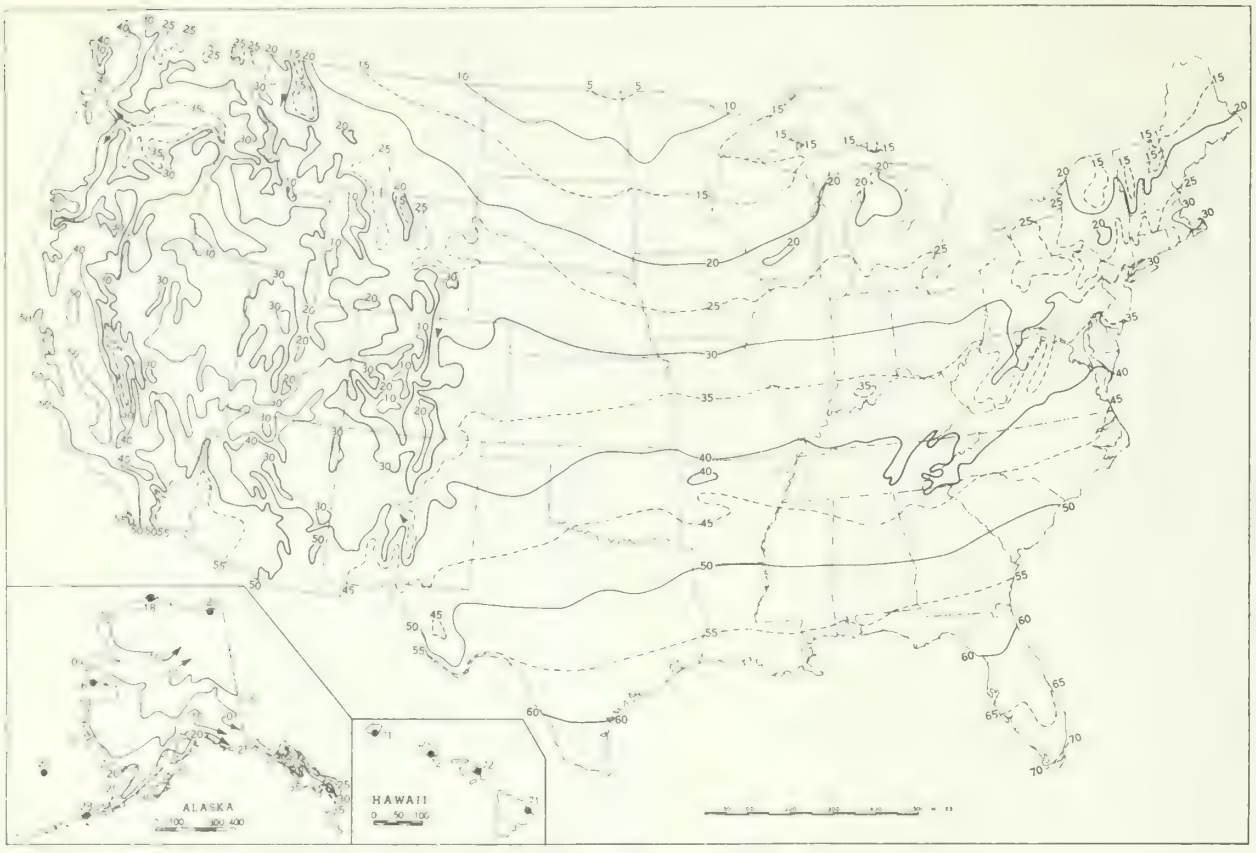
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code as defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units Milli-atmo-cms.

Station	Day of month																															Mean
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Amundsen-Scott, Antarctic	20288	20294	20290	20258	35285	20298	20291	20291	20295	20253	20288	20278	20283	20270	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----				283
Bismarck, N. D.	00334	-----	-----	00413	05446	00447	00445	00433	00373	00381	-----	00312	00299	05362	04335	00350	00364	05391	04392	00380	00413	05433	04393	00404	00376	-----	00452	00465				391
Boulder, Colo.	02328	00319	04388	00405	-----	-----	-----	03422	00348	03345	00362	00305	-----	-----	-----	00340	00322	04378	00396	-----	-----	00376	03410	00371	00343	00459	-----	-----				368
Green Bay, Wis.	00512	04379	05366	-----	-----	00446	00434	00455	00457	03428	03403	00398	00370	06376	00385	04352	00392	03356	-----	-----	05395	04355	-----	-----	00386	04390	04440	00411				414
Mauna Loa, Hawaii	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	06280	-----	00260	-----	00250	-----	-----				263
Nashville, Tenn.	-----	-----	-----	05288	00318	00352	00333	-----	-----	-----	-----	-----	-----	-----	00317	00303	00295	00287	04340	00315	-----	00349	-----	00320	00325	-----	-----	05270				310

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertical column of unit cross-sectional area extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone is usually expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g., 350 milli-atmo-cm ozone implies an ozone layer 3.5 millimeters thick. The code 4 5 designates the type of measurement made

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), February



B. Temperature Departure from 30 - Year Mean (°F 1931-60), February 1971.

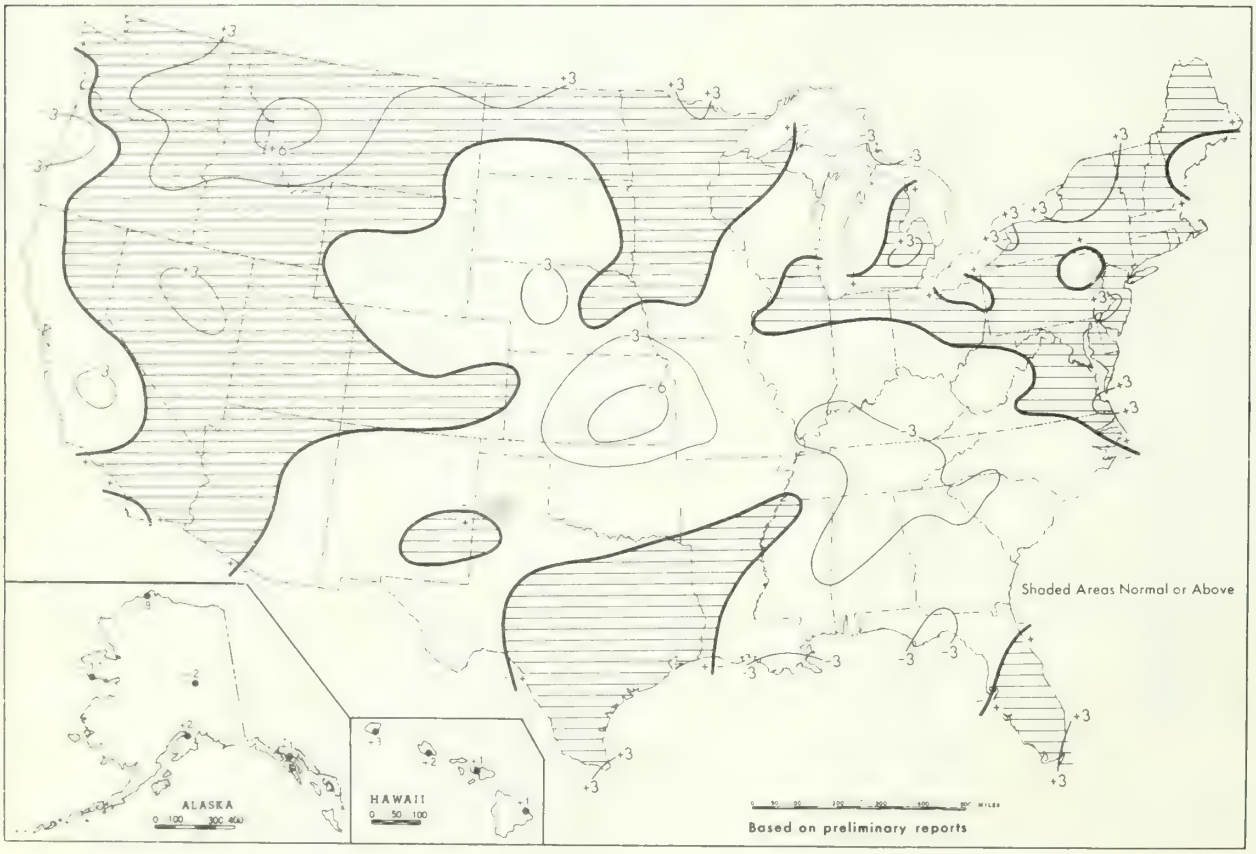


Chart II. Total Precipitation (Inches), **February 1971.**

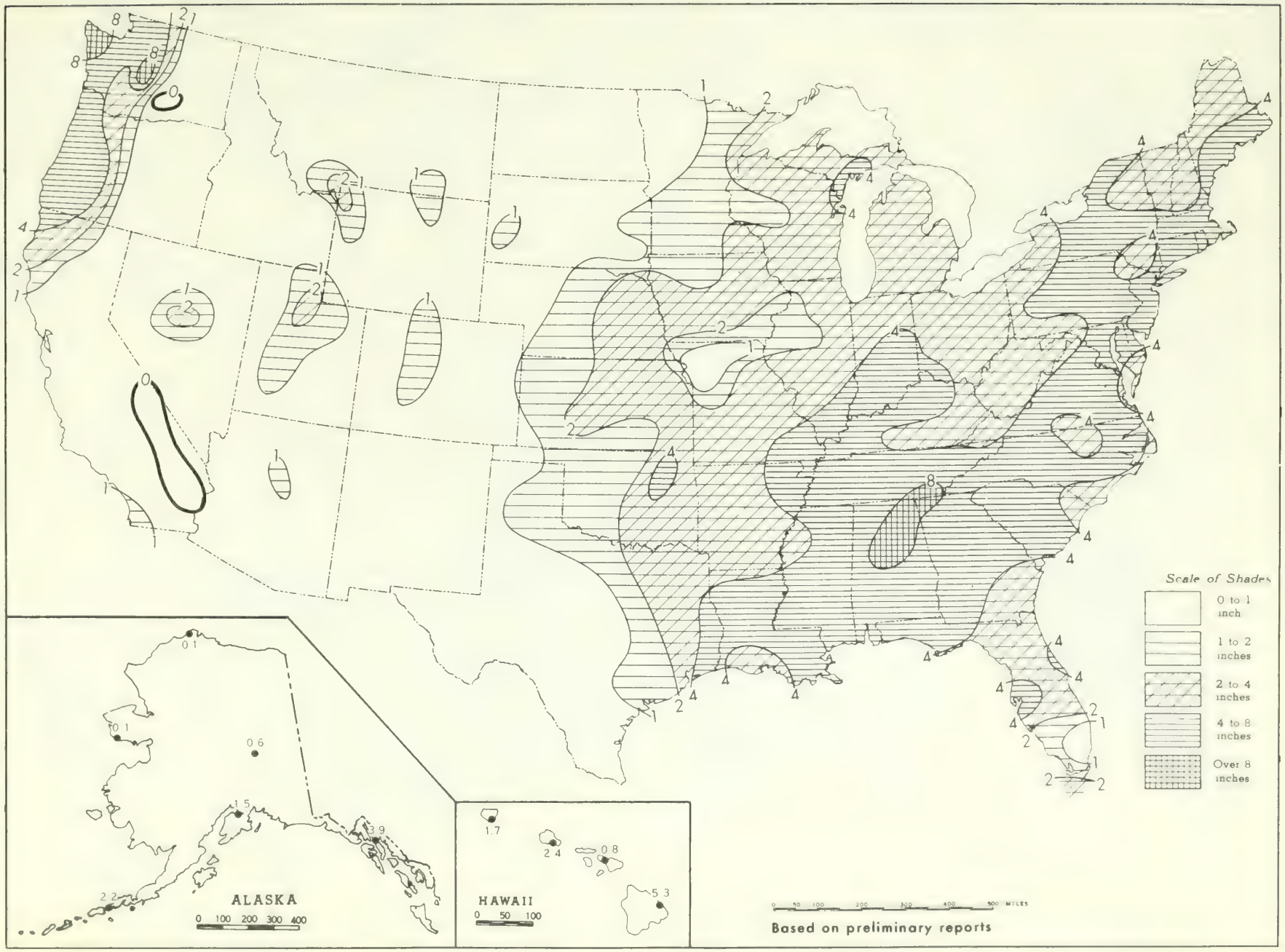


Chart III. Percentage of Normal Precipitation, February 1971.

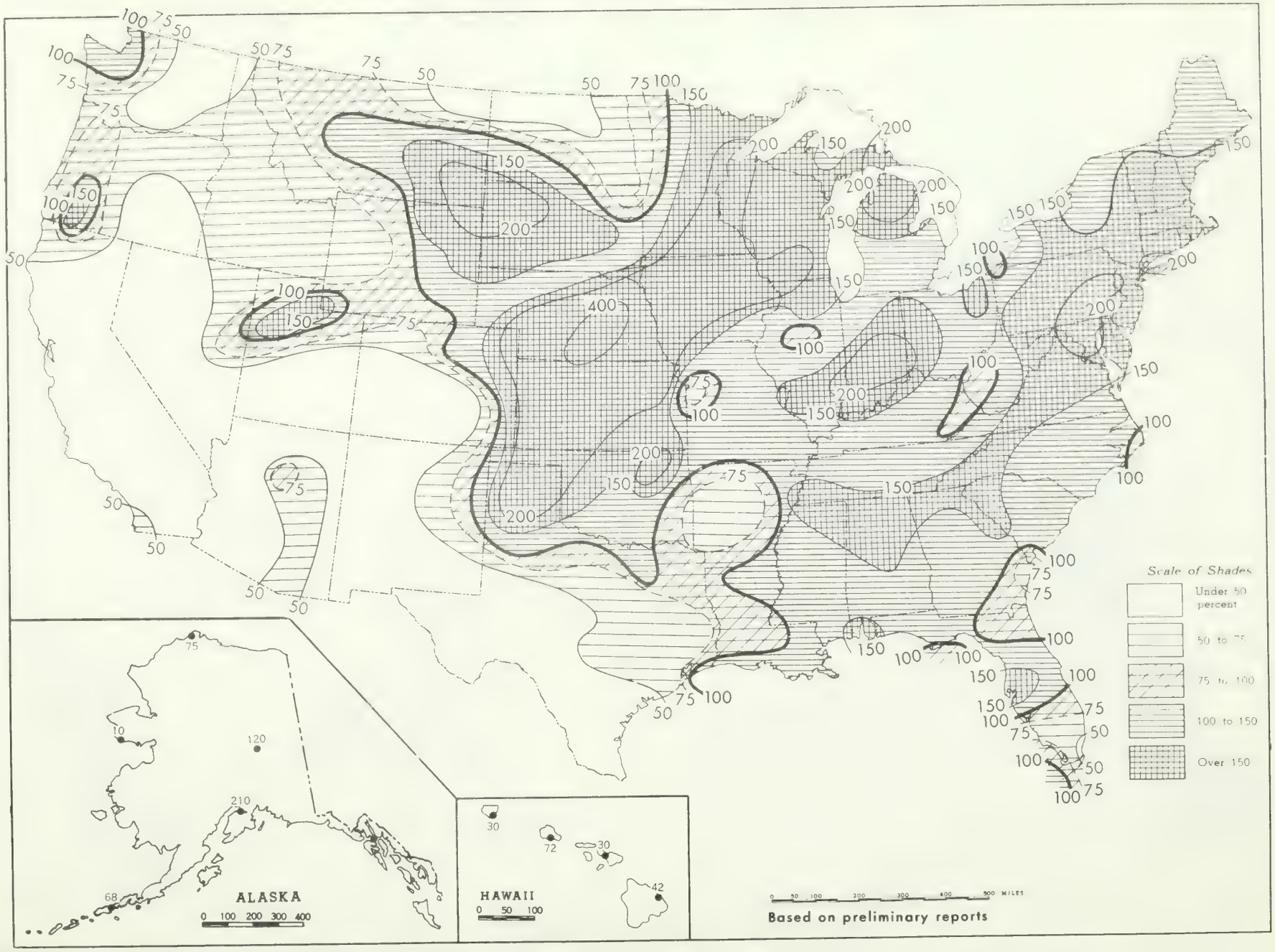
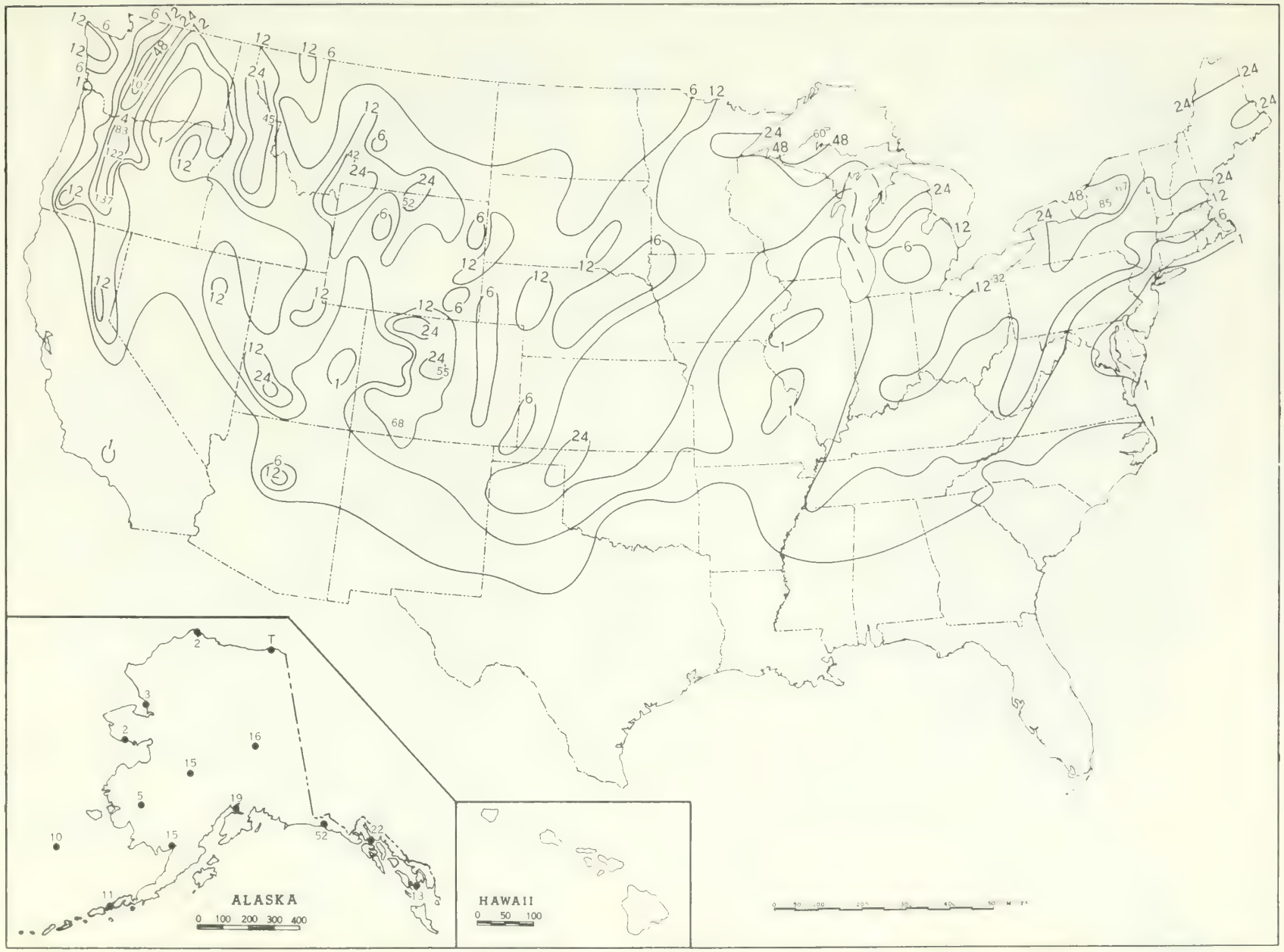
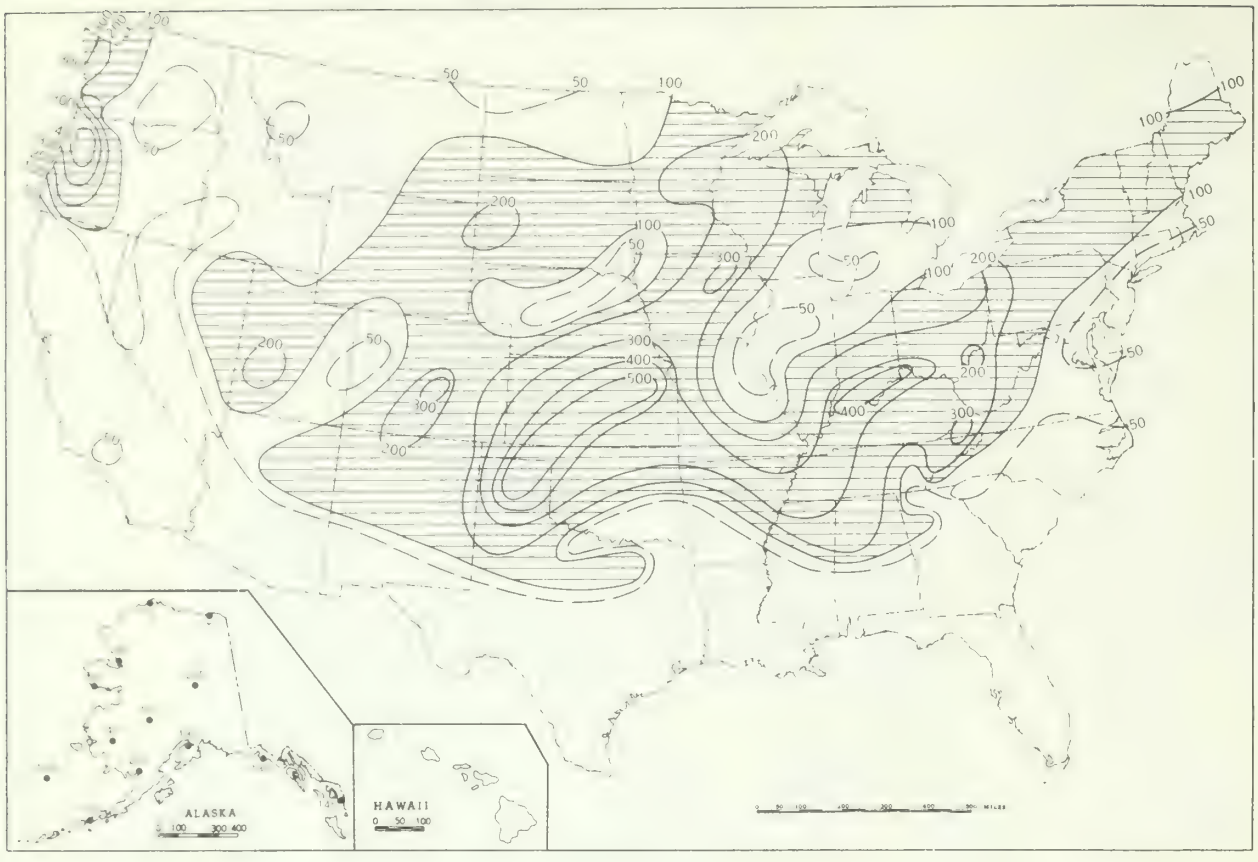


Chart IV. Total Snowfall (Inches), **February 1971.**

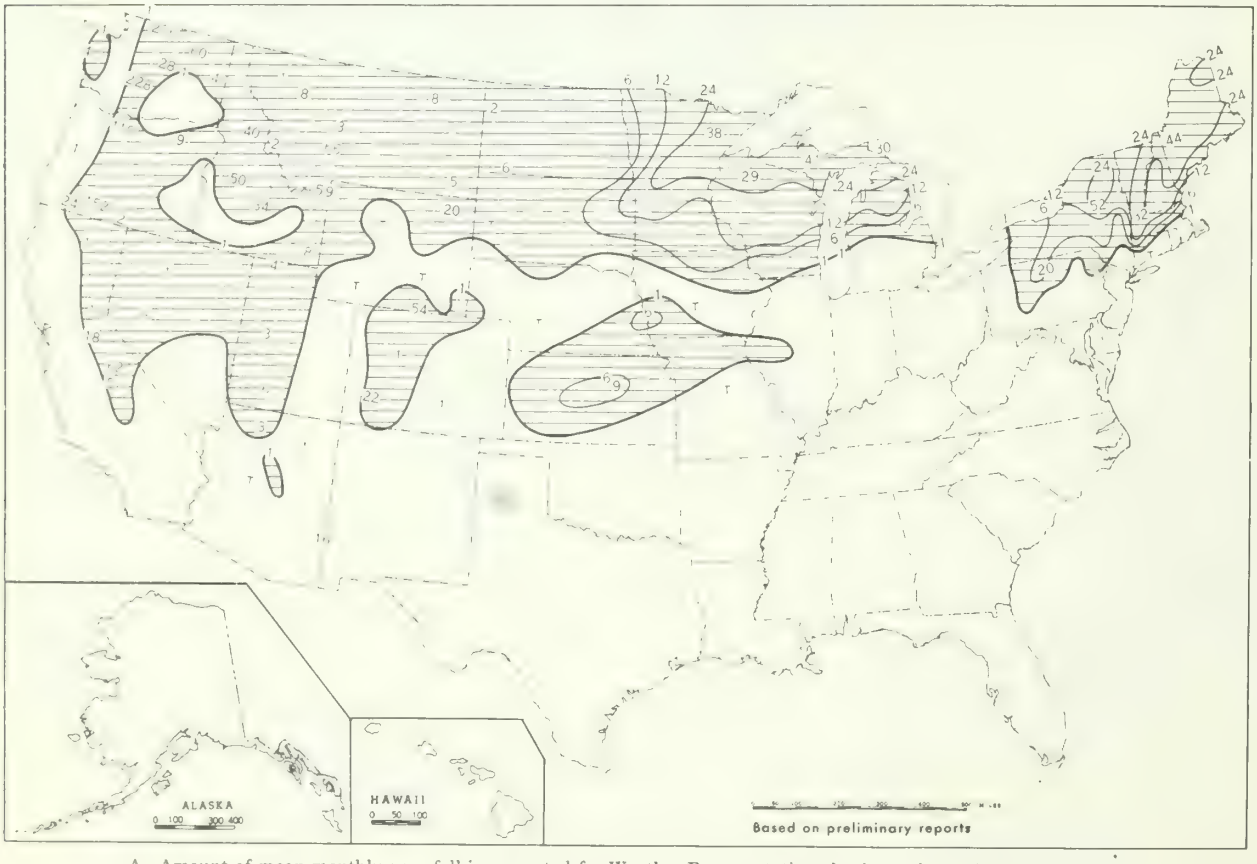


This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year

Chart V. A. Percentage of Mean Monthly Snowfall, February 1971.

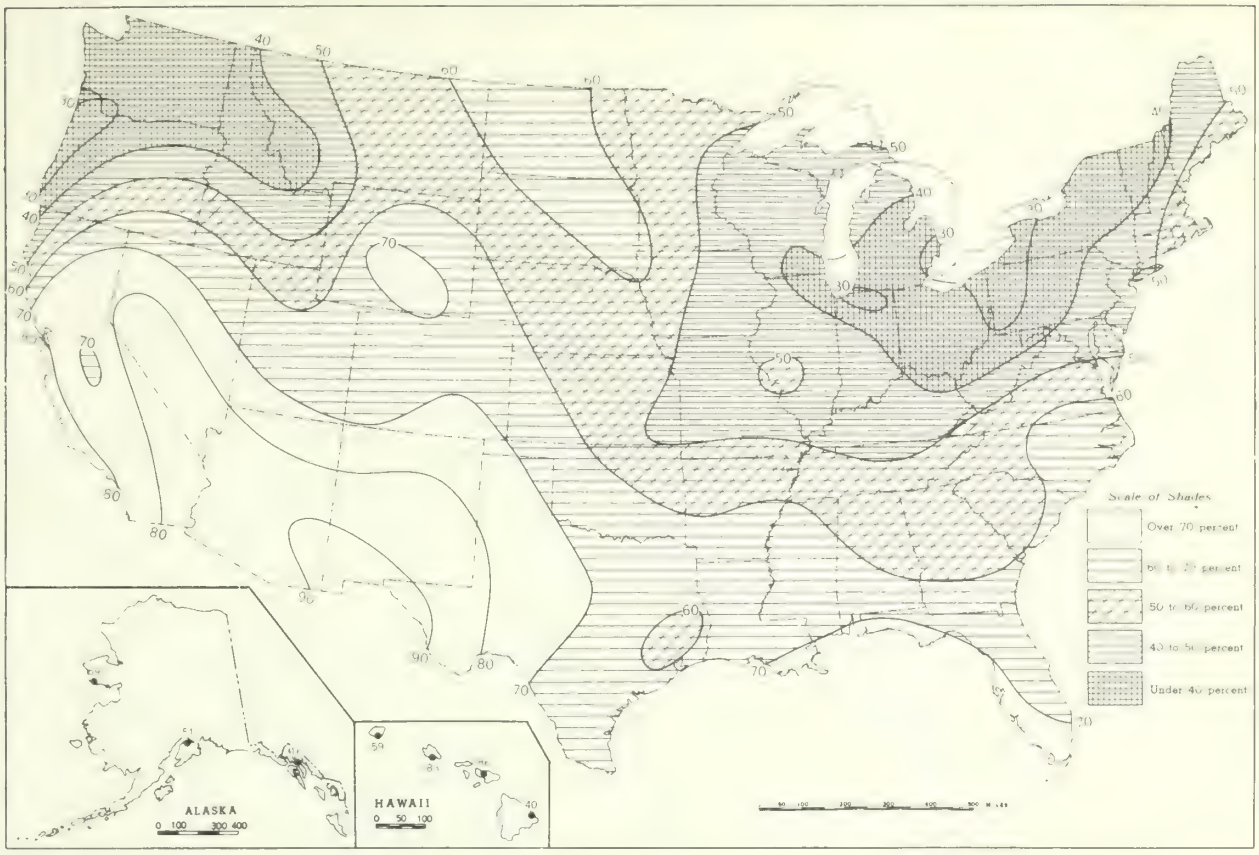


B. Depth of Snow on Ground (Inches), 7:00 a.m. E. S. T., March 1, 1971.

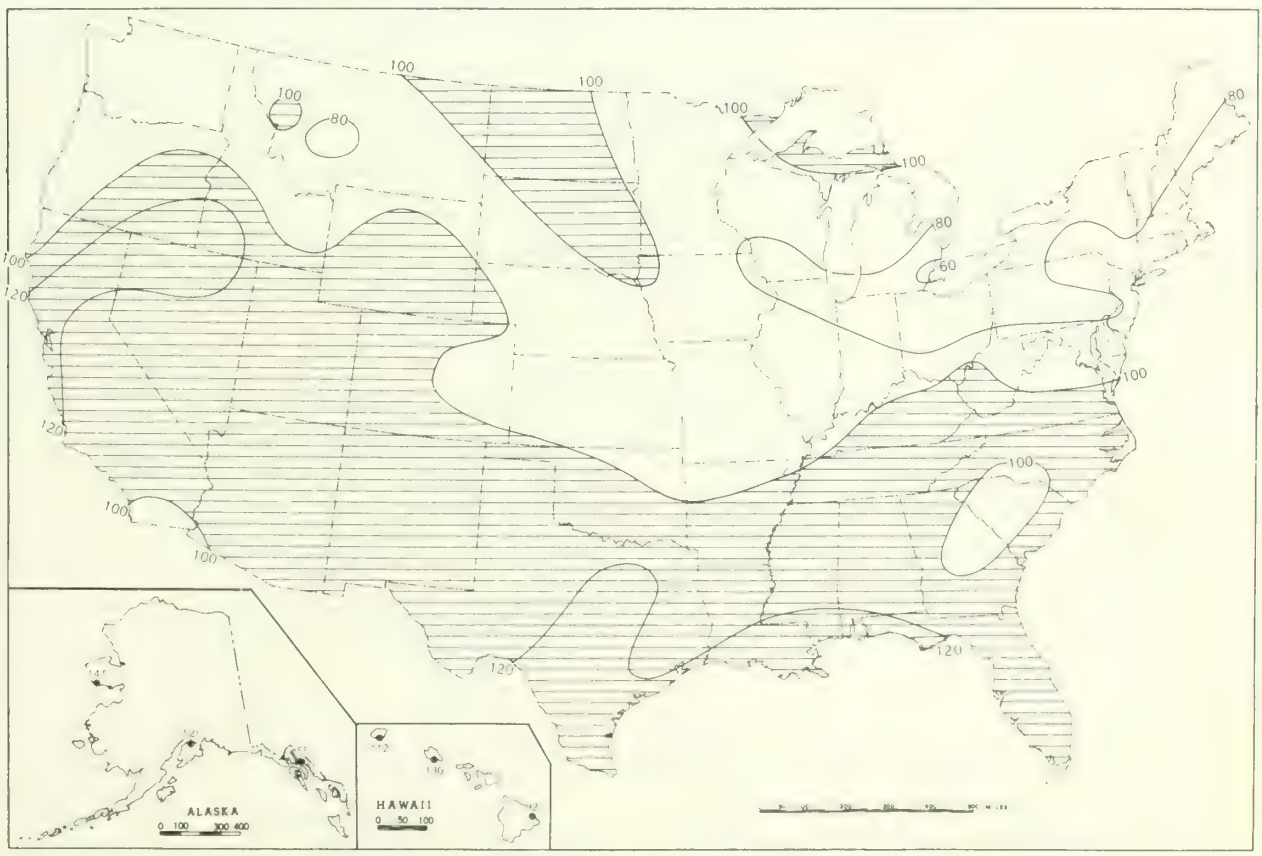


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, February 1971.

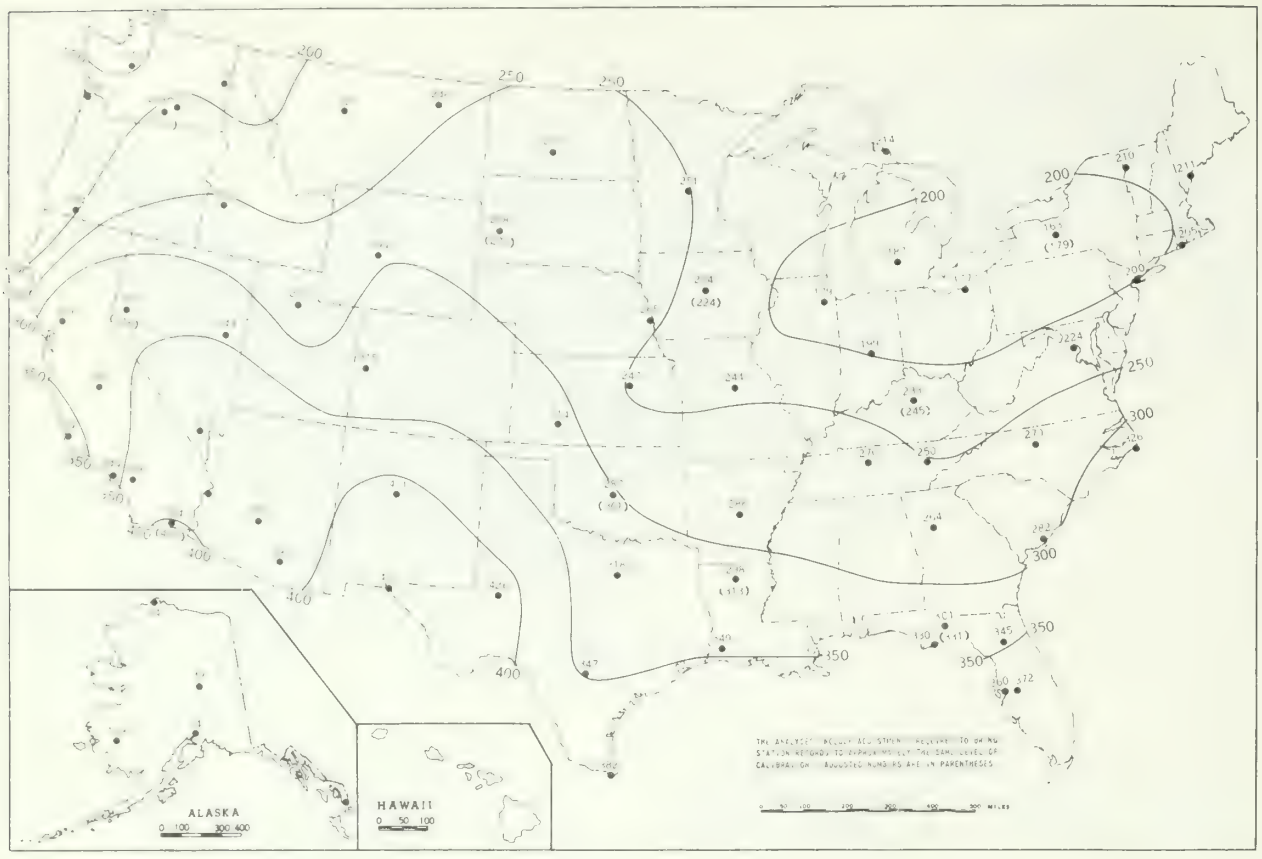


B. Percentage of Mean Monthly Sunshine, February 1971.

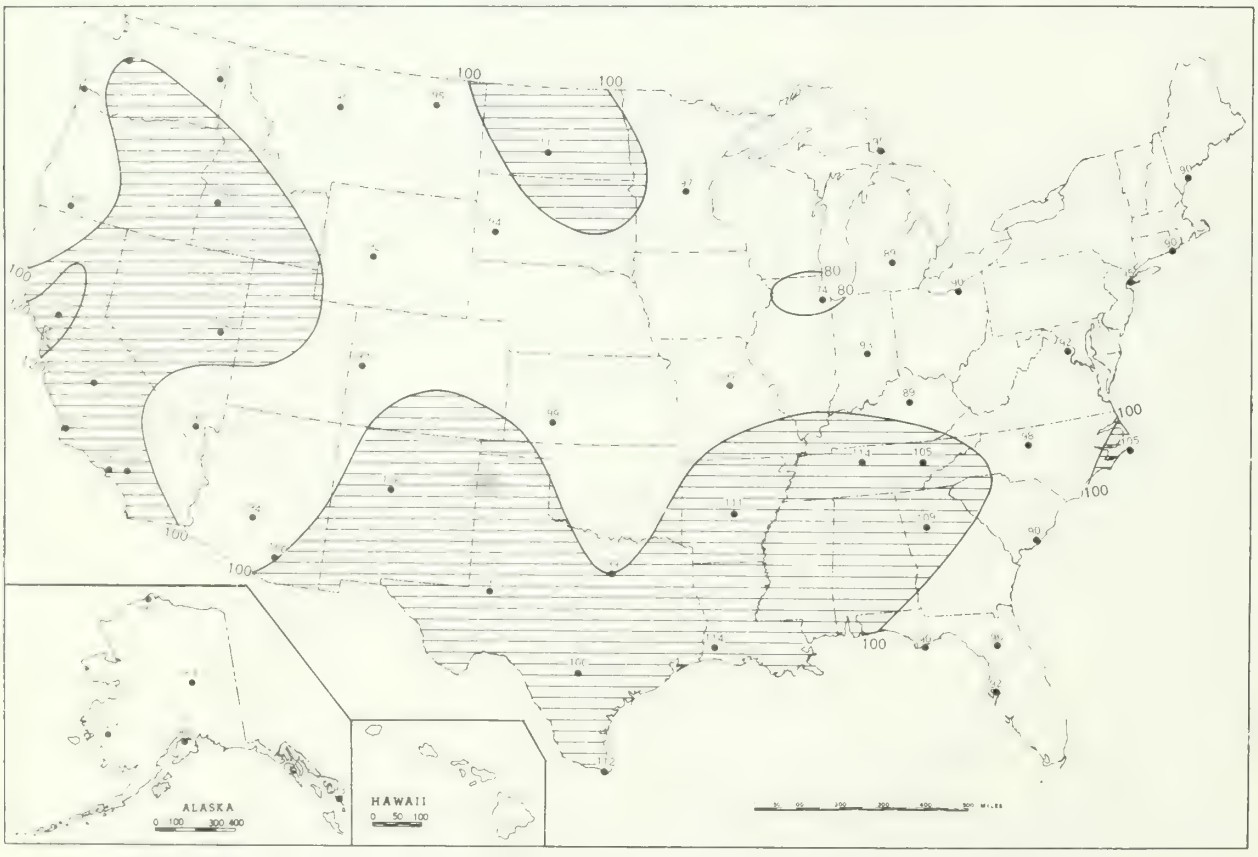


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, **February 1971.**

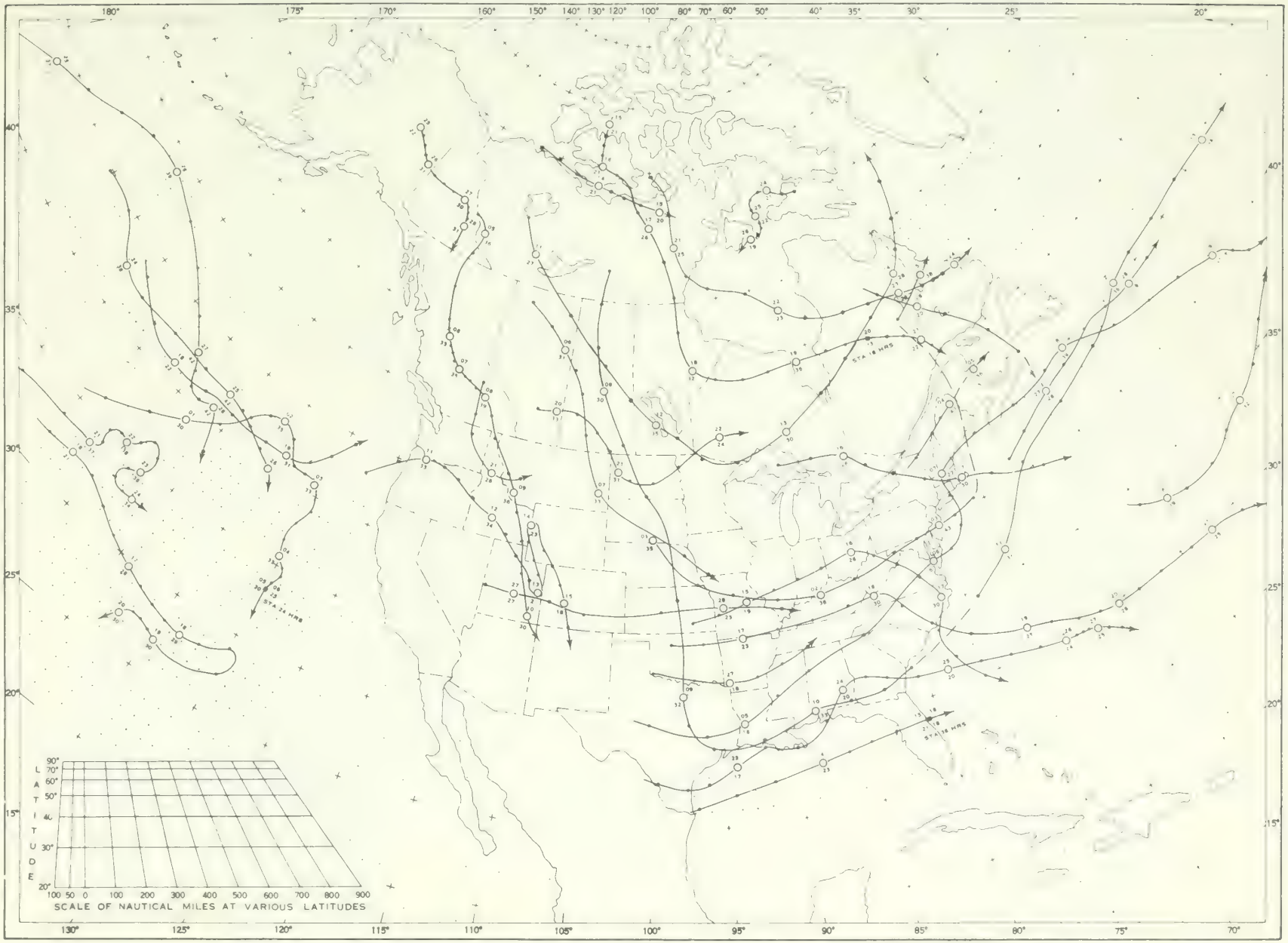


B. Percentage of Mean Daily Solar Radiation, **February 1971.**



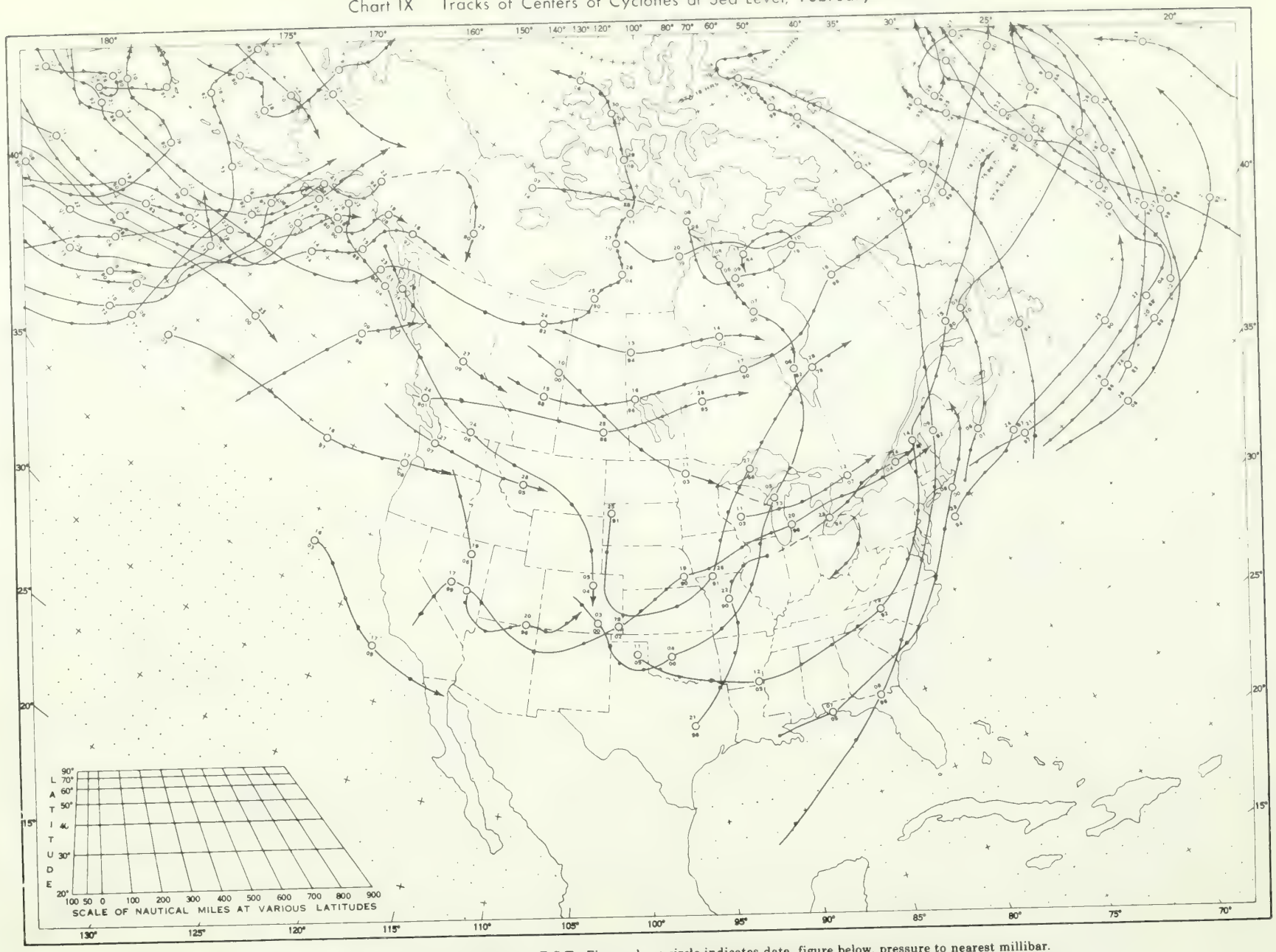
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, February 1971.



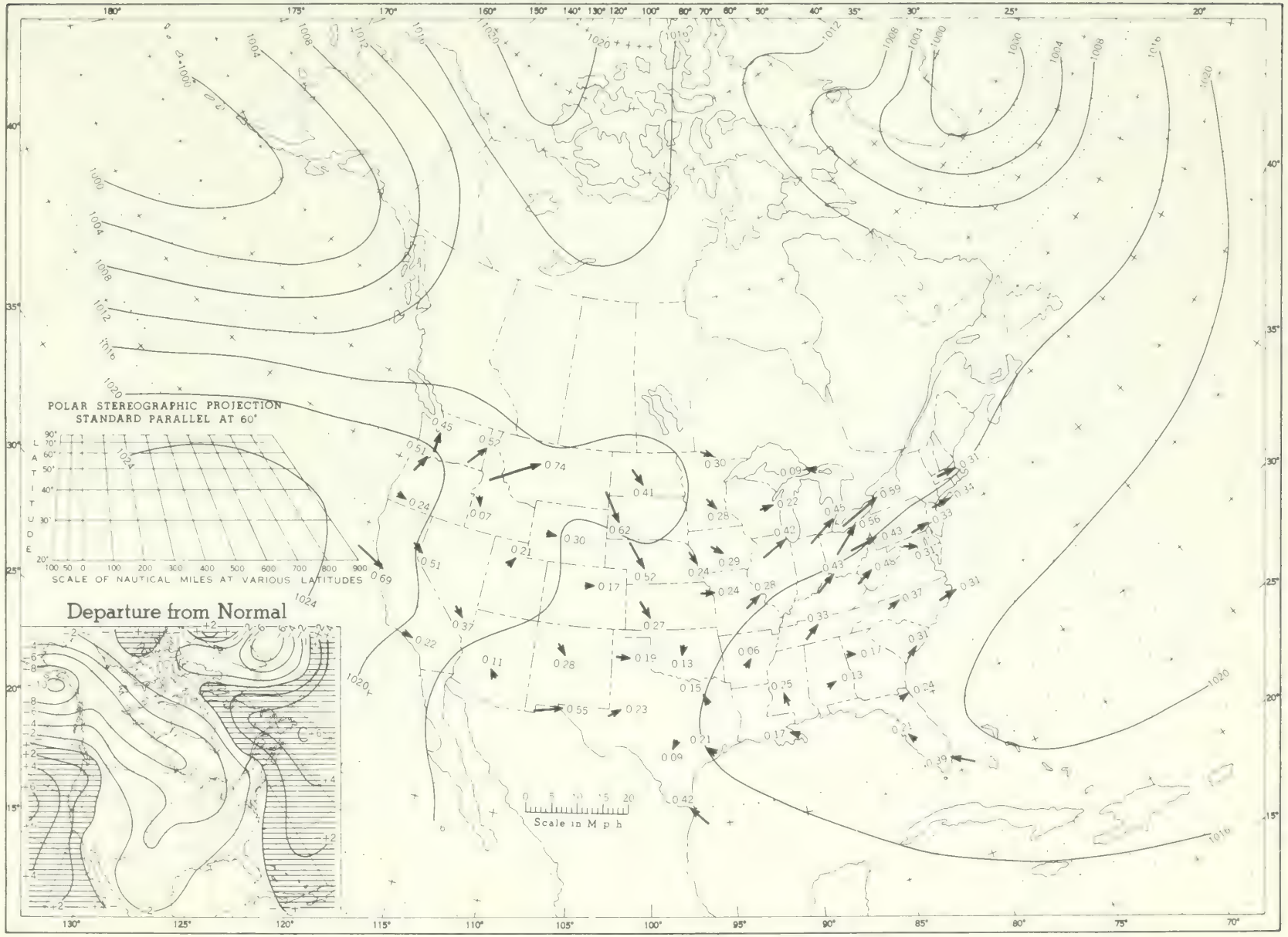
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, February 1971.



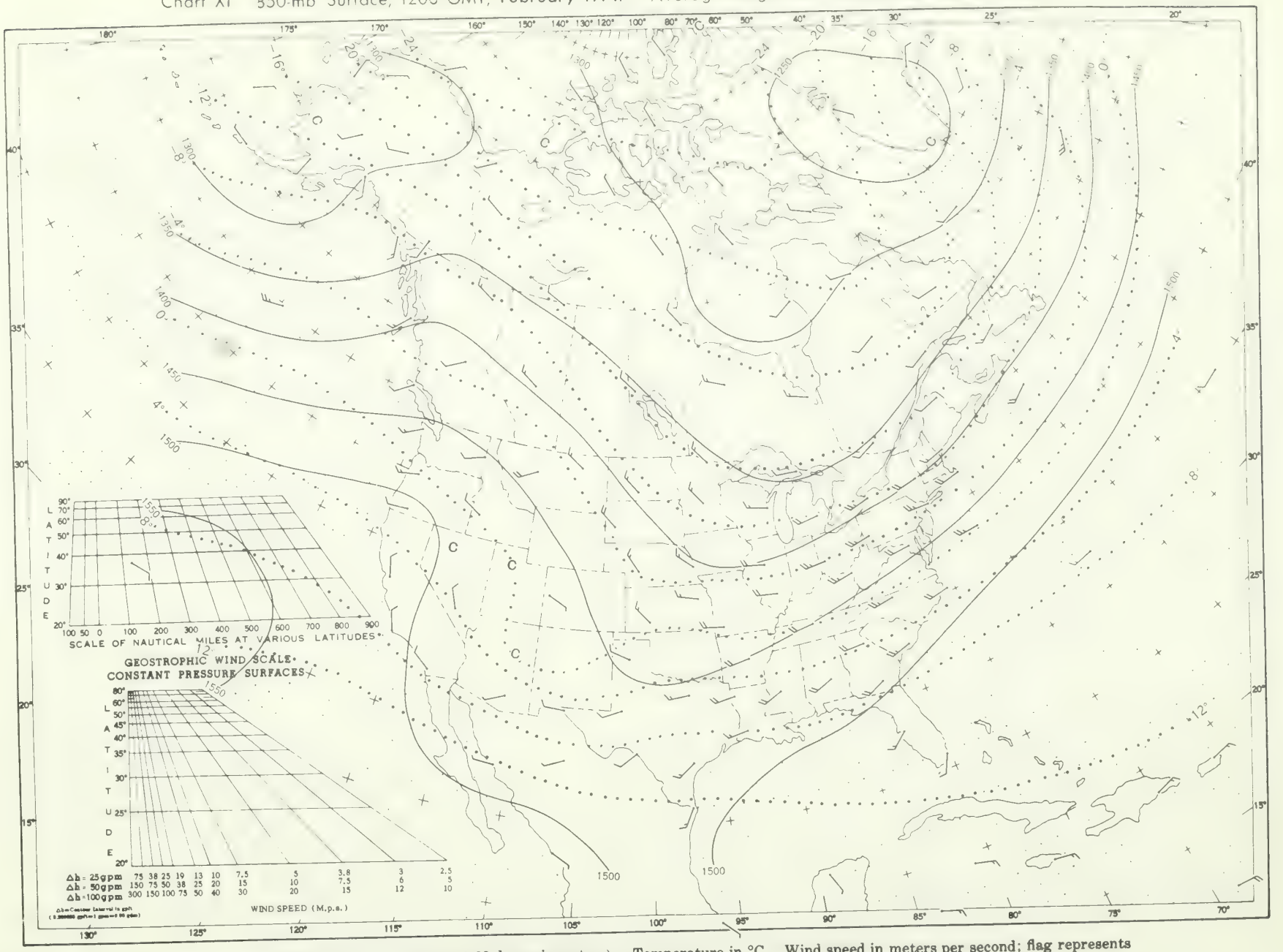
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, **February 1971**. Inset. Departure of Average Pressure (mb) from Normal, **February 1971**.



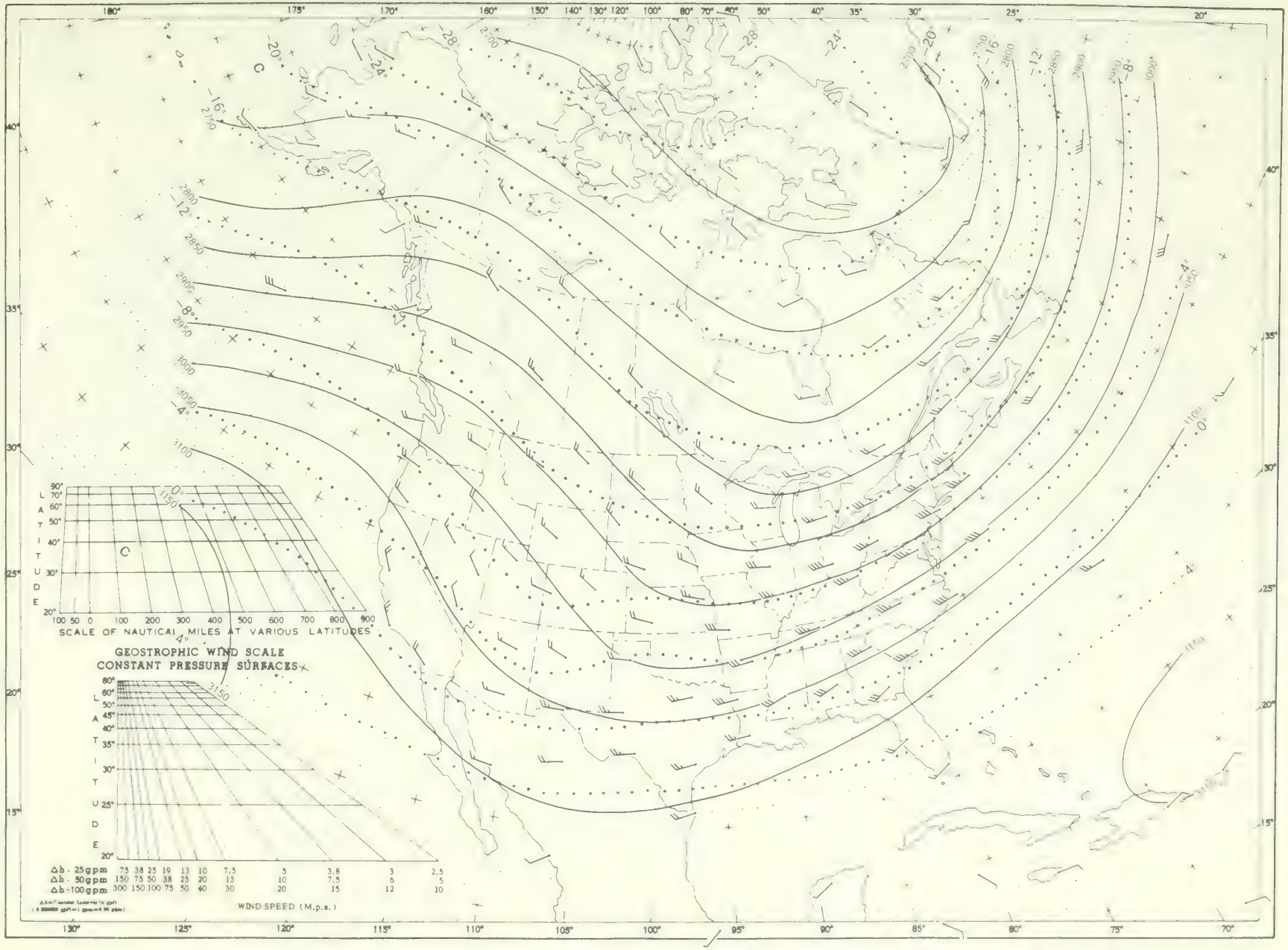
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI 850-mb Surface, 1200 GMT, February 1971. Average Height and Temperature, and Resultant Winds



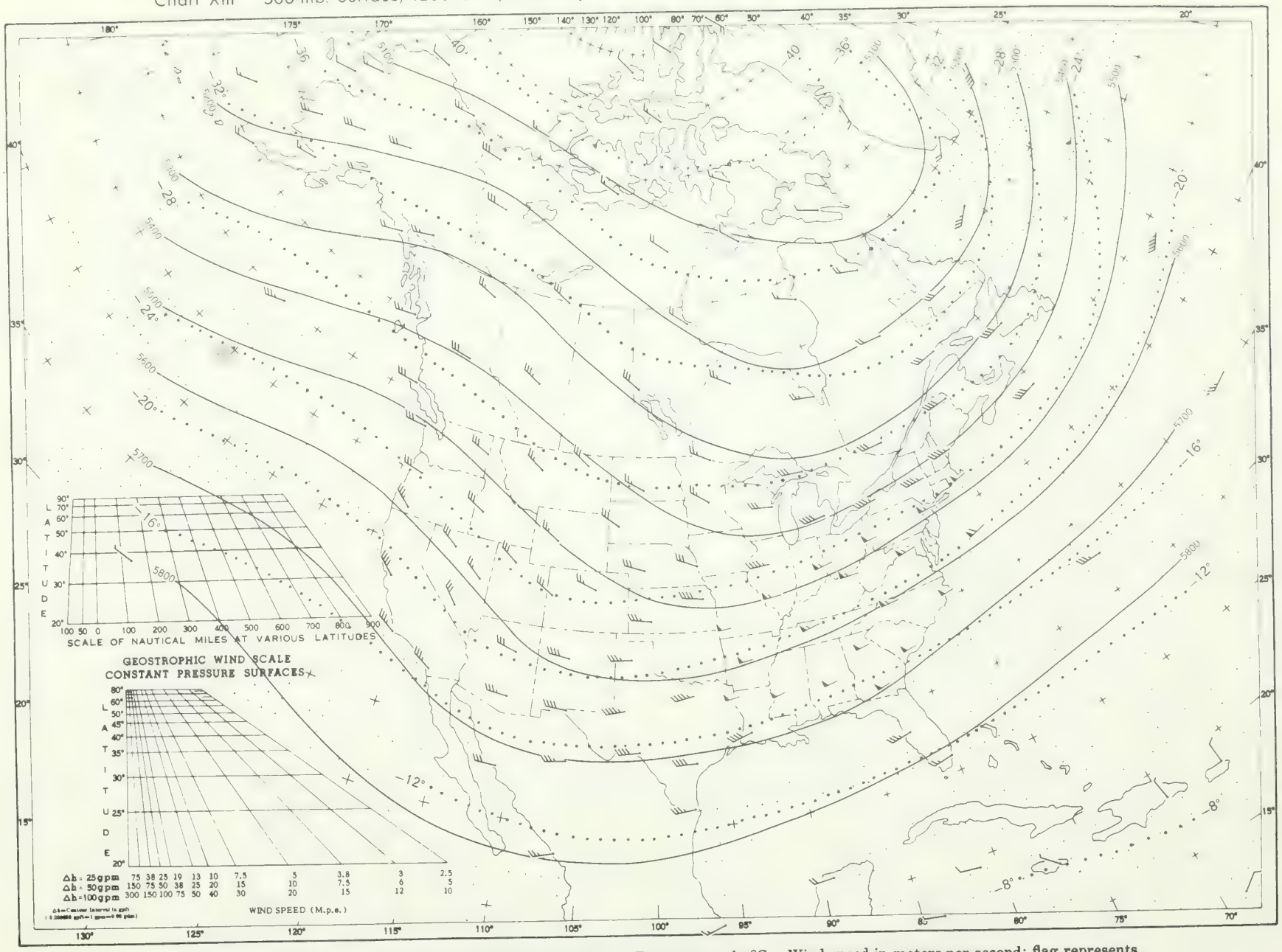
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb Surface, 1200 GMT, **February 1971**. Average Height and Temperature, and Resultant Winds



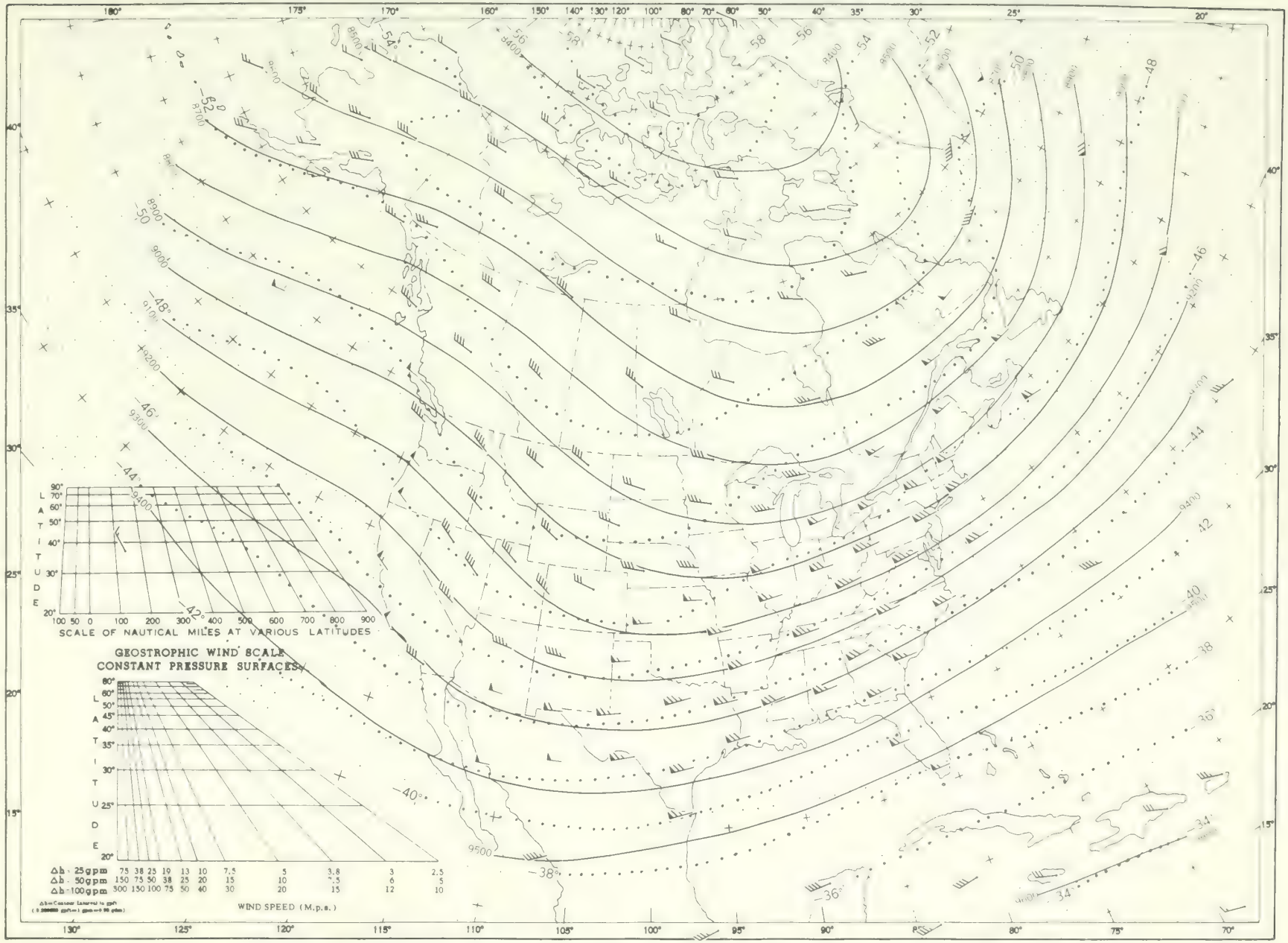
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII 500-mb. Surface, 1200 GMT, **February 1971.** Average Height and Temperature, and Resultant Winds



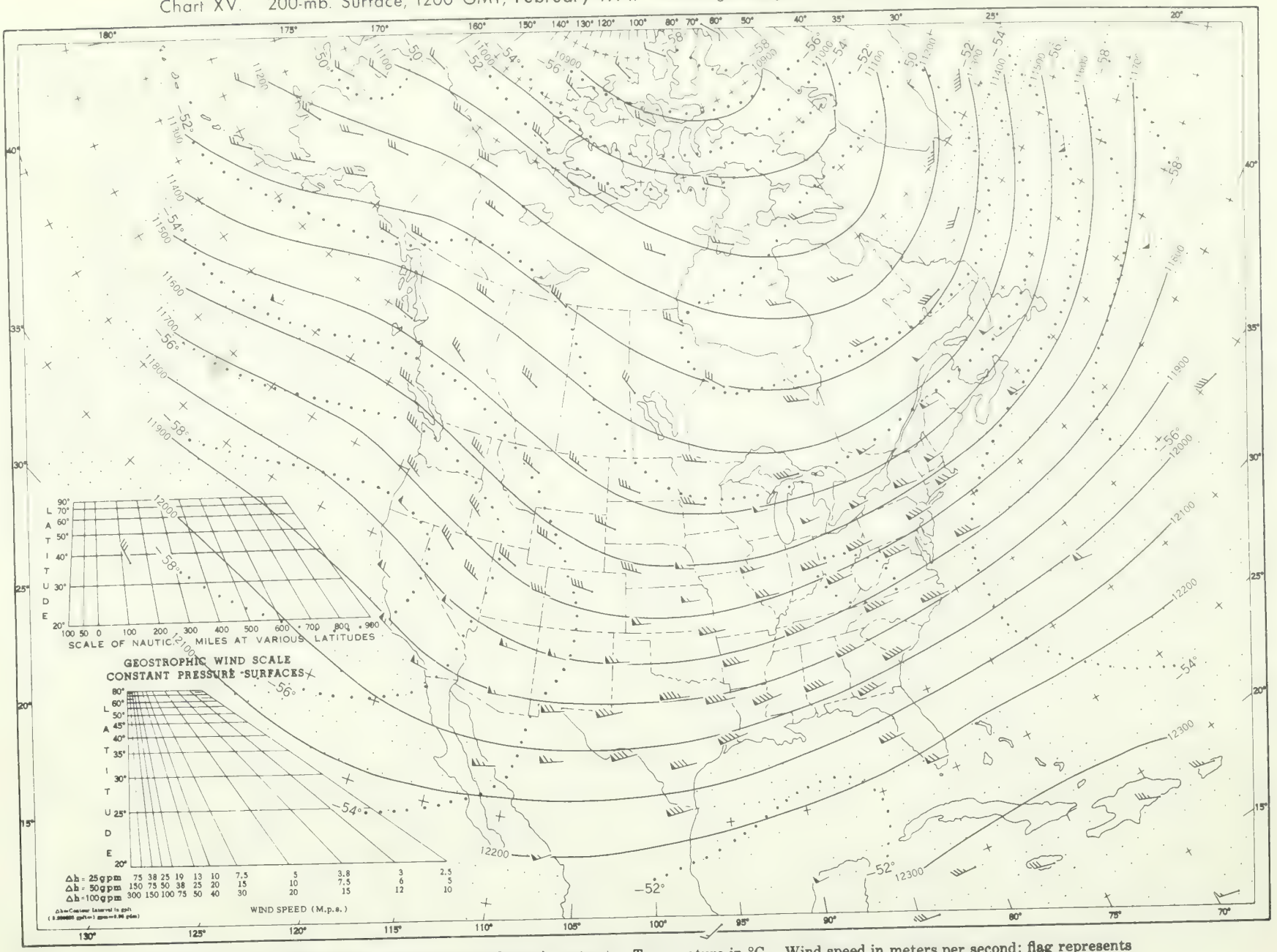
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 GMT, **February 1971.** Average Height and Temperature, and Resultant Winds



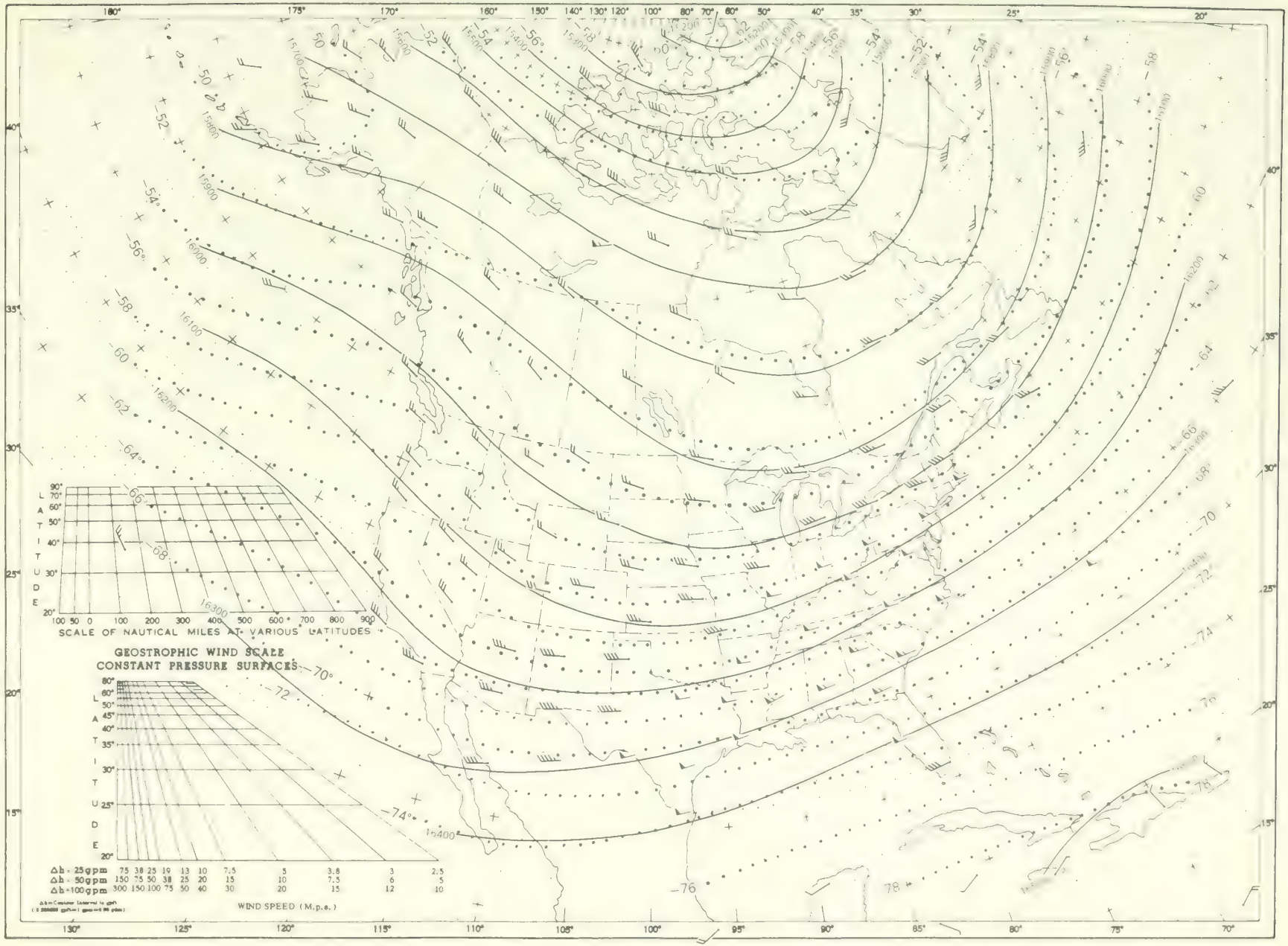
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 GMT, February 1971. Average Height and Temperature, and Resultant Winds



Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100-mb. Surface, 1200 GMT, **February 1971.** Average Height and Temperature, and Resultant Winds.

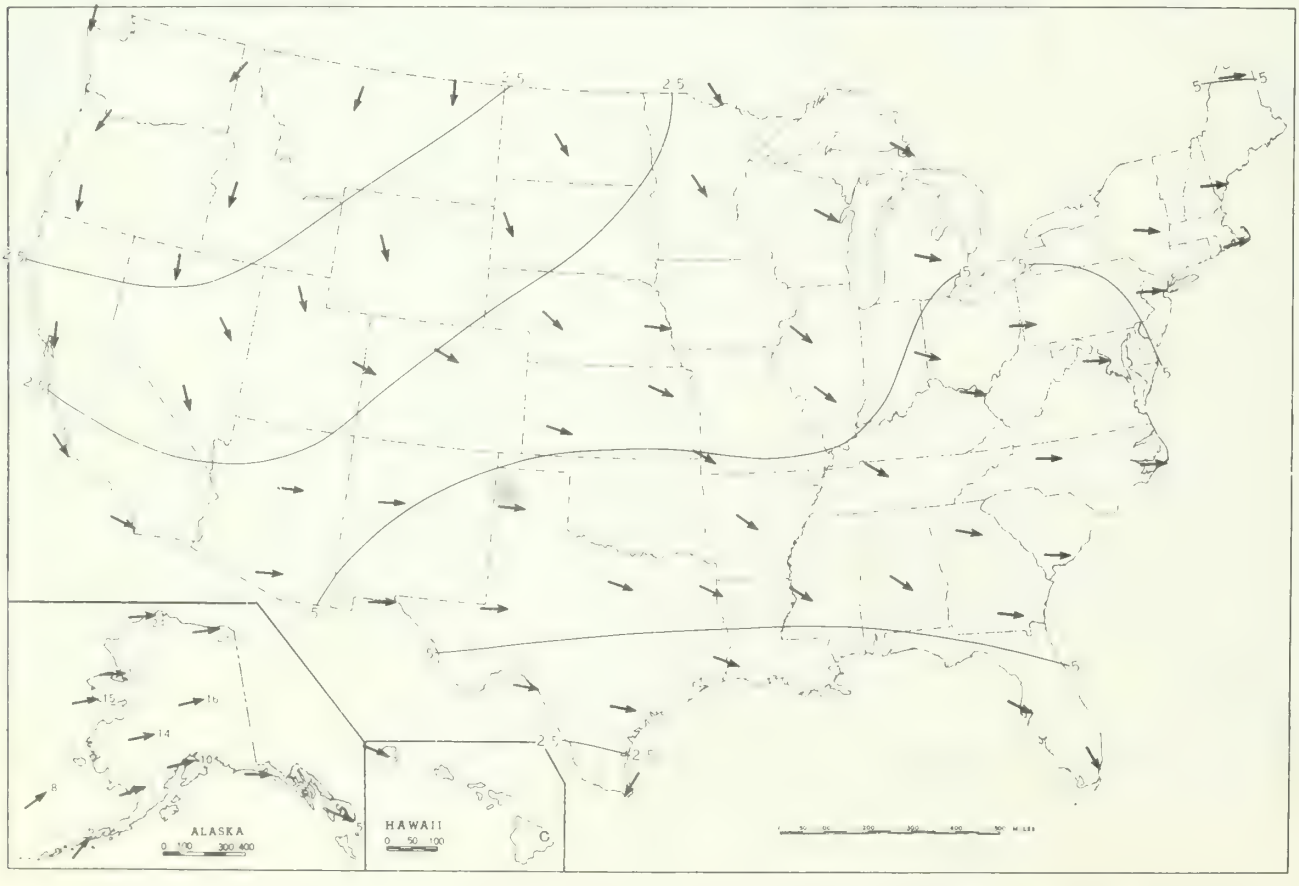


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 GMT, February 1971. Resultant Winds.



B. 30-mb. Surface, 1200 GMT, February 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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NOTE: Delayed data and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 3 MARCH 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:
1. March 1971 was a windy month with frequent temperature changes.
2. A variety of stormy weather occurred in March. It included snowstorms, blizzards, thunderstorms, tornadoes, and dust and sandstorms.

TEMPERATURE.--Monthly mean temperatures for March averaged slightly cooler than normal over Washington, Oregon, Idaho, southern Nebraska, central and eastern Kansas, and from the Mississippi River Valley to the Atlantic Ocean and slightly above normal elsewhere.

Cold, windy weather prevailed over most of the Nation in the first week of March. Blustery winds held afternoon temperatures below freezing as far south as the Texas Panhandle and most of Kentucky on 1 or 2 days. Temperatures dropped to below freezing in northern Florida and to zero or lower in the Rocky Mountains as far south as northern New Mexico; also from North Dakota to Wisconsin. On the morning of March 5, Tallahassee, Fla., registered 23°. This is the lowest temperature of record for Tallahassee for the month of March.

Winter temperatures continued from the northern Great Plains to New England early in the 2d week of March. Detroit Lakes, Minn., registered 20° below zero on the morning of March 8. Arctic air poured southward and freezing weather reached the Gulf Coast. New Orleans, La., recorded 28° on March 8. As brisk northerly winds brought cool temperatures southward on the front side of a High, southerly breezes brought a warming trend to mid-America on the back side of the High. By March 11, maximums over the Great Plains ranged from the 40's and 50's in the Dakotas to the 60's in Kansas, the 70's in Oklahoma, and the 80's in much of Texas. Waco and Alice, both in Texas, registered 88° and 89°, respectively on March 11. In the Far West, afternoon temperatures ranged from the 40's in Washington to the 80's in southern California. Subfreezing temperatures occurred almost every morning in the 2d week of March in the Great Basin and the Rocky Mountains.

At midmonth, southerly winds brought warmer weather to mid-America. Gage, Okla., registered 87° on the 13th and temperatures over much of Texas reached the 90's. McAllen, Texas, recorded 101° on the 14th. Meanwhile, a cooling trend was occurring over the West with temperatures tumbling to the freezing mark from Canada to Mexico. Douglas, Ariz., registered 30° on March 15. Mild weather continued along the Atlantic coast. Southerly breezes warmed the Atlantic seaboard and temperatures reached the 70's as far north as New Jersey on March 15. The Florida Peninsula warmed to the 80's. Orlando recorded 88° on the 15th and Palm Beach 89° on the 19th. Southern Texas continued warm. San Antonio recorded 92° on the 16th and Cotulla 93° on the 18th.

A mound of high pressure lay over the East about the middle of the 3d week of March. Temperatures dropped to freezing as far south as northern Florida, reaching 28° at Tallahassee and 32° at Jacksonville on the 18th. Subzero temperatures occurred at some locations in northern Wisconsin and Upper Michigan, -11° at Eagle River and Land O'Lakes, Wis., on the 17th, and -12° at Marquette County Airport, Mich., on the 18th. Mid-America warmed briefly on March 20 when some parts of Kansas were 30° warmer than the previous day. The 21st brought another blast of frigid weather to the northern Great Plains and some areas remained below freezing all day long. Northerly winds pushed the cold air far southward. McComb, Miss., registered 30° on the morning of March 21.

Temperatures in the last week of March averaged much warmer than normal over the Great Basin, the central and southern Rocky Mountains, and the western edge of the central and southern Great Plains. Record-breaking afternoon temperatures occurred on the 28th, reaching 100° or higher at a number of Texas stations. March 29 brought an abrupt temperature change to Texas with afternoon maximums ranging from the upper 60's to the low 80's.

The month ended with a wide range of temperature over the Nation. Northeastern Montana remained below freezing on the last day of March when the Plains of Texas warmed to near 90°.

PRECIPITATION.--March precipitation exceeded the March normals in small areas in the Northwest, northern Wisconsin, Upper Michigan, northern Lower Michigan, northern New England, and from central Mississippi to the Carolina coast. Most of the Great Plains received less than 25% of normal March precipitation. A large area from southern Nevada and Arizona to western Texas received no rain or only light widely scattered sprinkles.

A generous variety of stormy weather occurred in March. Rain fell along the northern Pacific coast with snow in the mountains in the first half and the last week of the month. Dust and sand storms occurred in the southwestern deserts and along the western edge of the central and southern Great Plains. Snowstorms and blizzards whitened the northern and central Great Plains and eastward to New England. Freezing rain and freezing drizzle fell south of the snow belt, and violent thunderstorms, some with hail and a few tornadoes struck the Deep South.

Spots in Mississippi and Alabama received up to 4.00 inches or more on March 2. A storm in the Southeast deepened on the 3d and spread disagreeable weather over the eastern half of the Nation. Tornadoes occurred in South Carolina and the Tampa, Fla., vicinity. Showers fell along the Atlantic coast. A wide band of snow and freezing rain fell from the Ohio River Valley to Maine and southward to northern Alabama and the Carolinas. The storm center deepened. The pressure at Portland, Maine, dropped to 28.44 inches, the lowest pressure in their century of records. Winds gusted to hurricane force, 75 m.p.h. A foot or 2 of snow fell in parts of New York and New England. Portland, Maine, received 11 inches of snow early on the 5th, bringing their seasonal total to 116.5 inches. As the deep storm moved out over the Atlantic Ocean, another storm moved from the southern Great Plains to the Northeast. It brought more violent weather to the eastern half of the Nation, heavy snow, sleet, and freezing rain to the Northeast, severe thunderstorms

and a few tornadoes in the Deep South.

A deep Low in the Gulf of Alaska moved to the northern Pacific coast in the 2d week of March. It brought wet and windy weather to the Northwest. Bright sunny weather prevailed in the South at the beginning of the 2d week of March but a Low developed and clouds and winds increased. Heavy thunderstorms broke out and hail pelted spots in Arkansas and Louisiana. At De Ridder, La., the winds gusted to 100 m.p.h. on the evening of March 9. The inclement weather spread to the middle Mississippi and Ohio Valley regions. Snow fell from Iowa to Indiana late March 9 before spreading northeastward to the already-snowbound New York and New England. By noon, March 10, the seasonal snowfall at Syracuse, N. Y., had reached 141.8 inches, only 5.0 inches less than their alltime record seasonal total. By evening, March 11, Portland, Maine, had received 8.2 inches of new snow bringing their total for the season to 125.6 inches and setting a new seasonal record. The record at Portland began in 1881. The previous record seasonal total was 119.1 inches of snow which fell in the 1933-34 season.

A storm in the intermountain region caused rain along the northern and central Pacific coast on March 12. Moving eastward, it caused snow flurries in the northern Rocky Mountains and the northern Great Plains. The wind at Lander, Wyo., gusted to 84 m.p.h. on the morning of March 16. Duststorms occurred over the Great Plains to New Mexico and western Texas which were becoming very dry. Tornadoes occurred in southern Oklahoma, northeastern Texas and southwestern Arkansas.

About midmonth, gusty winds and a few tornadoes occurred in the Ohio River Valley. Heavy snow fell in the northern Great Plains and the Upper Mississippi River Valley. A new storm developed in the Great Basin late on March 16 and early on the 17th. It spread snow over the central Rocky Mountains as it moved eastward. Three inches of snow fell at Rapid City, S. Dak., accompanied by winds gusting to 50 m.p.h. Much stronger gusts occurred farther south. Grand Junction, Colo., registered gusts to 63 m.p.h. Blowing dust reduced visibility at Grand Junction to 1/2 mile. Widespread duststorms occurred in the Oklahoma and Texas Panhandles and west of the Pecos River in Texas.

The storm deepened as it moved eastward on the 18th. Blowing snow or blowing dust reduced the visibility to near zero in places. The gusts reached 100 m.p.h. at Hastings, Nebr. At Hays, Kans., the winds remained at 65 m.p.h. or higher for 3 consecutive hours, reaching a peak gust of 115 m.p.h. The storm continued its northeastward movement dumping 6 to 15 inches of new snow along its path.

Heavy snow along the middle portion of the Nebraska-Kansas line closed schools on March 24. The snow spread eastward to Kentucky and the Carolinas. Clemson, S. C., was buried in 10.5 inches of snow and 13 inches fell at Blackstone, Va. The storm moved off the Atlantic coast about March 27.

Light rain fell along the northern Pacific coast in the last few days of March. Snow flurries occurred south and east of the Great Lakes, showers fell along the southern Atlantic and Gulf coasts, and sand and dust again filled the air in the western portions of the Great Plains.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Geneva	83	3	Florence	14	4	Plantersville 2 SSE	16.30	Coden	3.52
Alaska	Glennallen-KCAM	84	2	Kobuk	-68	1	Little Port Walter	16.47	2 Stations	.00
Arizona	1 Station	99	31	Happy Jack Ranger Sta	-12	2	2 Stations	.91	105 Stations	.00
Arkansas	6 Stations	86	15+	2 Stations	10	4	Stuttgart	5.73	Salem	.25
California	2 Stations	100	31	White Mountain 2	-18	1	Gasquet Ranger Station	21.55	26 Stations	.00
Colorado	2 Stations	90	26	Taylor Park	-35	7	Berthoud Pass	4.01	Yellow Jacket	.00
Connecticut	Norwalk Gas Plant	68	17	Norfolk 2 SW	7	26	Bridgeport WSO	4.34	Falls Village	2.10
Delaware	Milton 2 WSW	76	15	2 Stations	19	10+	Bridgeville 1 NW	2.68	Dover	1.82
Florida	Devils Garden Tower	95	15	Fountain 3 SSE	22	8	Milton Exp Station	6.89	2 Stations	T
Georgia	Brunswick	87	3	Helen 1 ESE	12	5	Experiment	14.15	Brunswick	2.11
Hawaii	Kaneohe Marine Base 9Hdl, Kauai	88	26+	2 Stations	29	5+	Mount Waialeale 1047,Kauai	49.69	Middle Pen 147.1, Hawaii	.00
Idaho	Bruneau	73	30	Island Park Dam	-35	6+	Deadwood Dam	6.50	Leadore No. 2	.10
Illinois	Quincy	83	14	2 Stations	8	9+	Chicago WSO	3.30	Barry	.32
Indiana	Winamac 5 SW	75	31	3 Stations	7	9	Bedford	3.06	Franklin 2 NW	.52
Iowa	Glenwood 2 NNW	81	31	Milford 4 NW	-6	3	Peterson 1 W	2.57	Sigourney	.12
Kansas	Larned	93	31	Ellsworth	-5	3	Mankato	1.95	2 Stations	.00
Kentucky	Jackson	81	15	Tomahawk 1 WSW	7	6+	Cumberland	4.81	College Hill Lock 11	.92
Louisiana	Shreveport WSO	87	14	Ashland 2 S	16	4	Diamond 4 NW	7.67	Lake Charles WSO	.27
Maine	Sanford 2 NNW	60	16	3 Stations	-15	27+	East Dover	5.55	Augusta FAA AP	1.85
Maryland	2 Stations	76	15	Oakland 1 SE	-4	25	Bittinger 2 NW	3.71	Potomac Filter Plant	1.08
Massachusetts	4 Stations	65	17+	Lanesboro	0	26	Chesterfield	5.10	Adams	1.59
Michigan	2 Stations	70	31+	2 Stations	-23	9+	Fife Lake 4 SW	4.79	East Jordan	.64
Minnesota	3 Stations	71	31+	Bigfork	-25	3	Isabella 1 W	D4.57	Orr 5 SW	1
Mississippi	Popora 1 E	85	14	University	14	4	Shubuta	14.27	Baldwyn	2.47
Missouri	Fredom	85	14	4 Stations	4	4+	Owensville	3.55	Louisiana Starks Nur	.25
Montana	Crow Agency	76	30	West Yellowstone	-32	2	East Glacier	3.79	Lavon	T
Nebraska	Red Cloud	91	31	Agate 3 E	-10	7	Halsey 2 W	2.64	Northeast Nebr Exp Sta	.19
Nevada	Sunrise Manor Las Vegas	92	30	Mountain City RS	-23	6+	Mount Rose-Sky Tavern	4.06	7 Stations	.00
New Hampshire	2 Stations	61	17	First Conn Lake	-15	27	Mount Washington	10.19	Lakeport 2	1.62
New Jersey	6 Stations	75	16+	High Point Park	10	9	Paterson	4.27	Atlantic City WSO	1.64
New Mexico	Jal	98	27	Tres Piedras	-18	3	Lake Maloya	1.29	45 Stations	.00
New York	New York Laurel Hill	70	16	Stillwater Reservoir	-21	10	Eagle Bay 3 SE	7.78	Scio	1.06
North Carolina	2 Stations	80	17+	Grandfather Mountain	3	4	Lumberton 6 NW	9.37	Sparta	1.86
North Dakota	Fullerton	74	30	Hannah 2 N	-21	24	Bisbee	3.25	3 Stations	T
Ohio	2 Stations	78	14	2 Stations	6	10+	Steubenville Water Wks	3.23	Sandusky	.95
Oklahoma	Frederick	104	27	Buffalo	6	3	Broken Bow Dam	3.32	19 Stations	.00
Oregon	Dayville	73	29	Fremont	-21	1	Valsetz	26.16	Redmond 2 W	.74
Pennsylvania	Uniontown 1 NE	77	15	Kane 1 NNE	-4	25	Bakerstown	D4.74	Farrell Sharon	D1.09
Puerto Rico	2 Stations, P.R.	92	27+	Adjuntas Substation, P.R.	48	5	Lares 3 SE, P.R.	7.92	Ponce 4 E, P.R.	.30
Rhode Island	Providence WSO	65	16	North Scituate 4 W	16	26	Kingston	4.47	Woonsocket	3.03
South Carolina	3 Stations	82	15+	2 Stations	15	5+	Sumter	11.71	Beaufort 7 SW	3.22
South Dakota	Delrichs	80	30	Deerfield 4 NW	-22	7	Deadwood	3.56	3 Stations	T
Tennessee	Moscow	82	14	Crossville Exp Sta	11	10	Coldwater	7.89	Sanburg Wildlife Ref	1.65
Texas	Zapata	105	14	Perryton 5 NNE	1	1	Newton	4.11	146 Stations	.00
Utah	2 Stations	85	30+	Soldier Creek	-18	6	Silver Lake Brighton	5.37	14 Stations	.00
Vermont	Rutland	62	15	Chelsea	-12	10	Manchester Center	7.73	Mc Indoe Falls	2.27
Virginia	2 Stations	79	15	2 Stations	5	30+	Wallaceton Lk Drummond	5.08	Washington	.74
Washington	2 Stations	68	31+	Chesaw 4 NNW	-7	1	Quinault Ranger Sta	29.89	Irene Mt Wauconda	.67
West Virginia	3 Stations	80	15+	5 Stations	0	25+	Canaan Valley	6.69	Harpers Ferry	1.05
Wisconsin	Prairie Du Chien	75	31	2 Stations	-23	3+	Dodgeville 1 NE	4.15	Pittsville 2 S	.40
Wyoming	Torrington Exp Farm	79	30	Bondurant 3 NW	-38	2	Moose	4.14	2 Stations	.07

\+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

MARCH 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90 F or above	Temperature: No. of days Min. 32 F or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 01 inch or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days sunrise to sunset: Clear, 0-3	No. of days sunrise to sunset: Partly cloudy, 4-7	No. of days sunrise to sunset: Cloudy, 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	Ft.	Mb	Mb	F	F	F	F.	F		F.				F	%	In	In	In			In	In	M p h		M p h							
ALABAMA																																
BIRMINGHAM	620	994.9	1017.6	60	37	48.5	- 6.0	71	31+	22	4	0	13	34	62	6.65	0.65	1.33	13	8	T	0	2.1	29	33	NW	3	11	7	13	5.5	62
HUNTSVILLE	624	994.2	1017.6	58	37	47.8	- 4.0	72	31+	24	4	0	10	35	64	6.64	1.07	2.00	13	5	T	T	2.3	28	33	26	6	10	8	13	6.0	
MOBILE	211	1016.2	1018.0	71	49	59.9	- 0.4	80	16+	31	4	0	2	45	62	6.49	- 0.74	2.05	12	5	T	0	.9	21	28	18	25	11	8	12	5.4	
MONTGOMERY	183	1010.5	1017.8	65	41	52.8	- 3.2	76	28	28	9+	0	6	38	62	10.77	4.61	2.74	14	4	0.0	0	2.6	28	29	W	6	15	5	11	4.7	69
ALASKA												B																				
ANCHORAGE	114	1030.7	1035.9	24	5	14.2	-10.4	40	17+	-24	7	0	31	7	70	0.70	0.19	0.35	5	0	11.1	15	3.2	36	26	34	5+	11	9	11	5.3	67
ANNETTE	110	1002.7	1006.8	41	30	35.9	- 1.9	46	30+	21	7	0	21	30	81	9.49	- 0.06	1.54	24	0	46.9	15	9.3	12	46	13	1	1	2	28	8.9	
BARROW	31	1023.0	1023.7	-11	-25	-18.2	- 3.6	10	22+	-52	2	0	31	-24	73	0.16	0.05	0.09	3	0	1.7	11	5.0	7	30	6	23	16	9	6	4.0	
BARTER ISLAND	39	1021.3	1024.3	-14	-25	-19.2	- 4.3	10	18	-44	3+	0	31	-27	66	0.09	- 0.11	0.06	2	0	1.3	18	2.5	26	32	28	4	15	5	11	4.5	
BETHEL	126	1004.7	1010.8	8	- 8	- 0.3	-11.9	43	19	-33	12	0	31	- 6	79	0.05	- 1.00	0.02	2	0	2.4	9	5.5	3	40	11	16	20	5	6	3.1	
BETTLES	644	990.9	1018.4	3	-20	- 8.5		29	22+	-55	4	0	31			0.43		0.14	7	0	7.2	46	4.0	5	27	8	24+	14	7	10	4.8	
BIG DELTA	1269			12	-12	0.7		40	18	-46	5	0	31			0.16		0.16	3	0	2.9	18			35	28	16	12	8	11	5.2	
COLD BAY	96	1002.0	1007.4	27	14	20.2	- 8.6	44	20	-13	12	0	31	16	84	0.59	- 1.16	0.21	12	0	3.9	4	1.3	33	56	14	15	3	7	21	7.7	
FAIRBANKS	436	995.6	1013.6	11	-11	- 0.4	- 9.3	37	20+	-39	5	0	31	-16	48	0.20	- 0.20	0.20	1	0	6.4	43	4.5	2	30	5	23	12	5	14	5.4	
GULKANA	1570	947.2	1008.4	22	- 4	9.1		38	1	-39	7	0	31			0.05		0.02	4	0	1.4		2.4	1	29	17	16+	9	9	13	5.6	
HOMER	67	1001.7	1004.3	28	8	18.2		43	18	-21	5	0	31	11	74	1.37	- 0.01	0.49	8	0	28.6	34	2.6	3	26	7	16	12	6	13	5.4	
JUNEAU	12	1005.1	1005.8	35	23	28.9	- 1.5	43	28+	1	7	0	29	25	86	3.33	0.06	1.13	19	0	30.6	29	6.1	11	30	12	3	3	1	27	8.9	35
KING SALMON	49	1005.4	1007.2	20	- 5	7.8	-11.7	50	19	-42	13	0	31	- 4	60	0.27	- 0.69	0.26	3	0	1.6	10	3.6	3	38	10	15	14	7	10	4.6	
KOTZEBUE	15	1015.9	1016.6	1	-15	- 7.2	- 5.1	28	19+	-45	10	0	31	-15	67	0.10	- 0.18	0.08	2	0	1.7	14	6.7	9	51	9	16	18	4	9	3.6	
MCGRATH	344	998.6	1012.3	12	-18	- 3.2	-11.5	40	18	-45	15+	0	31	-13	62	0.12	- 0.81	0.06	4	0	2.3	29	2.8	1	30	9	16	13	12	6	4.5	
NOME	13	1012.5	1013.5	7	-14	- 3.5	-11.4	35	21	-46	11	0	31	-12	66	T	- 0.88	T	0	0	0.1	18	7.9	7	43	5	16	19	6	6	3.5	83
ST. PAUL ISLAND	22	1005.1	1006.0	21	9	14.9	- 9.3	36	19+	-19	14	0	31	11	85	1.14	0.08	0.29	12	0	12.3	16	10.3	7	72	5	15	7	5	19	7.0	
SHEMYA	122	995.6	999.3	33	27	30.3	- 2.1	39	28	11	16	0	25	21	67	3.35	0.78	0.97	18	0	4.6	1	2.8	26	54	17	20	3	9	22	8.3	
SUMMIT	2401	917.0	1011.4	10	-10	0.1		32	17	-35	7	0	31			0.20		0.11	6	0	5.9	42	13.1	8	48	20	6+	13	5	13	5.5	
TALKEETNA	345			25	- 5	10.3	-10.0	42	17	-41	7	0	31			0.84	- 0.60	1.04	8	0	12.7	50			23	4	5					
UNALAKLEET	15			4	-14	- 5.0		35	19+	-50	11	0	31			0.03		0.02	3	0	0.5	32			53	11	16	21	6	4	2.5	
YAKUTAT	28	1002.4	1005.6	32	14	23.3	- 8.1	43	19	- 1	6	0	31	18	78	6.18	- 2.51	1.55	22	0	49.8	42	4.7	10	35	13	1	3	4	24	8.1	
ARIZONA																																
FLAGSTAFF	7006	787.0	1017.3	53	21	37.0	1.4	70	30	- 1	2	0	29	13	40	0.25	- 1.20	0.16	2	0	3.1	4	3.8	22	26	20	27	18	5	8	3.6	
PHOENIX	1117	975.6	1014.6	80	47	63.3	4.3	95	29	30	2	5	2	19	21	T	- 0.66	T	0	0	0.0	0	0.9	21	34Y	W	13	20	8	3	2.6	95
TUCSON	2584	926.2	1014.2	76	43	59.8	1.8	90	30+	22	3	2	4	15	20	T	- 0.53	T	0	0	0.0	0	2.5	22	36	SW	13	22	6	3	2.4	97
WINSLOW	4895	851.3	1016.9	66	27	46.0	0.4	85	30	7	3	0	20	10	27	T	- 0.39	T	0	0	T	T	5.5	24	43	22	5+	16	10	5	3.5	
YUMA	194	1008.1	1015.3	80	48	64.0	1.0	96	30+	34	3+	3	0	27	28	0.00	- 0.24	0.00	0	0	0.0	0	3.0	32	34	N	1	22	6	3	2.6	91
ARKANSAS																																
FORT SMITH	447	1000.0	1016.7	63	35	48.9	- 2.2	83	14	19	4	0	11	32	56	0.80	- 2.67	0.32	6	4	1.6	1	1.6	1	38	W	18	13	7	11	5.1	69
LITTLE ROCK	257	1007.5	1017.3	62	38	50.0	- 1.8	86	14	21	4	0	6	35	60	3.24	- 1.57	1.15	13	5	7.0	4	1.4	27	37	W	15	13	5	13	5.5	64
CALIFORNIA																																
BAKERSFIELD	475	1002.7	1020.4	70	45	57.8	0.9	80	29+	32	5	0	1	38	50	0.42	- 0.64	0.42	2	0	0.0	0	1.8	33	28	16	18	15	7	9	4.1	
BISHOP	4108	874.4		66	28	47.4	- 0.2	80	22	9	2	0	22			0.27	- 0.28	0.27	2		0.0	0						15	10	6	3.8	
BLUE CANYON	5280			43	30	36.6	- 2.9	59	29	11	1	0	23			11.19	2.74	4.46	13		29.6	60			39	22	25+	7	6	18	6.6	
EUREKA U	43			53	41	47.1	- 1.6	66	19	33	2	0	0			7.91	2.66	1.67	19		0.0	0			34	SW	26+	4	6	21	8.0	50
FRESNO	328	1008.8	1020.7	68	41	54.4	- 0.6	81	29	27	2	0	4	42	69	0.58	- 1.38	0.52	4	0	0.0	0	3.3	32	29	NW	30	14	11	6	4.3	87
LONG BEACH	25	1017.6	1018.8	70	49	59.5	2.8	86	29+	35	2	0	0	43	61	0.23	- 1.14	0.23	1	0	0.0	0	2.2	25	30	32	13	11	11	9	4.8	
LOS ANGELES	97	1014.6	1018.3	64	50	56.8	- 0.2	77	18	39	2	0	0	45	72	0.23	- 1.56	0.23	1	0	0.0	0	3.9	26	40Y	N	1	11	11	9	4.7	
LOS ANGELES U	270			70	51	60.3	0.9	89	29	38	2	0	0			0.53	- 1.73	0.53	2		0.0	0			25	NW	13	15	9	7	3.8	76
MT SHASTA R	3544	893.7	1019.9	48	28	37.9	- 3.3	65	29	15	2	0	26	27	70	4.88	0.42	2.19	10		4.2	2	2.9	12								
OAKLAND	6	1021.7	1022.0	59	47	52.9	- 0.7	69	29+	37	2	0	0	44	74	2.59	0.17	1.28	8	0	0.0	0	4.2	28	26	20	12	9	10	12	5.7	
RED BLUFF	342	1007.5	1020.3	63	41	51.8	- 2.3	75	28	29	2	0	4	35	57	2.20	- 0.50	1.17	8	0	0.0	0	1.1	25	44	SE	12	8	5	18	6.6	69
SACRAMENTO	17	1020.0	1020.9	64	42	52.6	- 0.8	76	29	26	5	0	3	40	68	2.05	- 0.31	0.73	6	0	0.0	0	2.6	23	34	N	17	12	7	12	5.6	75
SANDBERG R	4517	863.9		54	34	44.2	- 0.8	73	29	15	2	0	10	24		0.19	- 1.25	0.19	2		1.8	1	11.9	36	60	36	31	15	5	11	4.6	
SAN DIEGO	13	1017.6	1018.7	65	51	57.8	- 1.2	78	16	39	2	0	0	45	66	0.20	- 1.37	0.20	1	0	0.0	0	3.7	29	25	NW	13	17	7	7	4.6	78
SAN FRANCISCO	8	1021.3	1022.1	60	44	52.1	- 1.2	72	20	35	6+	0	0	42	73	2.68	- 0.01	1.48	6	0	0.0	0	5.8	27	35	19	12	11	8	12	5.7	
SAN FRANCISCO U	52			59	48	53.3	- 1.4	72	19	42	5+	0	0			2.91	- 0.02	1.35	5		0.0	0			28	W	30+					72
SANTA MARIA	236			63	39	51.0	- 2.3	79	29	24	2	0	5			0.35	- 1.71	0.35	2		0.0	0						16	6	9	3.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft	Mb	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In	In	In.			In.	In.	M.p.h.		M.p.h.							%
CALIFORNIA																																
STOCKTON	22	1020.7	1021.8	65	41	53.1	- 0.6	76	29	27	2	0	2	39	64	1.88	- 0.17	0.83	6	0	0.0	0	4.6	29	30	15	12	10	9	12	5.8	
COLORADO																																
ALAMOSA	7536	768.7		51	11	31.1	- 1.0	73	26	- 7	1	0	30			0.03	- 0.23	0.03	1		0.8	1						12	15	4	4.0	
COLORADO SPRINGS	6145	807.3	1014.7	52	23	37.7	1.5	81	26	7	3	0	27	14	46	0.34	- 0.27	0.19	6	0	3.0	1	3.3	36	46	35	17	11	9	11	5.1	
DENVER	5283	832.7	1012.7	54	23	38.5	2.1	84	26	- 2	7	0	28	19	53	0.53	- 0.68	0.46	3	1	9.6	7	1.2	32	34	N	17+	8	11	12	6.1	69
GRAND JUNCTION	4843	851.7	1016.5	57	25	41.1	- 0.4	81	26	6	6	0	23			0.02	- 0.73	0.02	1	0	0.2	T	0.5	26	43	W	17	10	10	11	5.5	71
PUEBLO	4684	852.4	1013.4	61	23	41.7	1.6	82	27	6	3	0	28	17	45	0.55	0.03	0.32	5	0	8.0	2	2.9	34	48	N	17	12	9	10	5.0	85
CONNECTICUT																																
BRIDGEPORT	7	1010.8	1011.3	45	31	38.1	0.6	60	16	24	26+	0	18	23	57	4.34	0.09	1.63	7	1	3.1	1	7.8	30	48	27	4	8	9	14	6.2	
HARTFORD	169	1003.7	1010.4	43	28	35.4	- 0.6	66	16	16	26	0	25	20	57	3.24	- 0.56	1.56	7	0	12.8	4	6.4	30	47	NW	4	6	7	18	6.9	60
DELAWARE																																
WILMINGTON	74	1010.2	1013.0	50	32	40.7	- 0.6	74	15	22	25+	0	18	24	55	2.29	- 1.73	0.86	6	0	2.4	2	5.6	31	43	29	4	8	9	14	6.3	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	290	1001.7	1013.8	51	28	39.7		70	16	17	25	0	22	25	57	2.27		1.38	7	0	2.4	1	4.5	30	37	30	4	5	12	14	6.6	
WASHINGTON NATIONAL	10	1011.2	1013.6	52	34	43.2	- 1.6	73	15	26	25+	0	13	25	52	1.93	- 1.28	0.95	7	1	1.4	1	4.9	31	40	W	4	6	13	12	6.1	55
FLORIDA																																
APALACHICOLA U	13			66	50	58.0	- 3.0	78	23	33	4	0	0			1.44	- 3.08	0.43	9	5	0.0	0			33	SW	19	13	6	12	4.9	83
DAYTONA BEACH	31	1016.9	1018.3	73	47	60.0	- 3.8	89	15	33	9	0	0	47	64	2.00	- 1.56	0.80	6	5	0.0	0	3.4	26	32	28	20	12	11	8	4.4	
FORT MYERS	15	1018.3	1018.6	78	53	65.9	- 2.3	86	15	39	9+	0	0	53	67	0.55	- 2.07	0.25	3	0	0.0	0	1.3	26	23	32	20+	20	9	2	2.7	
JACKSONVILLE	26	1016.6	1017.6	72	43	57.4	- 4.8	86	15+	28	9+	0	5	45	67	2.41	- 1.08	1.33	7	3	0.0	0	4.0	26	44	SW	3	13	9	9	4.4	70
KEY WEST	4	1016.9	1017.6	78	67	72.4	- 0.1	84	16	57	9+	0	0	61	67	T	- 1.77	T	0	1	0.0	0	4.3	8	34	W	3	22	8	1	2.5	90
LAKELAND U	214			75	52	63.3	- 3.2	87	15+	38	4	0	0			2.04	- 2.21	1.11	6		0.0	0						13	16	2	3.9	79
MIAMI	7	1017.6	1017.8	80	61	70.3	- 0.2	90	16	45	9+	1	0	58	66	0.40	- 1.87	0.27	3	2	0.0	0	1.3	14	25	33	30+	13	16	2	3.9	
ORLANDO	108	1015.5	1017.9	77	52	64.8	- 1.1	91	15	39	5+	1	0	48	60	1.46	- 1.95	0.68	6	1	0.0	0	3.0	26	29	29	26+	13	13	5	4.3	
PENSACOLA	112	1014.2	1018.3	68	48	58.0	- 3.0	79	15+	31	4	0	1	46	66	3.05	- 2.99	1.08	10	3	0.0	0	0.4	29	25	33	3	13	3	15	5.3	
TALLAHASSEE	55	1015.6	1017.8	70	40	54.6	- 6.0	82	15	23	5	0	9	40	64	4.81	- 0.37	1.31	11	5	0.0	0	1.8	27	23	20	3	14	6	11	4.8	
TAMPA	19	1018.0	1018.1	75	50	62.2	- 3.8	84	14+	35	21	0	0	50	68	0.54	- 3.21	0.25	6	0	0.0	0	2.2	28	37	30	3	14	9	8	4.4	81
WEST PALM BEACH	15	1017.3	1017.9	78	54	65.9	- 4.0	90	16	39	9	1	0	53	65	0.55	- 2.89	0.27	4	1	0.0	0	1.2	23	35	32	30+	15	12	4	4.0	
GEORGIA																																
ATHENS	800	986.8	1016.2	59	37	47.9	- 3.7	76	14	22	5	0	12	33	62	7.91	2.81	2.77	12	2	T	T	4.4	28	27	27	15	13	6	12	5.1	
ATLANTA	1010	979.7	1016.8	58	37	47.5	- 3.9	72	15	25	9+	0	13	32	60	8.65	3.28	3.06	13	4	T	T	3.6	30	42	SW	19	12	5	14	5.5	60
AUGUSTA	136	1011.2	1016.4	63	37	49.8	- 5.1	78	14	25	5	0	9	35	63	9.57	5.40	3.47	14	4	T	0	4.4	26	31	25	3	15	2	14	5.0	
COLUMBUS	385	1003.4		64	40	52.0	- 3.3	75	15	27	5	0	4	39	66	9.16	3.15	3.32	13	6	0.0	0	2.7	29	30	31	15	14	4	13	5.1	
MACON	354	1004.1	1017.2	65	39	52.4	- 4.5	79	15	27	5	0	8	38	62	7.17	2.23	2.65	13	3	0.0	0	3.4	28	34	NW	3	13	5	13	5.1	65
ROME	637			58	34	46.0	- 4.4	73	31+	20	9+	0	16			7.28	1.41	2.44	14		1.8	2										
SAVANNAH	46	1015.2	1016.9	68	41	54.5	- 3.8	86	15	26	5	0	6	39	62	2.63	- 1.34	1.22	12	4	0.0	0	3.9	26	35	W	3	15	3	13	4.8	72
HAWAII																																
HILO	27	1016.9	1018.1	78	61	69.4	- 1.2	86	21	54	18	0	0	62	82	12.04	- 2.66	2.56	24	0	0.0	0	1.8	16	27	SE	23	2	7	22	7.9	27
HONOLULU	7	1016.9	1017.5	80	68	73.9	1.1	82	31+	64	19	0	0	62	70	5.57	2.68	2.54	13	0	0.0	0	9.9	6	29	NE	12	3	12	16	7.3	65
KAHULUI	48	1014.9	1017.2	82	65	73.5	1.3	86	3	56	18+	0	0	63	73	2.92	0.70	1.80	12	0	0.0	0	8.5	7	31	N	25	6	14	11	6.0	62
LIHUE	103	1013.5	1018.5	78	69	73.9	2.9	81	23	63	21+	0	0	65	74	8.27	3.71	3.80	23	0	0.0	0	8.4	7	28	NE	25	2	7	22	8.1	40
IDAHO																																
BOISE	2838	917.4	1019.1	50	31	40.2	- 1.5	66	29	6	1	0	19	26	58	1.50	0.18	0.41	12	0	1.6	1	2.5	12	44	NW	30	5	5	21	7.4	65
LEWISTON	1413			50	32	40.8	- 1.8	63	29+	20	2	0	14			1.08	- 0.10	0.33	13		2.4	2						3	7	21	8.0	
POCATELLO	4454	862.5	1018.5	42	23	32.6	- 3.2	61	30	- 3	18	0	24	21	64	1.90	0.88	0.70	11	0	5.2	4	9.0	22	47	SW	30	1	12	18	7.7	47
ILLINOIS																																
CAIRO U	314			54	37	45.5	- 2.7	75	14	24	4	0	6			1.39	- 3.40	0.37	10		3.6	3			52	W	15	9	14	8	5.3	62
CHICAGO O HARE	658	989.8	1014.8	43	27	35.0	0.3	74	31	15	4	0	23	25	68	1.54	- 1.14	0.68	12	2	8.0	3	3.8	29	39	25	15	7	6	18	7.1	
CHICAGO MIDWAY	607	991.5	1014.7	44	28	35.7	- 0.6	74	31	17	9+	0	26	24	65	3.30	0.56	1.28	12	4	14.8	5	4.5	29	33	SW	15	7	5	19	7.0	49

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days sunrise to sunset: Clear, 0.3	No. of days sunrise to sunset: Partly cloudy, 4-7	No. of days sunrise to sunset: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F	F	F.		F.				F.	%	In	In	In.			In.	In	Mph.		Mph							%
ILLINOIS																																
MOLINE	582	993.6	1016.8	44	26	34.7	- 0.7	77	31	12	4	0	24	23	64	1.99	- 0.40	0.71	8	1	7.8	3	3.5	29	34	W	15	8	8	15	6.7	49
PEORIA	652	990.9	1015.4	45	26	35.5	- 2.1	75	31	12	4	0	26	23	64	1.09	- 1.76	0.31	9	2	5.8	4	3.5	29	35	S	31	4	9	18	7.0	64
ROCKFORD	724	987.1	1014.9	40	25	32.3	- 1.7	71	31	13	4	0	24	23	71	2.11	- 0.35	0.84	11	2	14.6	4	2.7	30	31	29	15	9	4	18	6.8	
SPRINGFIELD	588	992.6	1015.3	49	29	39.1	- 1.1	75	31+	16	4	0	23	27	65	1.18	- 1.70	0.66	9	2	0.7	1	3.6	28	40	W	15	7	7	17	6.6	57
INDIANA																																
EVANSVILLE	381	1002.4	1016.6	53	31	42.0	- 3.3	74	14	20	24	0	19	30	65	1.65	- 2.66	0.44	12	1	4.3	1	3.3	28	38	W	15	4	13	14	6.5	60
FORT WAYNE	791	984.4	1015.1	43	26	34.3	- 2.0	69	31	12	9	0	27	24	69	1.49	- 1.29	0.55	11	2	7.3	2	4.4	27	33	SW	19	4	7	21	7.9	53
INDIANAPOLIS	792	985.4	1015.1	47	28	37.3	- 1.6	73	31	17	8+	0	26	26	67	1.49	- 1.92	0.54	11	1	2.8	1	4.0	27	39	SW	15	7	6	18	6.9	50
SOUTH BEND	773	985.4	1014.2	41	26	33.9	- 1.0	70	31	9	9	0	27	24	71	2.10	- 0.64	0.46	16	1	19.1	7	3.7	29	35	25	15	2	5	24	8.3	
IOWA																																
BURLINGTON	692			44	26	35.3	- 2.0	77	31	13	4	0	26	25	67	1.50	- 1.21	0.44	9	1	6.9	4	3.8	31	29	31	19+	7	10	14	6.6	
DES MOINES	938	980.4	1016.1	44	27	35.2	1.4	76	31	12	8+	0	25	24	66	0.41	- 1.68	0.19	6	0	5.3	4	2.9	32	38	N	19	4	13	14	6.9	60
DUBUQUE	1056	975.3		37	23	29.6	- 2.3	70	31	9	4	0	28			1.58	- 1.18	0.73	9		13.4	5						9	6	16	6.5	
SIOUX CITY	1095	975.3	1016.3	44	26	35.2	2.1	77	31	12	3	0	26	24	67	0.46	- 1.00	0.38	4	1	1.7	2	2.4	33	49	NW	18	4	15	12	6.5	66
WATERLOO	868	983.4	1016.1	37	22	29.6	- 2.4	74	31	5	3	0	28	20	70	1.36	- 0.69	1.07	5	0	6.5	5	3.8	33	31	28	15	5	9	17	7.0	
KANSAS																																
CONCORDIA	1470	961.4	1015.2	51	28	39.4	- 0.4	83	31	5	3	0	23	28	70	0.77	- 0.72	0.43	7	0	9.2	7	0.7	32	68	NW	18	10	13	8	5.5	66
DODGE CITY	2582	922.5	1014.7	55	29	42.3	0.5	91	31	7	3+	1	20	25	58	0.09	- 1.07	0.07	3	0	0.1	3	1.5	30	63	NW	18	6	13	12	6.1	70
GOODLAND	3654	885.2	1013.6	54	25	39.8	3.3	83	31	6	3	0	27	23	59	0.57	- 0.49	0.16	8	0	8.6	3	3.5	27	49	33	18	9	8	14	6.0	
TOPEKA	877	983.7	1016.0	52	30	41.1	- 0.6	79	31	11	3	0	21	30	68	0.64	- 1.37	0.38	6	0	7.5	5	1.7	28	42	NW	18	8	9	14	6.2	59
WICHITA	1321	966.8	1015.4	57	31	44.0	- 0.5	80	30	14	3	0	21	28	58	0.01	- 1.63	0.01	1	0	T	1	1.0	29	57	NW	18	11	8	12	5.4	72
KENTUCKY																																
COVINGTON	869	983.1	1015.2	50	30	40.2	- 0.4	74	14	17	4	0	16	30	68	2.55	- 1.24	0.64	12	1	9.7	3	4.8	26	33	24	19+	5	4	22	7.7	
LEXINGTON	966	980.0	1016.1	51	30	40.3	- 2.9	73	14	17	24	0	21	27	63	2.02	- 2.73	0.68	9	2	5.3	2	5.0	24	32	27	15	4	14	13	6.7	
LOUISVILLE	477	998.0	1015.8	53	32	42.0	- 1.3	72	14	21	24+	0	16	28	59	2.12	- 2.47	0.49	10	1	5.2	3	4.1	27	37	W	6	6	10	15	6.9	59
LOUISIANA																																
ALEXANDRIA	92	1013.5	1017.8	66	42	53.9	- 4.5	81	13	26	4	0	4			4.26	- 0.71	1.52	10	7	0.0	0	0.2	10	24	30	6	11	8	12	5.4	
BATON ROUGE	64	1014.9	1017.5	69	45	57.3	- 3.4	83	14+	30	8	0	2	46	70	5.22	0.31	2.24	12	5	0.0	0	1.3	16	29	31	18	11	9	11	5.3	
LAKE CHARLES	9	1016.3	1017.3	71	48	59.1	- 2.0	81	13	30	4	0	1	48	73	0.27	- 3.97	0.10	4	1	0.0	0	2.3	14	28	2	29	9	9	13	5.8	
NEW ORLEANS	4	1016.9	1017.9	71	48	59.2	- 2.2	84	13	27	8	0	2	47	66	3.61	- 1.73	1.74	9	4	0.0	0	1.1	13	28	17	25	10	9	12	5.3	
SHREVEPORT	254	1007.5	1016.7	68	43	55.4	- 1.2	87	14	22	4	0	4	41	63	2.11	- 2.04	0.91	10	4	0.3	T	1.2	17	28	34	6	10	8	13	5.3	56
MAINE																																
CARIBOU	624	982.7		35	16	25.4	2.6	48	16	- 2	3	0	30			3.20	0.82	0.92	17		38.6	35						6	9	16	6.9	
PORTLAND	43	1006.1	100■.4	39	24	31.6	0.2	50	29	10	13+	0	28	21	63	4.74	0.40	2.29	7	0	24.7	25	5.1	30	38	E	4	9	10	12	6.1	61
MARYLAND																																
BALTIMORE	148	1008.1	1013.8	51	33	41.8	- 1.3	75	15	22	25	0	15	22	49	1.90	- 1.92	0.90	8	1	2.0	1	5.6	28	54	NW	4	7	11	13	6.2	58
MASSACHUSETTS																																
BLUE HILL OBS R	629			42	27	34.3	- 0.5	64	16	18	25	0	30			3.23	- 1.31	1.43	8		9.6	4			65	SSW	4					54
BOSTON	15	1008.1	1009.2	43	30	36.7	- 1.0	65	16	23	25	0	24	23	63	3.08	- 1.14	1.40	9	0	7.4	4	8.2	29	55	SW	4	6	11	14	6.5	68
WORCESTER	986	971.9	1009.8	38	22	29.9	- 2.9	55	16	11	10	0	31	17	63	1.93	- 2.18	1.07	8	0	12.1	13	7.2	29	37	29	5	8	9	14	6.3	
MICHIGAN																																
ALPENA	689	987.5	1013.7	35	12	23.9	- 1.8	55	14	- 3	12+	0	30	16	70	2.75	0.73	1.33	11	1	35.8	26	2.2	31	28	NE	19	8	10	13	6.3	60
DETROIT	619			39	26	32.8	- 2.0	63	14	17	9+	0	27	24	73	1.28	- 1.14	0.54	14	0	6.4		3.8	28	35	24	15					
DETROIT METRO	633	988.8	1013.5	40	25	32.0	- 2.4	63	14	12	9	0	28	23	70	1.59	- 0.82	0.63	14	0	8.7	3	4.2	29	34	SW	15	3	7	21	7.8	44
FLINT	771	984.8	1013.3	36	23	29.7	- 3.0	58	14	8	9	0	27	23	76	1.85	- 0.29	0.87	12	1	16.8	7	3.8	29	29	24	15	3	10	18	7.6	
GRAND RAPIDS	784	983.7	1013.9	37	21	29.0	- 3.7	64	31+	0	25	0	29	20	70	1.77	- 0.51	0.65	9	1	25.9	6	3.1	28	44	SW	15	3	7	21	8.0	42
HOUGHTON LAKE	1149	970.2	1013.6	34	13	23.4	- 3.1	51	14	- 6	2	0	31	17	75	1.79	0.10	0.65	13	1	28.7	16	2.4	31	25	6	19+	6	7	18	7.2	
LANSING	841	981.0	1013.7	39	22	30.2	- 2.2	65	31	4	9	0	27	24	76	2.33	- 0.07	0.76	14	0	19.8	11	3.2	28	43	SW	15	3	9	19	7.6	47
MARQUETTE U	677			33	20	26.3	- 0.4	46	31	9	25	0	30			2.06	0.15	0.77	13		15.9	31			30	N	15	3	13	15	7.4	54

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No of days		Snow, ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	990.5	1014.2	37	22	29.3	- 3.6	66	31+	1	25	0	29	20	68	1.99	- 0.06	0.71	15	2	29.0	8	2.8	32	29	22	15	5	5	21	7.5	
SAULT STE MARIE	721	985.8	1013.5	29	11	20.3	- 3.5	40	31	- 7	3	0	31	14	76	2.84	1.03	1.39	12	1	17.5	30	2.8	35	34	E	31	7	8	16	6.5	44
MINNESOTA																																
DULUTH	1428	962.1	1015.7	30	14	21.8	0.5	40	31	-15	3	0	31	14	74	2.02	0.40	0.70	12	1	12.7	25	2.3	33	32	NW	28	6	6	19	7.3	54
INTERNATIONAL FALLS	1179	970.9	1015.5	32	11	21.2	1.8	47	31	-14	3	0	31	12	65	0.52	- 0.51	0.15	10	2	4.2	18	1.3	30	24	35	15	6	6	19	7.1	
MINNEAPOLIS	834	984.4	1016.1	35	21	28.0	0.6	67	31	3	3	0	29	18	67	1.21	- 0.32	0.60	11	2	7.0	6	2.4	32	32	NW	27	6	6	19	7.2	52
ROCHESTER	1297	966.1	1015.6	34	18	26.2	- 1.7	64	31	2	3+	0	29	20	78	0.97	- 0.67	0.63	7	1	9.7	11	3.6	27	29	17	27+	6	9	16	6.9	
ST CLOUD	1034	977.0	1016.6	34	16	24.7	- 0.9	58	31	-16	3	0	29			0.31	- 0.97	0.15	5		4.3	15						6	9	16	6.7	
MISSISSIPPI																																
JACKSON	310	1005.4	1017.5	66	39	52.4	- 4.1	81	14	24	8+	0	8	42	70	7.68	1.94	1.92	12	10	T	0	0.3	21	30	NW	6	14	5	12	5.1	70
MERIDIAN	290	1006.8	1018.0	65	39	51.7	- 4.8	79	14	26	8+	0	9	40	69	8.05	1.73	1.64	11	8	T	0	1.4	28	23	33	20	12	4	15	5.4	
MISSOURI																																
COLUMBIA REGIONAL	887	983.1	1015.9	52	32	41.8	- 0.1	82	14	16	4	0	20	26	57	0.78	- 1.87	0.46	6	0	1.9	1	2.7	28	50	SW	18	6	9	16	6.7	63
KANSAS CITY	742	988.2	1015.6	54	33	43.7	0.4	81	14	15	3	0	16	27	56	0.87	- 1.62	0.62	5	0	7.4	4	2.2	29	37	S	31	11	8	12	5.8	78
ST JOSEPH	811			53	32	42.3	2.1	79	31	11	3	0	17	28	60	0.76	- 1.57		7		0.0		1.9	30	40	31	18	9	11	11	5.8	
ST LOUIS	535	995.3	1015.9	53	30	41.7	- 0.9	82	14	15	4	0	22	28	63	1.81	- 1.27	0.96	5	2	0.2	1	3.5	27	40	SE	18	5	9	17	6.6	63
SPRINGFIELD	1268	969.9	1016.1	57	31	44.0	0.0	82	14	12	4	0	20	27	57	1.22	- 1.62	0.68	6	3	2.8	1	2.5	22	42	SW	18	13	9	9	4.9	72
MONTANA																																
BILLINGS	3567	888.9	1015.6	44	23	33.5	- 0.2	72	30	4	2	0	26	18	60	0.83	- 0.22	0.26	10	0	8.0	3	7.0	28	49	NW	11	4	9	18	7.4	71
GLASGOW	2284	931.9	1016.5	34	16	24.6	- 2.1	51	30	- 6	2	0	30	19	77	0.27	- 0.29	0.18	6	1	1.1	8	2.6	3	33	12	26	5	13	13	6.5	
GREAT FALLS	3652	885.5	1016.1	42	22	31.6	0.9	61	29	- 4	1	0	27	16	55	1.12	0.20	0.38	10	0	9.7	3	11.4	24	38	SW	12+	6	9	16	7.0	69
HAVRE	2594	921.1	1015.4	40	20	30.2	3.3	62	30+	- 8	2	0	29	20	67	0.07	- 0.53	0.02	5	0	2.1	5	5.2	26	35	NW	30	5	15	11	6.3	75
HELENA	3828	878.8	1017.0	42	22	31.9	0.5	64	29	3	2+	0	29	16	55	0.41	- 0.29	0.16	8	1	2.5	2	6.1	27	43	W	11	3	8	20	7.7	68
KALISPELL	2965	909.9	1016.8	42	24	32.9	1.1	57	29	5	2	0	29	21	66	0.95	- 0.01	0.39	12	0	10.2	2	2.7	19	32	2	20	3	6	22	7.8	
MILES CITY	2639	920.4	1015.6	41	22	31.6	0.7	67	30	- 5	2	0	28	23	74	0.56	- 0.09		12	0	5.1		4.0	30								
MISSOULA	3190	903.5	1017.7	45	26	35.5	1.8	66	29	8	2	0	27	24	67	0.78	0.05	0.15	13	0	6.3	1	2.9	29	33	SW	20	1	9	21	8.2	52
NEBRASKA																																
GRAND ISLAND	1841	948.2	1015.7	47	25	36.1	0.4	83	31	8	3	0	26	24	64	1.12	- 0.15	0.53	7	0	11.7	6	2.5	32	55	34	18	8	7	16	6.5	
LINCOLN M	1150			47	28	37.5	- 0.6	82	31	6	3	0	23			0.70	- 1.03	0.25	7		8.3	5			47	NW	18	9	9	13	6.2	59
NORFOLK	1544			44	24	33.8	0.5	74	31	8	3	0	28			0.47	- 1.12	0.24	7		5.5	3						7	7	17	6.8	
NORTH PLATTE	2775	915.3	1015.4	46	21	33.4	- 1.6	82	31	- 3	7	0	31	23	70	0.97	- 0.01	0.48	9	0	19.0	9	2.6	34	57	NW	18	6	8	17	6.8	64
OMAHA	977	979.7	1015.9	47	27	37.2	0.3	82	31	10	3	0	25	25	64	0.49	- 0.96	0.17	8	0	4.3	3	2.4	35	38	NW	18	7	9	15	6.5	72
SCOTTSBLUFF	3957	876.7	1015.4	47	22	34.7	- 0.6	80	30	- 5	7	0	27	22	66	1.31	0.45	0.58	8	0	14.2	7	4.4	33	35	36	17	0	15	16	7.5	
VALENTINE	2587			44	21	32.4	1.1	75	30	2	2	0	28			0.51	- 0.50	0.23	7		8.0	4			43	NW	31	5	6	20	7.3	49
NEVADA																																
ELKO	5050	845.2	1018.7	47	25	36.1	0.5	67	29	- 4	2	0	25			0.53	- 0.30	0.29	12	0	2.0	1	4.2	26	29	25	30+	5	8	18	6.9	
ELY	6253	808.0	1017.3	50	19	34.7	1.2	69	29	-10	2	0	27	16	52	0.20	- 0.65	0.10	6	0	4.1	3	3.7	24	41	SW	26	10	10	11	5.6	89
LAS VEGAS	2162	940.1	1016.9	70	42	55.8	1.0	88	30	23	3	0	6	11	18	T	- 0.35	T	0	0	0.0	0	2.8	28	48	NW	31	17	7	7	3.7	93
RENO	4404	867.3	1018.6	56	26	40.9	- 0.6	76	29	0	5	0	24	23	54	1.54	0.86	0.62	6	0	7.0	5	2.4	25	49	SW	25	7	12	12	6.0	69
WINNEMUCCA	4301	870.0	1019.2	54	22	37.9	- 0.1	75	29	- 3	2+	0	24	20	54	0.75	- 0.06	0.26	11	0	2.0	1	3.8	22	42	W	12	4	10	17	7.2	77
NEW HAMPSHIRE																																
CONCORD	342	996.6	1009.5	39	21	30.4	- 1.3	56	16	5	13	0	30	18	60	2.28	- 0.98	0.84	8	0	24.0	25	7.0	31	35	W	5	10	10	11	5.8	68
MT WASHINGTON OBS	6262			15	2	8.6	- 3.1	37	15	- 9	9	0	31			10.19	4.45	2.08	22	0	86.6	34			125	W	4	4	7	20	7.8	36
NEW JERSEY																																
ATLANTIC CITY	64	1009.8	1012.4	48	31	39.0	- 2.1	67	16	19	10	0	22	24	57	1.64	- 2.27	0.77	10	0	0.9	1	6.0	29	41	27	4	10	7	14	5.9	60
ATLANTIC CITY U	11			47	35	40.9	- 0.2	56	16	27	25	0	10			1.84	- 2.17	1.19	10						39	W	4					
NEWARK	7	1010.8	1011.7	48	34	41.2	0.7	70	15	26	25	0	10	26	60	3.29	- 0.80	0.92	8	0	4.2	4	6.1	29	35	24	4	5	13	13	6.6	
TRENTON U	56			47	34	40.3	- 0.4	72	15	26	25+	0	15			3.26	- 0.58	1.41	11		3.4	2			39	S	15+	9	10	12	5.9	57

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

MARCH 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 90 F or above	Temperature: No of days: Min. 32 F or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: .01 inch or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In	In.	In			In	In	M p h		M p h							%
NEW MEXICO																																
ALBUQUERQUE	5311	836.8	1014.1	64	31	47.7	1.9	85	26	10	7	0	18	10	27	0.03	- 0.45	0.03	2	0	0.5	T	4.7	31	45	W	17	14	13	4	3.6	84
CLAYTON	4959			60	25	42.6	1.7	85	27	7	7+	0	26			0.38	- 0.25	0.27	4		4.4	2						19	12	0	4.2	
ROSWELL	3612			73	33	52.9	3.4	95	27	9	3	1	13			0.11	- 0.39	0.11	1		1.0	1			47	SW	5					90
NEW YORK																																
ALBANY	275	1000.7	1011.6	39	23	30.6	- 2.4	51	16	9	10	0	30	21	68	3.11	0.39	1.38	11	0	32.0	16	6.7	30	49	W	5	5	9	17	7.1	55
BINGHAMTON	1590	991.6	1011.9	34	23	28.4	- 2.9	50	15	13	10	0	30	19	68	2.77	- 0.12	1.36	16	0	33.5	28	5.7	28	42	W	4	2	7	22	7.9	43
BUFFALO	705	986.1	1012.6	36	23	29.8	- 1.7	63	15	12	10	0	29	22	74	2.07	- 1.17	0.69	18	0	22.6	7	6.3	27	56	SW	15	0	8	23	8.4	47
NEW YORK J	132	1008.1	1011.3	47	33	40.1	- 0.4	69	16	26	10+	0	12	24	57	3.80	- 0.21	1.32	8	0	1.3	1	5.6	31	34	W	5+					54
NEW YORK KENNEDY	13	1011.2	1011.8	45	33	38.9	0.2	58	16	25	25	0	14	25	60	3.17	- 0.98	1.19	9	0	2.8	2	7.2	30	44	28	4	7	12	12	6.2	
NEW YORK LA GUARDIA	11	1010.8	1012.0	46	34	39.8	- 1.0	67	16	27	25+	0	11	23	56	3.08	- 1.15	1.02	9	0	2.3	2	7.8	31	47	NW	4	7	11	13	6.3	
ROCHESTER	547	992.2	1012.9	35	22	28.5	- 3.8	57	15	9	10	0	30	21	75	3.43	0.42	1.88	17	0	29.7	14	6.8	27	45	W	15	2	8	21	7.9	46
SYRACUSE	410	996.6	1011.7	37	25	31.2	- 1.4	58	15	14	26	0	28	22	70	2.90	- 0.70	1.19	16	0	37.2	25	6.4	27	37	NW	4	6	5	20	7.3	49
NORTH CAROLINA																																
ASHEVILLE	2140	938.0	1015.0	55	32	43.1	- 1.5	71	14+	17	5	0	18	31	66	3.48	- 1.34	1.04	12	1	8.9	5	4.7	34	40	34	3	12	8	11	5.2	74
CAPE HATTERAS R	7	1014.2	1014.5	58	41	49.4	- 1.6	71	15+	26	25+	0	6	38	68	4.70	0.54	1.75	12	0	0.0	0	5.3	30	36	1	27+	13	7	11	5.4	67
CHARLOTTE	736	987.8	1015.6	57	35	46.3	- 3.7	74	14	21	9+	0	16	30	58	4.87	0.48	1.63	10	2	5.7	5	3.5	26	47	SW	15	12	7	12	5.5	63
GREENSBORO	897	982.7	1014.9	55	32	43.7	- 3.7	75	14	19	5	0	19	28	58	3.32	- 0.37	1.10	10	0	3.5	3	4.3	26	32	NW	4	11	7	13	5.5	70
RALEIGH	434	999.0	1015.1	57	33	45.1	- 4.4	76	14	21	9+	0	17	29	58	3.69	0.34	1.41	9	0	5.3	2	4.7	27	32	20	19	12	7	12	5.2	66
WILMINGTON	28	1014.2	1015.6	61	40	50.2	- 4.0	74	16+	29	5	0	4	36	63	4.57	0.54	1.09	13	3	T	0	4.4	28	36	SW	19	13	7	11	4.9	69
NORTH DAKOTA																																
BISMARCK	1647	954.3	1015.9	37	19	28.2	2.0	70	30	- 4	2	0	31	21	74	0.30	- 0.48	0.18	10	0	3.3	3	3.8	32	40	NW	31	4	6	21	7.5	65
FARGO	896	982.1	1015.9	36	20	27.6	3.3	59	30	- 2	8	0	27	23	81	0.56	- 0.19	0.27	10	0	1.8	3	1.3	33	34	NW	31+	5	8	18	7.1	44
WILLISTON	1899	945.5	1015.9	38	19	28.2	3.9	64	30	3	7+	0	31	21	76	0.45	- 0.26	0.27	9	0	1.6	2	4.3	33	30	NW	31+	7	5	19	7.1	52
OHIO																																
AKRON	1208	967.8	1013.5	43	25	34.3	- 2.6	70	14	14	9	0	26	22	63	2.41	- 0.91	0.48	19	1	15.1	5	4.8	27	31	24	7	2	8	21	8.0	
CINCINNATI ABBE OB	761			50	31	40.4	- 2.3	73	14	16	4	0	20			2.34	- 1.55	0.62	11		6.4	4			27	W	7					55
CLEVELAND	777	984.4	1014.3	39	24	31.6	- 3.5	69	14	10	9	0	28	21	66	2.01	- 1.12	0.37	13	1	16.6	4	4.3	26	42	SW	7	0	9	22	8.3	43
COLUMBUS	812	984.1	1014.8	45	28	36.6	- 2.3	72	14	14	4	0	24	26	68	2.70	- 0.46	0.85	12	0	12.3	3	5.0	27	40	SW	15	5	7	19	7.4	38
DAYTON	1002	978.0	1014.7	47	29	37.8	- 1.1	71	31	18	24+	0	23	26	67	1.84	- 1.28	0.52	11	3	11.0	3	4.8	26	40	W	15	5	7	19	7.5	46
MANSFIELD	1295			43	25	34.1	- 1.1	69	14	12	25+	0	26	24	71	1.78	- 2.00	0.50	13	1	13.5	4	5.6	25	29	25	15+	4	7	20	7.7	
TOLEDO	669	988.2	1013.8	42	24	32.9	- 2.3	69	31+	10	25+	0	28	23	70	1.34	- 0.92	0.67	12	0	5.2	1	4.3	27	42	SW	15	3	6	22	7.9	51
YOUNGSTOWN	1178	969.9	1013.8	38	23	30.3	- 5.0	67	14	12	25	0	29	22	72	2.36	- 0.99	0.52	18	0	22.0	7	4.5	28	41	27	15	2	7	22	8.3	
OKLAHOMA																																
OKLAHOMA CITY	1285	968.8	1015.6	63	35	49.1	0.6	86	13	18	3	0	11	29	50	0.07	- 1.90	0.07	1	0	0.7	1	0.5	15	47	NW	18	18	8	5	4.0	83
TULSA	650	991.5	1015.9	62	37	49.9	1.8	85	14	21	3	0	10	30	50	0.08	- 2.35	0.05	2	0	T	T	1.8	19	40	S	31	15	8	8	4.4	79
OREGON																																
ASTORIA	8	1016.6	1017.4	49	35	42.0	- 2.5	58	19	22	1	0	11	36	79	9.96	1.04	1.23	21	0	1.5	1	5.2	17	39	17	26	2	6	23	8.2	
BURNS U	4151	873.4	1019.0	45	22	33.4	- 4.0	61	29	6	1	0	29	23	69	2.02	1.05	0.75	15		7.2	2	3.5	26				6	2	23	7.6	
EUGENE	359	1005.8	1019.4	51	35	43.1	- 2.9	61	19	21	1	0	10	36	80	7.99	3.67	1.41	20	0	0.8	1	5.2	18	44	21	11	3	4	24	8.3	
MEACHAM	4050	876.1	1019.2	37	23	29.6	- 3.7	54	29	9	1	0	29			4.00	0.04	1.09	20		33.2	22			22	25	13	4	7	20	7.9	
MEDFORD	1298	971.6	1020.1	54	36	44.9	0.6	68	20	26	2+	0	11	35	72	2.72	0.94	0.61	13	0	5.0	3	1.4	29	29	16	25	3	4	24	8.3	
PENDLETON	1482	964.1	1018.7	50	31	40.5	- 4.6	59	29+	19	1	0	18	26	60	1.11	- 0.09	0.31	16	0	4.9	3	4.8	24	37	25	13	7	3	21	7.4	
PORTLAND	21	1017.6	1018.9	52	35	43.7	- 2.4	65	19	22	1	0	10	35	73	4.87	1.04	0.92	20	2	T	0	4.7	17	48	S	26	5	2	24	8.3	46
SALEM	196	1011.2	1018.8	51	33	41.9	- 3.4	62	19	12	1	0	14	33	74	6.93	2.25	1.03	20	0	1.4	T	6.3	20	40	19	26	2	5	24	8.1	
SEXTON SUMMIT R	3836	884.2	1019.7	39	29	34.0	- 4.6	57	20+	15	1	0	22			7.36	3.89	1.83	17		31.9	26			59	19	11	3	4	24	8.4	
PACIFIC AREA																																
GUAM TAGUAC R	361	997.0	1009.3	85	72	78.5	- 0.3	88	19	67	24	0	0	74	88	16.94	14.30	3.33	27	0	0.0	0	7.0	9	25	SE	16	0	6	25	8.6	48
JOHNSTON	7	1013.5	1014.2	80	72	76.0	- 1.2	83	23	67	27+	0	0	69	77	6.82	4.48	2.06	20	2	0.0	0	14.7	9	40	NE	5	9	9	13	6.1	61
KOROR R	94	1004.1	1007.8	88	76	82.1	1.4	91	28	71	6	8	0	76	85	11.09	3.46	4.62	24	1	0.0	0	1.7	6	22	SW	19	0	4	27	9.2	53
KWAJALEIN	8	1008.1	1008.9	87	78	82.1	1.6	89	25+	75	15+	0	0	74	79	4.28	- 2.18	1.45	16	0	0.0	0	13.5	8	29	10	11+	5	5	21	7.8	
MAJURO	10	1009.1	1009.6	85	77	80.9	0.3	86	28+	74	31+	0	0	74	79	9.80	- 1.92	2.84	18	2	0.0	0	12.1	8	28	E	3+	3	9	19	7.5	79

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets				Fastest mile							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																															
PAGO PAGO	12	1011.2	1011.4	86	73	79.5		88	31+	69	9	0	0	74	84	7.69		2.02	20	1	0.0	0	4.4	7	21	NE	8	6	15	10	5.9	67
PONAPE P	123	1008.1	1008.4	86	73	79.5	- 1.1	89	31+	69	20+	0	0	74	85	19.98	5.43	4.57	25	0	0.0	0	4.4	9	17	NE	11+	1	7	23	8.5	68
TRUK MOEN ISLAND	5	1008.1	1008.3	86	77	81.5	0.7	89	5	73	18	0	0	75	81	9.85	2.10	2.06	23	1	0.0	0	6.6	8	24	SE	14	1	3	27	9.1	73
WAKE	11	1012.9	1013.1	83	74	78.6	0.8	85	31+	69	23	0	0	69	75	1.62	0.15	0.57	16	0	0.0	0	12.9	8	27	NE	12	8	18	5	4.7	78
YAP R	44			87	76	81.5	0.5	89	20+	72	18	0	0			13.48	8.10	2.55	27	0	0.0	0			20	SW	22	0	6	25	8.9	88
PENNSYLVANIA																															
ALLENTOWN	387	998.0	1012.4	44	27	35.7	- 1.9	68	15	19	25+	0	28	24	67	3.52	- 0.27	1.38	9	0	6.8	6	6.1	29	40	28	4	7	10	14	6.3	
ERIE	731	986.1	1013.6	37	23	30.0	- 3.6	65	14	11	25	0	28	19	66	1.85	- 1.03	0.36	17	1	26.8	6	4.5	26	32	27	15	2	7	22	8.0	
HARRISBURG	338	1000.0	1013.2	47	30	38.6	- 1.7	66	15	20	27	0	21	23	56	2.67	- 0.76	1.16	10	0	5.3	5	6.4	29	42	NW	4	6	8	17	6.9	48
PHILADELPHIA	5	1011.5	1012.6	48	33	40.7	- 0.3	72	15	25	10	0	15	23	54	2.58	- 1.22	1.05	8	0	4.4	2	5.4	30	43	W	4	6	11	14	6.3	59
PITTSBURGH	1137	968.5	1013.6	43	26	34.3	- 2.5	71	14	14	25	0	27	23	66	3.20	- 0.12	0.99	19	2	16.8	10	6.7	28	46	27	16+	5	5	21	7.8	43
SCRANTON	930	977.7	1012.7	40	26	33.0	- 3.2	57	15+	14	10	0	26	22	67	1.93	- 0.89	0.96	10	0	15.6	8	4.6	29	38	W	4	4	5	22	7.8	46
WILLIAMSPORT	524	993.6	1013.0	44	29	36.6	- 0.8	58	15	19	10	0	21	25	68	2.69	- 1.04	1.23	14	0	16.7	12	5.4	28	30	29	4	3	8	20	7.4	
RHODE ISLAND																															
BLOCK ISLAND	110			42	31	36.3	- 0.4	52	16	23	25+	0	19			3.07	- 1.00	1.32	6		T	0										
PROVIDENCE	51	1007.8	1010.2	45	29	36.7	- 0.3	65	16	18	25	0	24	22	57	3.81	- 0.33	1.46	8	0	6.1	3	7.1	30	46	26	4	8	8	15	6.3	57
SOUTH CAROLINA																															
CHARLESTON	40	1014.9	1016.7	63	41	51.9	- 4.8	78	15+	27	5	0	7	38	63	4.05	- 0.12	1.35	12	2	T	0	3.7	27	51Y	W	20+	14	6	11	5.0	72
CHARLESTON U	9			61	46	53.4	- 4.1	76	2	33	4	0	0			3.84	0.22	1.38	11		0.0	0			40	W	4+					
COLUMBIA	213	1008.1	1016.2	62	38	50.0	- 4.4	82	14	22	5	0	10	36	64	9.53	5.27	3.05	12	4	1.7	T	4.3	27	30	29	20	15	3	13	5.0	70
GRNVLLE-SPRTNBRG	957	980.4	1015.4	58	35	46.3	- 5.1	75	14	19	5	0	16	30	58	5.52	0.77	1.55	11	1	6.6	7	3.0	27	33	N	30+	13	7	11	5.1	65
SOUTH DAKOTA																															
ABERDEEN	1296	967.5	1015.7	42	20	31.4	3.2	75	30	5	2	0	30	22	71	0.04	- 1.05	0.03	2	0	1.3	1	2.5	31	35	33	31	3	12	16	7.2	
HURON	1281	967.8	1016.0	38	19	28.5	- 0.2	66	30	- 2	2	0	30	23	82	0.15	- 0.96	0.07	5	0	1.9	6	1.7	29	36	N	31	4	10	17	7.4	59
RAPID CITY	3162	902.1	1015.8	43	22	32.6	1.5	72	26	7	22	0	30	21	66	1.25	0.24	0.76	11	0	13.8	7	6.3	34	47	NW	27	4	8	19	7.5	56
SIOUX FALLS	1418	962.8	1015.8	41	22	31.2	1.1	73	31	7	3	0	27	23	76	0.85	- 0.69	0.72	4	1	4.7	5	3.6	30	35	35	31	4	11	16	6.9	
TENNESSEE																															
BRISTOL	1507	960.7	1015.5	54	32	43.0	- 3.0	75	14	20	5	0	19	28	60	3.42	- 0.56	0.88	17	2	6.3	2	4.8	26	25	27	20+	9	8	14	6.3	
CHATTANOOGA	665	991.2	1016.4	56	35	45.2	- 6.0	74	14	22	9+	0	15	32	63	6.71	1.07	1.82	15	5	4.5	2	2.8	29	30	SW	18	9	8	14	5.9	53
KNOXVILLE	980	980.7	1016.2	56	35	45.6	- 4.0	78	14	21	9	0	13	30	59	4.21	- 0.52	1.02	16	3	3.6	1	4.3	27	35	W	19	8	9	14	6.3	67
MEMPHIS	258	1007.1	1017.5	59	38	48.4	- 2.7	79	14	22	4	0	8	32	56	3.64	- 1.43	0.81	12	9	1.6	1	2.3	26	34	SW	14	9	8	14	5.8	69
NASHVILLE	590	994.2	1016.5	56	33	44.6	- 4.5	72	14	20	4	0	15	32	64	2.95	- 2.24	0.75	11	4	3.0	1	3.5	26	33	SW	15	8	10	13	6.0	56
OAK RIDGE R	905			54	34	44.4	- 3.1	76	14	20	5	0	14			4.61	- 0.98	0.84	17		2.6	T			40Y		18+	10	8	13	6.2	
TEXAS																															
ABILENE	1762	953.6	1015.5	70	40	55.1	0.1	92	27	19	3	2	5	29	41	0.04	- 1.00	0.04	1	0	0.4	T	3.8	21	41	S	17	17	11	3	3.6	86
AMARILLO	3634	888.6	1012.6	65	32	48.3	0.7	94	27	10	3	1	17	18	37	0.10	- 0.72	0.10	1	0	1.0	1	5.9	22	43	NW	18+	16	8	7	4.2	85
AUSTIN	597	993.9	1015.8	76	48	62.1	2.4	98	28	28	4	4	3	40	51	0.79	- 1.34	0.74	2	1	0.0	0	0.7	14	34	NW	3+	14	10	7	4.0	70
BROWNSVILLE	19	1014.9	1015.4	83	61	72.1	4.2	93	14+	38	4	6	0	57	63	T	- 1.04	T	0	0	0.0	0	8.1	14	45	N	6	12	9	10	4.9	73
CORPUS CHRISTI	41	1014.2	1015.6	81	57	68.7	3.5	97	25	33	4	6	0	54	66	T	- 1.44	T	0	0	0.0	0	7.8	13	36	SE	31	14	7	10	4.9	68
DALLAS	481	998.3	1015.9	71	45	57.6	1.5	92	13	24	3	1	4	35	48	0.28	- 2.57	0.26	3	1	0.8	1	2.6	16	35	NW	6	11	11	7	4.2	80
DEL RIO	1026	978.7	1014.7	81	49	64.9	1.9	101	28	26	3	6	2	32	36	T	- 0.82	T	0	0	0.0	0	3.9	10	39	SE	2	18	9	4	3.1	
EL PASO	3918	881.5	1013.1	74	43	58.1	3.2	88	27	14	3	0	7	13	17	0.00	- 0.35	0.00	0	0	0.0	0	6.3	28	48	W	5	22	9	0	2.4	99
FORT WORTH	537	995.9	1016.4	70	41	55.6	- 0.3	91	13	22	3	1	6	36	54	0.34	- 2.17	0.26	3	1	1.6	2	2.8	19	35	SE	14	14	10	7	4.1	
GALVESTON U	7			66	55	60.6	- 0.8	77	25	36	3	0	0			0.64	- 2.22	0.25	7		0.0	0			37	NW	3+					50
HOUSTON INTERCON	96	1013.5	1017.2	72	47	59.4	- 0.4	88	22	25	4	0	5	47	66	1.21	- 1.59	0.51	5	3	0.0	0	2.2	13	28	SE	3	11	4	16	5.8	55
LUBBOCK	3254	911.8	1013.6	68	34	51.0	1.4	94	27	9	3	1	13	22	39	0.21	- 0.52	0.21	1	0	2.1	1	3.0	25	40	SE	14	15	8	8	3.9	
MIDLAND	2851	915.3	1013.8	74	38	55.8	0.6	95	27	15	3	1	7	18	29	T	- 0.36	T	0	0	T	T	3.2	21	35	SE	14	17	8	4	3.0	
PORT ARTHUR	16	1016.6		72	50	60.7	- 0.4	85	25	30	4	0	1	50	71	1.15	- 2.29	0.60	5	2	0.0	0	2.8	15	30	SW	25+	9	8	14	6.0	53
SAN ANGELO	1903	948.2	1014.7	77	42	59.6	2.6	96	27	18	3	3	5	27	35	T	- 0.93	T	0	0	T	T	4.3	21	35	SE	14	22	4	5	2.8	
SAN ANTONIO	788	987.8	1015.6	81	49	64.6	3.6	100	28	25	4	6	4	40	48	0.04	- 1.63	0.03	2	1	0.0	0	1.8	12	33	NW	2	18	7	6	3.8	81
VICTORIA	104	1012.2	1016.2	78	51	64.2	1.0	95	22	30	4	4	2	49	64	0.18	- 2.14	0.11	4	3	0.0	0	3.7	14	45Y	N	2	11	9	11	5.3	
WACO	501	998.0	1016.0	75	47	60.8	2.9	100	28	29	3	2	1	38	48	0.64	- 1.71	0.46	3	2	T	T	2.5	18	30	SE	14	19	5	7	3.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

MARCH 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days sunrise to sunset: Clear 0-3	No. of days sunrise to sunset: Partly cloudy 4-7	No. of days sunrise to sunset: Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In	In			In	In	M.p.h.		M.p.h.							%
TEXAS																																
WICHITA FALLS	994	978.3	1015.3	69	36	52.5	- 1.3	100	27	16	3	2	11	30	49	0.12	- 1.42	0.08	2	0	3.0	3	1.3	15	46	30	14	14	10	7	4.4	
UTAH																																
MILFORD	5028	846.3		54	23	38.4	- 0.1	74	30	4	2	0	26			0.31	- 0.72	0.22	5		4.6	2						14	9	8	4.5	
SALT LAKE CITY	4220	872.7	1018.5	51	29	40.4	0.0	72	26	3	2	0	22	25	58	1.01	- 0.55	0.28	9	0	8.9	4	0.9	23	32	SE	26	8	3	20	6.9	71
WENDOVER	4237	871.7	1018.7	50	29	39.6	- 1.9	72	30	13	6	0	18			0.07	- 0.32	0.02	5		0.9	1	3.0	33				10	9	12	5.8	
VERMONT																																
BURLINGTON	332	998.0	1010.9	32	16	24.1	- 2.6	47	15	- 9	10	0	30	16	67	2.71	0.60	1.62	12	0	33.1	31	2.5	30	45	SW	15	8	8	15	6.6	65
VIRGINIA																																
LYNCHBURG	916			54	33	43.1	- 2.4	71	14+	20	25	0	17			2.64	- 0.97	0.73	6		7.8	7			31	NW	4	12	9	10	5.1	69
NORFOLK	24	1012.5	1013.6	55	38	46.9	- 1.1	79	15	29	10	0	7	30	57	3.88	0.43	1.38	12	1	4.2	2	4.6	29	45	NE	26	11	8	12	5.3	63
RICHMOND	164	1007.8	1014.2	56	34	44.5	- 3.2	75	15	24	18+	0	16	27	56	2.68	- 0.74	0.99	11	1	8.4	8	3.2	27	31	W	19+	9	13	9	5.4	64
ROANOKE	1149	971.6	1013.9	55	32	43.6	- 1.9	75	14	17	25	0	17	23	49	2.28	- 1.25	0.86	10	0	7.3	7	6.0	29	35	31	4	10	12	9	5.4	
WALLOPS ISLAND	9			51	36	43.5		66	22	27	25	0	11			2.79		0.92	12		5.5	2			62Y	W	4					
WASHINGTON																																
OLYMPIA	195	1009.8	1017.2	49	31	40.0	- 4.2	60	19	18	1	0	17	35	84	9.11	3.71	1.45	20	0	6.1	1	6.1	19	35	20	26	1	8	22	9.4	
QUILLAYUTE	179	1008.1	1015.6	47	32	39.3	- 3.6	56	19+	19	1	0	18	34	82	14.83	3.75	2.15	24	0	10.2	5	3.6	17	29	SE	11	1	8	22	8.2	29
SEATTLE-TACOMA	400	1000.3	1017.0	47	36	41.3	- 2.5	55	29+	23	1	0	8	33	73	7.12	3.33	0.97	20	0	1.9	1	5.4	17	41	SW	26	1	8	22	8.3	39
SPOKANE	2356	931.3	1016.6	43	28	35.2	- 2.9	55	29	1	1	0	25	24	68	2.11	0.61	0.59	13	0	1.5	4	7.6	21	54	SW	26	5	9	17	7.1	41
STAMPEDE PASS R	3958	876.1		30	22	26.1	- 3.9	40	29	10	1	0	31			11.08	0.48	1.69	25		88.7	188						2	3	26	8.8	
WALLA WALLA U	949			52	36	43.8	- 2.2	61	29	21	1	0	9			1.24	- 0.35	0.34	13		4.0	2			42	W	10	5	5	21	7.8	37
YAKIMA	1052	978.7	1017.9	50	27	38.7	- 3.3	62	29	13	5	0	26	25	60	1.56	0.94	0.58	13	0	10.8	3	4.0	26	35	20	26	7	8	16	6.9	
WEST INDIES																																
SAN JUAN P.R.	13	1013.9	1016.3	85	73	78.9	3.6	90	30+	69	25+	2	0	67	68	1.78	- 0.42	0.69	10	0	0.0	0	7.1	9	27	E	20	7	23	1	4.9	89
WEST VIRGINIA																																
BECKLEY	2504	924.5	1015.3	46	26	36.0	- 3.9	71	14	11	4	0	24	25	66	2.87	- 2.18	0.52	18	0	19.8	5	6.6	26	26	29	19+	9	4	18	7.0	
CHARLESTON	939	980.0	1014.9	50	29	39.7	- 4.7	77	14	16	5	0	22	25	59	1.97	- 2.37	0.67	15	0	11.7	4	4.9	26	30	28	20	2	13	16	7.3	
ELKINS	1948	941.1		46	23	34.5	- 5.0	73	14	0	25	0	29			2.90	- 1.24	0.64	19		33.5	5						3	7	21	7.8	
HUNTINGTON	827	984.1	1014.9	52	32	41.9	- 2.9	77	14	21	25+	0	16	27	59	1.96	- 2.24	0.86	14	1	11.0	7	4.2	25	37	25	15	4	7	20	7.4	
PARKERSBURG U	615			49	29	39.4	- 3.3	77	14	15	4	0	20			1.31	- 2.22	0.45	11		5.5	4			36	W	15					43
WISCONSIN																																
GREEN BAY	682	988.2	1014.4	34	17	25.9	- 2.3	46	31	- 1	4	0	29	19	73	2.04	0.70	0.87	11	1	14.8	14	3.2	29	31	NE	19	7	9	15	6.6	51
LA CROSSE	651	990.5	1015.9	37	20	28.1	- 2.4	70	31	2	3	0	28	21	76	1.11	- 0.96		5	0	5.6		2.9	30								
MADISON	858	982.4	1014.7	37	20	28.6	- 0.5	70	31	3	9	0	28	20	71	1.52	- 0.32	0.94	9	2	20.1	14	3.5	29	30	N	19+	9	4	18	6.6	52
MILWAUKEE	672	988.8	1014.7	35	22	28.6	- 2.4	65	31	7	9	0	28	19	69	2.83	0.52	1.63	12	1	18.1	9	4.4	29	40	SW	15	6	6	19	7.1	52
WYOMING																																
CASPER	5338	833.7	1015.0	43	20	31.7	- 0.4	70	30	- 6	2	0	27	18	62	1.17	0.14	0.35	10	1	14.8	5	8.1	26	33	28	26	2	14	15	7.1	
CHEYENNE	6126	808.3	1015.4	44	21	32.4	0.0	70	30	0	2	0	29	14	49	1.08	- 0.13	0.74	7	0	15.2	9	11.8	30	49	W	20	6	12	13	6.4	72
LANDER	5563	825.3	1014.7	46	20	32.6	0.4	67	30	2	2	0	31	13	49	0.85	- 0.30	0.54	4	1	16.2	8	3.6	26	61	SW	13	5	11	15	6.6	82
SHERIDAN	3964	876.4	1016.1	45	22	33.5	2.5	72	30	- 1	2	0	27	18	56	0.62	- 0.80	0.13	13	0	7.5	2	4.6	32	33	NW	26	3	11	17	7.2	67

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days sunrise to sunset: Clear 0.3	No. of days sunrise to sunset: Partly cloudy 4-7	No. of days sunrise to sunset: Cloudy 8-10	Sky cover tenths sunrise to sunset	Possible sunshine
	M	Mb	Mb.	C.	C	C	C	C		C.				C.	%	Mm.	Mm	Mm			Mm	Mm.	M.p.s.		M p s							%
ALABAMA																																
BIRMINGHAM	189	994.9	1017.6	15.6	2.8	9.2	- 3.3	21.7	31+	- 5.6	4	0	13	1.1	62	169	17	34	13	8	T	0	0.9	29	14.8	NW	3	11	7	13	5.5	62
HUNTSVILLE	190	994.2	1017.6	14.4	2.8	8.8	- 2.2	22.2	31+	- 4.4	4	0	10	1.7	64	169	27	51	13	5	T	T	1.0	28	14.8	26	6	10	8	13	6.0	
MOBILE	64	1010.2	1018.0	21.7	9.4	15.5	- 0.2	26.7	16+	- 0.6	4	0	2	7.2	62	165	- 19	52	12	5	T	0	0.4	21	11.6	15	25	11	8	12	5.4	
MONTGOMERY	56	1010.5	1017.8	18.3	5.0	11.6	- 1.8	24.4	28	- 2.2	9+	0	6	3.3	62	274	117	70	14	9	0	0	1.2	28	13.0	W	6	15	5	11	4.9	65
ALASKA												B																				
ANCHORAGE	35	1000.7	1005.9	- 4.4	-15.0	- 9.9	- 5.8	4.4	17+	-31.1	7	0	31	-13.9	70	18	5	9	5	0	282	381	1.4	36	11.6	34	5+	11	9	11	5.3	67
ANNETTE	34	1002.7	1006.8	5.0	- 1.1	2.2	- 1.1	7.8	30+	- 6.1	7	0	21	- 1.1	81	241	- 2	39	24	0	1191	381	4.2	12	20.6	13	1	1	2	28	8.9	
BARROW	9	1023.0	1023.7	-23.9	-31.7	-27.9	- 2.0	-12.2	22+	-46.7	2	0	31	-31.1	73	4	1	2	3	0	43	279	2.2	7	13.4	6	23	16	9	6	4.0	
BARTER ISLAND	12	1021.3	1023.3	-25.6	-31.7	-28.4	- 2.4	-12.2	18	-42.2	3+	0	31	-32.8	66	2	- 3	2	2	0	33	457	1.1	26	14.3	28	4	15	5	11	4.5	
BETHEL	38	1004.7	1010.8	-13.3	-22.2	-17.9	- 6.6	6.1	19	-36.1	12	0	31	-21.1	79	1	- 25	1	2	0	61	229	2.5	3	17.9	11	16	20	5	6	3.1	
BETTLES	196	990.9	1018.4	-16.1	-28.9	-22.5		- 1.7	22+	-48.3	4	0	31			11		4	7	0	183	1168	1.8	5	13.0	9	24+	14	7	10	4.6	
BIG DELTA	386			-11.1	-23.9	-17.4		4.4	18	-43.3	5	0	31			4		4	3	0	74	457			15.6	18	16	12	8	11	5.2	
COLD BAY	29	1002.0	1007.4	- 2.8	-10.0	- 6.6	- 4.8	6.7	20	-25.0	12	0	31	- 8.9	84	15	- 29	5	12	0	99	102	0.6	33	25.0	15	15	3	7	21	7.7	
FAIRBANKS	133	995.6	1013.6	-11.7	-23.9	-18.0	- 5.2	2.8	20+	-39.4	5	0	31	-26.7	48	5	- 5	5	1	0	163	1092	2.0	2	12.4	5	23	12	5	14	5.4	
GULKANA	479	947.2	1008.4	- 5.6	-20.0	-12.7		3.3	1	-39.4	7	0	31			1		1	4	0	36		1.1	1	13.0	17	16+	9	9	13	5.6	
HOMER	20	1001.7	1004.3	- 2.2	-13.3	- 7.7		6.1	18	-29.4	5	0	31	-11.7	74	35	T	12	8	0	726	864	1.2	3	11.6	7	16	12	6	13	5.4	
JUNEAU	4	1005.1	1005.8	1.7	- 5.0	- 1.7	- 0.8	6.1	28+	-17.2	7	0	29	- 3.9	86	85	2	29	19	0	1285	737	2.7	1.	13.4	22	1	3	1	27	8.9	34
KING SALMON	15	1005.4	1007.2	- 6.7	-20.6	-13.4	- 6.5	10.0	19	-41.1	13	0	31	-20.0	60	7	- 18	7	3	0	41	254	1.6	3	17.0	10	15	14	7	10	4.6	
KOTZEBUE	3	1015.9	1016.6	-17.2	-26.1	-21.8	- 2.8	- 2.2	19+	-42.8	10	0	31	-26.1	67	3	- 5	2	2	0	43	356	3.0	9	22.8	9	16	18	4	9	3.6	
MC GRATH	105	998.6	1012.3	-11.1	-27.8	-19.6	- 6.4	4.4	18	-42.8	15+	0	31	-25.0	62	3	- 21	2	4	0	58	737	1.3	1	13.4	9	16	13	12	6	4.5	
NOME	4	1012.5	1013.5	-13.9	-25.6	-19.7	- 6.3	1.7	21	-43.3	11	0	31	-24.4	66	T	- 22	T	0	0	T	457	3.5	7	19.2	5	16	22	6	6	3.5	83
ST. PAUL ISLAND	7	1005.1	1006.0	- 6.1	-12.8	- 9.5	- 5.2	2.2	19+	-28.3	14	0	31	-11.7	85	29	2	7	12	0	312	406	4.6	7	32.2	5	15	7	5	19	7.	
SHEMYA	37	995.6	999.3	0.6	- 2.8	- 0.9	- 1.2	3.9	28	-11.7	16	0	25	- 6.1	67	85	20	25	18	0	117	25	1.3	26	26.4	17	20	7	9	22	8.3	
SUMMIT	732	917.0	1011.4	-12.2	-23.3	-17.7		0.0	17	-37.2	7	0	31			5		3	6	0	150	1067	5.9	8	21.5	10	6+	13	5	13	5.5	
TALKEETNA	105			- 3.9	-20.6	-12.1	- 5.6	5.6	17	-40.6	7	0	31			21	- 15	26	8	0	323	1270			10.3	4	5					
UNALAKLEET	5			-15.6	-25.6	-20.6		1.7	19+	-45.6	11	0	31			1		1	3	0	13	813			23.7	11	16	22	8	4	2.5	
YAKUTAT	9	1002.4	1003.6	0.0	-10.0	- 4.8	- 4.5	6.1	19	-18.3	6	0	31	- 7.8	78	157	- 64	39	22	0	1265	2067	2.1	10	15.6	13	1	3	4	24	8.1	
ARIZONA																																
FLAGSTAFF	2135	787.0	1017.3	11.7	- 6.1	2.8	0.8	21.1	30	-18.3	2	0	29	-10.6	40	6	- 30	4	2	2	79	102	1.7	22	11.6	20	27	18	5	8	3.6	
PHOENIX	340	975.6	1014.6	26.7	8.3	17.4	2.4	35.0	29	- 1.1	2	5	2	- 7.2	21	T	- 17	T	0	0	0	0	0.4	21	17.4	W	14	20	M	1	2.6	45
TUCSON	788	926.2	1014.2	24.4	6.1	15.4	1.0	32.2	30+	- 5.6	3	2	4	- 9.4	20	T	- 13	T	0	0	0	0	1.1	22	16.1	SW	13	22	8	1	2.4	97
WINSLOW	1492	851.3	1016.9	18.9	- 2.8	7.8	0.2	29.4	30	-13.9	3	0	20	-12.2	27	T	- 10	T	0	0	T	T	2.5	24	19.2	22	5+	26	4	5	3.5	
YUMA	59	1008.1	1015.3	26.7	8.9	17.8	0.6	35.6	30+	1.1	3+	3	0	- 2.8	28	0	- 6	0	0	0	0	0	1.3	32	15.2	N	.	22	5	3	2.8	92
ARKANSAS																																
FORT SMITH	136	1000.0	1016.7	17.2	1.7	9.4	- 1.2	28.3	14	- 7.2	4	0	11	0.0	56	20	- 68	8	6	4	41	25	0.7	1	17.0	W	18	13	7	11	5.1	64
LITTLE ROCK	78	1007.5	1017.3	16.7	3.3	10.0	- 1.0	30.0	14	- 6.1	4	0	6	1.7	60	82	- 40	29	13	5	178	102	0.6	27	16.5	N	15	13	5	13	5.5	64
CALIFORNIA																																
BAKERSFIELD	145	1002.7	1020.4	21.1	7.2	14.3	0.5	26.7	29+	0.0	5	0	1	3.3	50	11	- 16	11	2	0	0	0	0.8	33	12.5	SE	18	15	7	9	4.1	
BISHOP	1252	874.4		18.9	- 2.2	8.6	- 0.1	26.7	22	-12.8	2	0	22			7	- 7	7	2		0	0						15	10	6	3.8	
BLUE CANYON	1609			6.1	- 1.1	2.6	- 1.6	15.0	29	-11.7	1	0	23			284	70	113	13		752	1524			17.4	22	25+	7	6	18	6.6	
EUREKA U	13			11.7	5.0	8.4	- 0.9	18.9	19	0.6	2	0	0			201	68	42	19		0	0			15.4	SW	26+	4	6	21	8.0	50
FRESNO	100	1008.8	1020.7	20.0	5.0	12.4	- 0.3	27.2	29	- 2.8	2	0	4	5.6	69	15	- 35	13	4	0	0	0	1.5	32	13.0	NW	30	14	11	6	4.3	87
LONG BEACH	8	1017.6	1018.8	21.1	9.4	15.3	1.6	30.0	29+	1.7	2	0	0	6.1	61	6	- 29	6	1	0	0	0	1.0	25	13.4	32	13	11	11	9	4.8	
LOS ANGELES	30	1014.6	1018.3	17.8	10.0	13.8	- 0.1	25.0	18	3.9	2	0	0	7.2	72	6	- 40	6	1	0	0	0	1.7	26	17.9	W	5	11	11	9	4.7	
LOS ANGELES U	82			21.1	10.6	15.7	0.5	31.7	29	3.3	2	0	0			13	- 44	13	2		0	0			22.2	NW	13	15	5	7	3.8	26
MT SHASTA R	1080	893.7	1019.9	8.9	- 2.2	3.3	- 1.8	18.3	29	- 9.4	2	0	26	- 2.8	70	124	11	56	10		107	51	1.3	12								
OAKLAND	2	1021.7	1022.0	15.0	8.3	11.6	- 0.4	20.6	29+	2.8	2	0	0	6.7	74	66	4	33	8	0	0	0	1.9	28	11.6	20	12	9	10	12	5.7	
RED BLUFF	104	1007.5	1020.3	17.2	5.0	11.0	- 1.3	23.9	28	- 1.7	2	0	4	1.7	57	56	- 13	30	8	0	0	0	0.5	25	17.7	E	12	8	7	10	6.6	59
SACRAMENTO	5	1020.0	1020.9	17.8	5.6	11.4	- 0.4	24.4	29	- 3.3	5	0	3	4.4	68	52	- 8	19	6	0	0	0	1.2	23	15.2	N	17	12	7	12	5.6	75
SANDBERG R	1377	863.9		12.2	1.1	6.8	- 0.4	22.8	29	- 9.4	2	0	10	- 4.4		5	- 32	5	2		46	25	5.3	36	26.8	26	31	15	5	11	4.6	
SAN DIEGO	4	1017.6	1018.7	18.3	10.6	14.3	- 0.7	25.6	16	3.9	2	0	0	7.2	66	5	- 35	5	1	0	0	0	1.7	29	11.2	NW	16	17	7	7	4.6	78
SAN FRANCISCO	2	1021.3	1022.1	15.6	6.7	11.2	- 0.7	22.2	20	1.7	6+	0	0	5.6	73	68	T	38	6	0	0	0	2.6	27	15.6	19	12	11	8	12	5.7	
SAN FRANCISCO U	16			15.0	8.9	11.8	- 0.8	22.2	19	5.6	5+	0	0			74	- 1	34	5		0	0			12.5	W	30+					72
SANTA MARIA	72			17.2	3.9	10.6	- 1.3	26.1	29	- 4.4	2	0	5			9	- 43	9	2		0	0						16	6	9	3.9	
STOCKTON	7	1020.7	1021.8	18.3	5.0	11.7	- 0.3	24.4	29	- 2.8	2	0	2	3.9	64	48	- 4	21	6	0	0	0	2.1	29	13.4	15	12	10	9	12	5.8	
COLORADO																																
ALAMOSA	2297	768.7		10.6	-11.7	- 0.5	- 0.6	22.8	26	-21.7	1	0	30			1	- 6	1	1		20	25						12	15	4	4.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 2.5 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days sunrise to sunset: Clear 0.3	No. of days sunrise to sunset: Partly cloudy 4.7	No. of days sunrise to sunset: Cloudy 8.10	Sky cover, tenths: sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C.	C.	C	C		C.				C	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s		M.p.s							
COLORADO																																
COLORADO SPRINGS	1873	807.3	1014.7	11.1	- 5.0	3.2	0.8	27.2	26	-13.9	3	0	27	-10.0	46	9	- 7	5	6	0	76	25	1.5	36	20.6	35	17	11	9	11	5.1	
DENVER	1610	832.7	1012.7	12.2	- 5.0	3.6	1.2	28.9	26	-18.9	7	0	28	- 7.2	53	13	- 17	12	3	1	244	178	0.5	32	15.2	N	17+	8	11	12	6.1	69
GRAND JUNCTION	1476	851.7	1016.5	13.9	- 3.9	5.1	- 0.2	27.2	26	-14.4	6	0	23			1	- 19	1	1	0	5	T	0.2	26	19.2	W	17	10	10	11	5.5	71
PUEBLO	1428	852.4	1013.4	16.1	- 5.0	5.4	0.9	27.8	27	-14.4	3	0	28	- 8.3	45	14	1	8	5	0	203	51	1.3	34	21.5	N	17	12	9	10	5.0	65
CONNECTICUT																																
BRIDGEPORT	2	1010.8	1011.3	7.2	- 0.6	3.4	0.3	15.6	16	- 4.4	26+	0	18	- 5.0	57	110	2	41	7	1	79	25	3.5	30	21.5	27	4	8	9	14	6.2	
HARTFORD	52	1003.7	1010.4	6.1	- 2.2	1.9	- 0.3	18.9	16	- 8.9	26	0	25	- 6.7	57	82	- 14	40	7	0	325	102	2.9	30	21.0	NW	4	6	7	18	6.9	60
DELAWARE																																
WILMINGTON	23	1010.2	1013.0	10.0	0.0	4.8	- 0.3	23.3	15	- 5.6	25+	0	18	- 4.4	55	58	- 44	22	6	0	61	51	2.5	31	19.2	29	4	8	9	14	6.3	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	88	1001.7	1013.8	10.6	- 2.2	4.3		21.1	16	- 8.3	25	0	22	- 3.9	57	58		35	7	0	61	25	2.0	30	16.5	30	4	5	12	14	6.6	
WASHINGTON NATIONAL	3	1011.2	1013.6	11.1	1.1	6.2	- 0.9	22.8	15	- 3.3	25+	0	13	- 3.9	52	49	- 33	24	7	1	36	25	2.2	31	17.9	*	4	6	13	12	6.1	55
FLORIDA																																
APALACHICOLA U	4			18.9	10.0	14.4	- 1.7	25.6	23	0.6	4	0	0			37	- 78	11	9	5	0	0			14.8	SW	19	13	6	12	4.9	83
DAYTONA BEACH	9	1016.9	1018.3	22.8	8.3	15.6	- 2.1	31.7	15	0.6	9	0	0	8.3	64	51	- 40	20	6	5	0	0	1.5	26	14.3	28	20	12	11	8	4.4	
FORT MYERS	5	1018.3	1018.6	25.6	11.7	18.8	- 1.3	30.0	15	3.9	9+	0	0	11.7	67	14	- 53	6	3	0	0	0	0.6	26	10.3	32	20+	20	9	2	2.7	
JACKSONVILLE	8	1016.6	1017.6	22.2	6.1	14.1	- 2.7	30.0	15+	- 2.2	9+	0	5	7.2	67	61	- 27	34	7	3	0	0	1.8	26	19.7	SW	3	13	9	9	4.4	70
KEY WEST	1	1016.9	1017.6	25.6	19.4	22.4	- 0.1	28.9	16	13.9	9+	0	0	16.1	67	T	- 45	T	0	1	0	0	1.9	8	15.2	W	3	22	8	1	2.5	30
LAKELAND U	65			23.9	11.1	17.4	- 1.8	30.6	15+	3.3	4	0	0			52	- 56	28	6		0	0						13	16	2	3.9	79
MIAMI	2	1017.6	1017.8	26.7	16.1	21.3	- 0.1	32.2	16	7.2	9+	1	0	14.4	66	10	- 47	7	3	2	0	0	0.6	14	11.2	33	30+	13	16	2	3.9	
ORLANDO	33	1013.5	1017.9	25.0	11.1	18.2	- 0.6	32.8	15	3.9	5+	1	0	8.9	60	37	- 50	17	6	1	0	0	1.3	26	13.0	29	26+	13	13	5	4.3	
PENSACOLA	34	1014.2	1018.3	20.0	8.9	14.4	- 1.7	26.1	15+	- 0.6	4	0	1	7.8	66	77	- 76	27	10	3	0	0	0.2	29	11.2	33	3	13	3	15	5.3	
TALLAHASSEE	17	1015.6	1017.8	21.1	4.4	12.6	- 3.3	27.8	15	- 5.0	5	0	9	4.4	64	122	- 9	33	11	5	0	0	0.8	27	10.3	20	3	14	6	11	4.8	
TAMPA	6	1018.0	1018.1	23.9	10.0	16.8	- 2.1	28.9	14+	1.7	21	0	0	10.0	68	14	- 82	6	6	0	0	0	1.0	28	16.5	30	3	14	9	8	4.4	81
WEST PALM BEACH	5	1017.3	1017.9	25.6	12.2	18.8	- 2.2	32.2	16	3.9	9	1	0	11.7	65	14	- 73	7	4	1	0	0	0.5	23	15.6	32	30+	15	12	4	4.0	
GEORGIA																																
ATHENS	244	986.8	1016.2	15.0	2.8	8.8	- 2.1	24.4	14	- 5.6	5	0	12	0.6	62	201	71	70	12	2	T	T	2.0	28	12.1	27	15	13	6	12	5.1	
ATLANTA	308	979.7	1016.8	14.4	2.8	8.6	- 2.2	22.2	15	- 3.9	9+	0	13	0.0	60	220	83	78	13	4	T	T	1.6	30	18.8	SW	19	12	5	14	5.5	60
AUGUSTA	41	1011.2	1016.4	17.2	2.8	9.9	- 2.8	25.6	14	- 3.9	5	0	9	1.7	63	243	137	88	14	4	T	0	2.0	26	13.9	25	3	15	2	14	5.0	
COLUMBUS	117	1003.4		17.8	4.4	11.1	- 1.8	23.9	15	- 2.8	5	0	4	3.9	66	233	80	84	13	6	0	0	1.2	29	13.4	31	15	14	4	13	5.1	
MACON	108	1004.1	1017.2	18.3	3.9	11.3	- 2.5	26.1	15	- 2.8	5	0	8	3.3	62	182	57	67	13	3	0	0	1.5	28	15.2	NW	3	13	5	13	5.1	65
ROME	194			14.4	1.1	7.8	- 2.4	22.8	31+	- 6.7	9+	0	16			185	36	62	14		46	51										
SAVANNAH	14	1015.2	1016.9	20.0	5.0	12.5	- 2.1	30.0	15	- 3.3	5	0	6	3.9	62	67	- 34	31	12	4	0	0	1.7	26	15.6	W	3	15	3	13	4.8	72
HAWAII																																
HILO	8	1016.9	1018.1	25.6	16.1	20.8	- 0.7	30.0	21	12.2	18	0	0	16.7	82	306	- 68	65	24	0	0	0	0.8	16	12.1	SE	23	2	7	22	7.9	27
HONOLULU	2	1016.9	1017.5	26.7	20.0	23.3	0.6	27.8	31+	17.8	19	0	0	16.7	70	141	68	65	13	0	0	0	4.4	6	13.0	NE	12	3	12	16	7.3	65
KAHULUI	15	1014.9	1017.2	27.8	18.3	23.1	0.7	30.0	3	13.3	18+	0	0	17.2	73	74	18	46	12	0	0	0	3.8	7	13.9	N	25	6	14	11	6.0	62
LIHUE	31	1013.5	1018.5	25.6	20.6	23.3	1.6	27.2	23	17.2	21+	0	0	18.3	74	210	94	97	23	0	0	0	3.8	7	12.5	NE	25	2	7	22	8.1	40
IDAHO																																
BOISE	865	917.4	1019.1	10.0	- 0.6	4.6	- 0.8	18.9	29	-14.4	1	0	19	- 3.3	58	38	5	10	12	0	41	25	1.1	12	19.7	NW	30	5	5	21	7.4	65
LEWISTON	431			10.0	0.0	4.9	- 1.0	17.2	29+	- 6.7	2	0	14			27	- 3	8	13		61	51						3	7	21	8.0	
POCATELLO	1358	862.5	1018.5	5.6	- 5.0	0.3	- 1.8	16.1	30	-19.4	18	0	24	- 6.1	64	48	22	18	11	0	132	102	4.0	22	21.0	SW	30	1	12	18	7.7	47
ILLINOIS																																
CAIRO U	96			12.2	2.8	7.5	- 1.5	23.9	14	- 4.4	4	0	6			35	- 86	9	10		91	76			23.2	W	15	9	14	8	5.3	62
CHICAGO O HARE	201	989.8	1014.8	6.1	- 2.8	1.7	0.2	23.3	31	- 9.4	4	0	23	- 3.9	68	39	- 29	17	12	2	203	76	1.7	29	17.4	25	15	7	6	18	7.1	
CHICAGO MIDWAY	185	991.5	1014.7	6.7	- 2.2	2.1	- 0.3	23.3	31	- 8.3	9+	0	26	- 4.4	65	84	14	33	12	4	376	76	1.6	29	14.8	SW	15	7	5	19	7.0	49
MOLINE	177	993.6	1016.8	6.7	- 3.3	1.5	- 0.4	25.0	31	-11.1	4	0	24	- 5.0	64	51	- 10	18	8	1	198	76	1.6	29	15.2	W	15	8	8	15	6.7	49
PEORIA	199	990.9	1015.4	7.2	- 3.3	1.9	- 1.2	23.9	31	-11.1	4	0	26	- 5.0	64	28	- 45	8	9	2	147	102	1.6	29	15.6	S	31	4	9	18	7.0	64
ROCKFORD	221	987.1	1014.9	4.4	- 3.9	0.2	- 0.9	21.7	31	-10.6	4	0	24	- 5.0	71	54	- 9	21	11	2	371	102	1.2	30	13.9	29	15	9	4	18	6.8	
SPRINGFIELD	179	992.6	1015.3	9.4	- 1.7	3.9	- 0.6	23.9	31+	- 8.9	4	0	23	- 2.8	65	30	- 43	17	9	2	18	25	1.6	28	17.9	W	15	7	7	17	6.6	57
INDIANA																																
EVANSVILLE	116	1002.4	1016.6	11.7	- 0.6	5.6	- 1.1	23.3	14	- 6.7	24	0	19	- 1.1	65	42	- 68	11	12	1	109	25	1.5	28	17.0	W	15	4	13	14	6.5	60

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
				Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days: 25 mm or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Fastest mile (1.6 kilometers): Direction	Fastest mile (1.6 kilometers): Date	Clear 0.3	Partly cloudy 4.7	Cloudy 8.10		
	Station ○	Sea level																													
	M	Mb	Mb	C.	C.	C	C.	C		C.				C.	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M p.s							%
INDIANA																																
FORT WAYNE	241	984.4	1015.1	6.1	- 3.3	1.3	- 1.1	20.6	31	-11.1	9	0	27	- 4.4	69	38	- 33	14	11	2	185	51	2.0	27	14.8	SW	19	3	7	21	7.9	53
INDIANAPOLIS	241	985.4	1015.1	8.3	- 2.2	2.9	- 0.9	22.8	31	- 8.3	8+	0	26	- 3.3	67	38	- 49	14	11	1	71	25	1.8	27	17.4	SW	15	7	6	18	6.9	50
SOUTH BEND	236	985.4	1014.2	5.0	- 3.3	1.1	- 0.6	21.1	31	-12.8	9	0	27	- 4.4	71	53	- 16	12	16	1	485	178	1.7	29	15.6	25	15	2	5	24	8.3	
IOWA																																
BURLINGTON	211			6.7	- 3.3	1.8	- 1.1	25.0	31	-10.6	4	0	26	- 3.9	67	38	- 31	11	9	1	175	102	1.7	31	13.0	31	19+	7	10	14	6.6	
DES MOINES	286	980.4	1016.1	6.7	- 2.8	1.8	0.8	24.4	31	-11.1	8+	0	25	- 4.4	66	10	- 43	5	6	0	135	102	1.3	32	17.0	N	19	4	13	14	6.9	60
DUBUQUE	322	975.3		2.8	- 5.0	- 1.3	- 1.3	21.1	31	-12.8	4	0	28			40	- 30	19	9		340	127						9	6	16	6.5	
SIOUX CITY	334	975.3	1016.3	6.7	- 3.3	1.8	1.2	25.0	31	-11.1	3	0	26	- 4.4	67	12	- 25	10	4	1	43	51	1.1	33	21.9	NW	18	4	15	12	6.5	66
WATERLOO	265	983.4	1016.1	2.8	- 5.6	- 1.3	- 1.3	23.3	31	-15.0	3	0	28	- 6.7	70	35	- 18	27	5	0	165	127	1.7	33	13.9	28	15	5	9	17	7.0	
KANSAS																																
CONCORDIA	448	961.4	1015.2	10.6	- 2.2	4.1	- 0.2	28.3	31	-15.0	3	0	23	- 2.2	70	20	- 18	11	7	0	234	178	0.3	32	30.4	NW	18	10	13	8	5.5	66
DODGE CITY	787	922.5	1014.7	12.8	- 1.7	5.7	0.3	32.8	31	-13.9	3+	1	20	- 3.9	58	2	- 27	2	3	0	T	76	0.7	30	28.2	NW	18	6	13	12	6.1	70
GOODLAND	1114	885.2	1013.6	12.2	- 3.9	4.3	1.8	28.3	31	-14.4	3	0	27	- 5.0	59	14	- 12	4	8	0	218	76	1.6	27	21.9	33	18	9	8	14	6.0	
TOPEKA	267	983.7	1016.0	11.1	- 1.1	5.1	- 0.3	26.1	31	-11.7	3	0	21	- 1.1	68	16	- 35	10	6	0	191	127	0.8	28	18.8	NW	18	8	9	14	6.2	59
WICHITA	403	966.8	1015.4	13.9	- 0.6	6.7	- 0.3	26.7	30	-10.0	3	0	21	- 2.2	58	T	- 41	T	1	0	T	25	0.4	29	25.5	NW	18	11	8	12	5.4	72
KENTUCKY																																
COVINGTON	265	983.1	1015.2	10.0	- 1.1	4.6	- 0.2	23.3	14	- 8.3	4	0	16	- 1.1	68	65	- 31	16	12	1	246	76	2.1	26	14.8	24	19+	5	4	22	7.7	
LEXINGTON	294	980.0	1016.1	10.6	- 1.1	4.6	- 1.6	22.8	14	- 8.3	24	0	21	- 2.8	63	51	- 69	17	9	2	135	51	2.2	24	14.3	27	15	4	14	13	6.7	
LOUISVILLE	145	998.0	1015.8	11.7	0.0	5.6	- 0.7	22.2	14	- 6.1	24+	0	16	- 2.2	59	54	- 63	12	10	1	132	76	1.8	27	16.5	W	6	6	10	15	6.9	59
LOUISIANA																																
ALEXANDRIA	28	1013.5	1017.8	18.9	5.6	12.2	- 2.5	27.2	13	- 3.3	4	0	4			108	- 18	39	10	7	0	0	0.1	10	10.7	30	6	11	8	12	5.4	
BATON ROUGE	20	1014.9	1017.5	20.6	7.2	14.1	- 1.9	28.3	14+	- 1.1	8	0	2	7.8	70	133	8	57	12	5	0	0	0.6	16	13.0	31	18	11	9	11	5.3	
LAKE CHARLES	3	1016.3	1017.3	21.7	8.9	15.1	- 1.1	27.2	13	- 1.1	4	0	1	8.9	73	7	-101	3	4	1	0	0	1.0	14	12.5	2	29	9	9	13	5.8	
NEW ORLEANS	1	1016.9	1017.9	21.7	8.9	15.1	- 1.2	28.9	13	- 2.8	8	0	2	8.3	66	92	- 44	44	9	4	0	0	0.5	13	12.5	17	25	10	9	12	5.3	
SHREVEPORT	77	1007.5	1016.7	20.0	6.1	13.0	- 0.7	30.6	14	- 5.6	4	0	4	5.0	63	54	- 52	23	10	4	8	T	0.5	17	12.5	34	6	10	8	13	5.3	56
MAINE																																
CARIBOU	190	982.7		1.7	- 8.9	- 3.7	1.4	8.9	16	-18.9	3	0	30			81	21	23	17		980	889						6	9	16	6.9	
PORTLAND	13	1006.1	1008.4	3.9	- 4.4	- 0.2	0.1	10.0	29	-12.2	13+	0	28	- 6.1	63	120	10	58	7	0	627	635	2.3	30	17.0	E	4	9	10	12	6.1	61
MARYLAND																																
BALTIMORE	45	1008.1	1013.8	10.6	0.6	5.4	- 0.7	23.9	15	- 5.6	25	0	15	- 5.6	49	48	- 49	23	8	1	51	25	2.5	28	24.1	NW	4	7	11	13	6.2	58
MASSACHUSETTS																																
BLUE HILL OBS R	192			5.6	- 2.8	1.3	- 0.3	17.8	16	- 7.8	25	0	30			82	- 33	36	8		244	102			29.1	SW	4					54
BOSTON	5	1008.1	1009.2	6.1	- 1.1	2.6	- 0.6	18.3	16	- 5.0	25	0	24	- 5.0	63	78	- 29	36	9	0	188	102	3.7	29	24.6	SW	4	6	11	14	6.5	68
WORCESTER	301	971.9	1009.8	3.3	- 5.6	- 1.2	- 1.6	12.8	16	-11.7	10	0	31	- 8.3	63	49	- 55	27	8	0	307	330	3.2	29	16.5	29	5	8	9	14	6.3	
MICHIGAN																																
ALPENA	210	987.5	1013.7	1.7	-11.1	- 4.5	- 1.0	12.8	14	-19.4	12+	0	30	- 8.9	70	70	19	34	11	1	909	660	1.0	31	12.5	NE	19	8	10	13	6.3	60
DETROIT	189			3.9	- 3.3	0.4	- 1.1	17.2	14	- 8.3	9+	0	27	- 4.4	73	33	- 29	14	14	0	163		1.7	28	15.6	24	15					
DETROIT METRO	193	988.8	1013.5	4.4	- 3.9	0.0	- 1.3	17.2	14	-11.1	9	0	28	- 5.0	70	40	- 21	16	14	0	221	76	1.9	29	15.2	SW	15	3	7	21	7.8	44
FLINT	235	984.8	1013.3	2.2	- 5.0	- 1.3	- 1.7	14.4	14	-13.3	9	0	27	- 5.0	76	47	- 7	22	12	1	427	178	1.7	29	13.0	24	15	3	10	18	7.6	
GRAND RAPIDS	239	983.7	1013.9	2.8	- 6.1	- 1.7	- 2.1	17.8	31+	-17.8	25	0	29	- 6.7	70	45	- 13	17	9	1	658	152	1.4	28	19.7	SW	15	3	7	21	8.0	42
HOUGHTON LAKE	350	970.2	1013.6	1.1	-10.6	- 4.8	- 1.7	10.6	14	-21.1	2	0	31	- 8.3	75	45	3	17	10	1	729	406	1.1	31	11.2	E	19+	6	7	18	7.2	
LANSING	256	981.0	1013.7	3.9	- 5.6	- 1.0	- 1.2	18.3	31	-15.6	9	0	27	- 4.4	76	59	- 2	19	14	0	503	279	1.4	28	19.2	SW	15	3	9	19	7.6	47
MARQUETTE U	206			0.6	- 6.7	- 3.2	- 0.2	7.8	31	-12.8	25	0	30			52	4	20	13		404	787			13.4	N	15	3	13	15	7.4	54
MUSKEGON	191	990.5	1014.2	2.8	- 5.6	- 1.5	- 2.0	18.9	31+	-17.2	25	0	29	- 6.7	68	51	- 2	18	15	2	737	203	1.3	32	13.0	22	15	5	5	21	7.5	
SAULT STE MARIE	220	985.8	1013.5	- 1.7	-11.7	- 6.5	- 1.9	4.4	31	-21.7	3	0	31	-10.0	76	72	26	35	12	1	445	762	1.3	35	15.2	E	31	7	8	16	6.5	64
MINNESOTA																																
DULUTH	435	962.1	1015.7	- 1.1	-10.0	- 5.7	0.3	4.4	31	-26.1	3	0	31	-10.0	74	51	10	18	12	1	323	635	1.0	35	14.3	NW	28	6	6	19	7.3	54
INTERNATIONAL FALLS	359	978.9	1015.5	0.0	-11.7	- 6.0	1.0	8.3	31	-25.6	3	0	31	-11.1	65	13	- 13	4	10	2	107	457	0.6	30	10.7	35	15	6	6	19	7.1	
MINNEAPOLIS	254	984.4	1016.1	1.7	- 6.1	- 2.2	0.3	19.4	31	-16.1	3	0	29	- 7.8	67	31	- 8	15	11	2	178	152	1.1	32	14.3	NW	27	6	6	19	7.2	52
ROCHESTER	395	966.1	1015.6	1.1	- 7.8	- 3.2	- 0.9	17.8	31	-16.7	3+	0	29	- 6.7	78	25	- 17	16	7	1	246	279	1.6	27	13.0	17	27+	6	9	16	6.9	
ST CLOUD	315	977.0	1016.6	1.1	- 8.9	- 4.1	- 0.5	14.4	31	-26.7	3	0	29			8	- 25	4	5		109	381						6	9	16	6.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover (tenths, sunrise to sunset)	Possible sunshine
	M	Mb	Mb.	C.	C.	C	C.	C		C.				C.	%	Mm	Mm	Mm.			Mm.	Mm	M.p.s		M p s							%
MISSISSIPPI																																
JACKSON	94	1005.4	1017.5	18.9	3.9	11.3	- 2.3	27.2	14	- 4.4	8+	0	8	5.6	70	195	49	49	12	10	T	0	0.1	21	13.4	NW	6	14	5	12	5.1	70
MERIDIAN	88	1006.8	1018.0	18.3	3.9	10.9	- 2.7	26.1	14	- 3.3	8+	0	9	4.4	69	204	44	42	11	8	T	0	0.6	28	10.3	33	20	12	4	15	5.4	
MISSOURI																																
COLUMBIA REGIONAL	270	983.1	1015.9	11.1	0.0	5.4	- 0.1	27.8	14	- 8.9	4	0	20	- 3.3	57	20	- 47	12	6	0	48	25	1.2	28	22.4	SW	18	6	9	16	6.7	63
KANSAS CITY	226	988.2	1015.6	12.2	0.6	6.5	0.2	27.2	14	- 9.4	3	0	16	- 2.8	56	22	- 41	16	5	0	188	102	1.0	29	16.5	S	31	11	8	12	5.8	78
ST JOSEPH	247			11.7	0.0	5.7	1.2	26.1	31	-11.7	3	0	17	- 2.2	60	19	- 40		7		0		0.8	30	17.9	31	18	9	11	11	5.8	
ST LOUIS	163	995.3	1015.9	11.7	- 1.1	5.4	- 0.5	27.8	14	- 9.4	4	0	22	- 2.2	63	46	- 32	24	5	2	5	T	1.6	27	17.9	SE	18	5	9	17	6.7	63
SPRINGFIELD	386	969.9	1016.1	13.9	- 0.6	6.7	0.0	27.8	14	-11.1	4	0	20	- 2.8	57	31	- 41	17	6	3	71	25	1.1	22	18.8	SW	18	13	9	9	4.9	72
MONTANA																																
BILLINGS	1087	888.9	1015.6	6.7	- 5.0	0.8	- 0.1	22.2	30	-15.6	2	0	26	- 7.8	60	21	- 6	7	10	0	203	76	3.1	28	21.9	NW	11	4	9	18	7.4	71
GLASGOW	696	931.9	1016.5	1.1	- 8.9	- 4.1	- 1.2	10.6	30	-21.1	2	0	30	- 7.2	77	7	- 7	5	6	1	28	20	1.2	3	14.8	12	26	5	13	13	6.5	
GREAT FALLS	1116	885.5	1016.1	5.6	- 5.6	- 0.2	0.5	16.1	29	-20.0	1	0	27	- 8.9	55	28	5	10	10	0	246	76	5.1	24	17.0	SW	12+	6	9	16	7.0	69
HAVRE	788	921.1	1015.4	4.4	- 6.7	- 1.0	1.8	16.7	30+	-22.2	2	0	29	- 6.7	67	2	- 13	1	5	0	53	127	2.3	26	15.6	NW	30	5	15	11	6.3	78
HELENA	1167	878.8	1017.0	5.6	- 5.6	- 0.1	0.3	17.8	29	-16.1	2+	0	29	- 8.9	55	10	- 7	4	8	1	64	51	2.7	27	19.2	W	11	3	8	20	7.7	68
KALISPELL	904	909.9	1016.8	5.6	- 4.4	0.5	0.6	13.9	29	-15.0	2	0	29	- 6.1	66	24	T	10	12	0	259	51	1.2	19	14.3	2	20	3	6	22	7.8	
MILES CITY	801	920.4	1015.6	5.0	- 5.6	- 0.2	0.4	19.4	30	-20.6	2	0	28	- 5.0	74	14	- 2		12	0	130		1.8	30								
MISSOULA	972	903.5	1017.7	7.2	- 3.3	1.9	1.0	18.9	29	-13.3	2	0	27	- 4.4	67	20	1	4	13	0	160	25	1.3	29	14.8	SW	20	1	9	21	8.2	52
NEBRASKA																																
GRAND ISLAND	561	948.2	1015.7	8.3	- 3.9	2.3	0.2	28.3	31	-13.3	3	0	26	- 4.4	64	28	- 4	13	7	0	297	152	1.1	32	24.6	34	18	8	7	16	6.5	
LINCOLN U	351			8.3	- 2.2	3.1	- 0.3	27.8	31	-14.4	3	0	23			18	- 26	6	7		211	127			21.0	NW	18	9	9	13	6.2	59
NORFOLK	471			6.7	- 4.4	1.0	0.3	23.3	31	-13.3	3	0	28			12	- 28	6	7		140	76						7	7	17	6.8	
NORTH PLATTE	846	915.3	1015.4	7.8	- 6.1	0.8	- 0.9	27.8	31	-19.4	7	0	31	- 5.0	70	25	T	12	9	0	483	229	1.2	34	25.5	NW	18	6	8	17	6.8	62
OMAHA	298	979.7	1015.9	8.3	- 2.8	2.9	0.2	27.8	31	-12.2	3	0	25	- 3.9	64	12	- 24	4	8	0	109	76	1.1	35	17.0	NW	18	7	9	15	6.5	72
SCOTTSBLUFF	1206	876.7	1015.4	8.3	- 5.6	1.5	- 0.3	26.7	30	-20.6	7	0	27	- 5.6	66	33	11	15	8	0	361	178	2.0	33	15.6	36	17	0	15	16	7.5	
VALENTINE	789			6.7	- 6.1	0.2	0.6	23.9	30	-16.7	2	0	28			13	- 13	6	7		203	102			19.2	NW	31	5	6	20	7.3	49
NEVADA																																
ELKO	1539	845.2	1018.7	8.3	- 3.9	2.3	0.3	19.4	29	-20.0	2	0	25			13	- 8	7	12	0	51	25	1.9	26	13.0	25	30+	5	8	18	6.9	
ELY	1906	808.0	1017.3	10.0	- 7.2	1.5	0.7	20.6	29	-23.3	2	0	27	- 8.9	52	5	- 17	3	6	0	104	76	1.7	24	18.3	SW	26	10	10	11	5.6	89
LAS VEGAS	659	940.1	1016.9	21.1	5.6	13.2	0.6	31.1	30	- 5.0	3	0	6	-11.7	18	T	- 9	T	0	0	0	0	1.3	28	21.5	NW	31	17	7	7	3.7	93
RENO	1342	867.3	1018.6	13.3	- 3.3	4.9	- 0.3	24.4	29	-17.8	5	0	24	- 5.0	54	39	22	16	6	0	178	127	1.1	25	21.9	SW	25	7	12	12	6.0	69
WINNEMUCCA	1311	870.0	1019.2	12.2	- 5.6	3.3	- 0.1	23.9	29	-19.4	2+	0	24	- 6.7	54	19	- 2	7	11	0	51	25	1.7	22	18.8	W	12	4	10	17	7.2	77
NEW HAMPSHIRE																																
CONCORD	104	996.6	1009.5	3.9	- 6.1	- 0.9	- 0.7	13.3	16	-15.0	13	0	30	- 7.8	60	58	- 25	21	8	0	610	635	3.1	31	15.6	W	5	10	10	11	5.8	68
MT WASHINGTON OBS	1909			- 9.4	-16.7	-13.0	- 1.7	2.8	15	-22.8	9	0	31			259	113	53	22	0	2200	864			55.9Y	W	4	4	7	20	7.8	36
NEW JERSEY																																
ATLANTIC CITY	20	1009.8	1012.4	8.9	- 0.6	3.9	- 1.2	19.4	16	- 7.2	10	0	22	- 4.4	57	42	- 58	20	10	0	23	T	2.7	29	18.3	27	4	10	7	14	5.9	60
ATLANTIC CITY U	3			8.3	1.7	4.9	- 0.1	13.3	16	- 2.8	25	0	10			47	- 55	30	10						17.4	W	4					
NEWARK	2	1010.8	1011.7	8.9	1.1	5.1	0.4	21.1	15	- 3.3	25	0	10	- 3.3	60	84	- 20	23	8	0	107	102	2.7	29	15.6	24	4	5	13	13	6.5	
TRENTON U	17			8.3	1.1	4.6	- 0.2	22.2	15	- 3.3	25+	0	15			83	- 15	36	11		86	51			17.4	S	15+	9	10	12	5.9	57
NEW MEXICO																																
ALBUQUERQUE	1619	836.8	1014.1	17.8	- 0.6	8.7	1.1	29.4	26	-12.2	7	0	18	-12.2	27	1	- 11	1	2	0	13	T	2.1	31	20.1	W	17	14	13	4	3.6	84
CLAYTON	1515			15.6	- 3.9	5.9	0.9	29.4	27	-13.9	7+	0	26			10	- 6	7	4		112	51						13	12	6	4.2	
ROSWELL	1101			22.8	0.6	11.6	1.9	35.0	27	-12.8	3	1	13			3	- 10	3	1		25	25			21.0	SW	5					90
NEW YORK																																
ALBANY	84	1000.7	1011.6	3.9	- 5.0	- 0.8	- 1.3	10.6	16	-12.8	10	0	30	- 6.1	68	79	10	35	11	0	813	406	3.0	30	21.9	W	5	5	9	17	7.1	55
BINGHAMTON	485	951.6	1011.9	1.1	- 5.0	- 2.0	- 1.6	10.0	15	-10.6	10	0	30	- 7.2	68	70	- 3	35	16	0	851	711	2.5	28	18.8	W	4	2	7	22	7.9	43
BUFFALO	215	986.1	1012.6	2.2	- 5.0	- 1.2	- 0.9	17.2	15	-11.1	10	0	29	- 5.6	74	53	- 30	18	18	0	574	178	2.8	27	25.0	SW	15	0	8	23	8.4	47
NEW YORK U	40	1008.1	1011.3	8.3	0.6	4.5	- 0.2	20.6	16	- 3.3	10+	0	12	- 4.4	57	97	- 5	34	8	0	33	25	2.5	31	15.2	W	5+					54
NEW YORK KENNEDY	4	1011.2	1011.8	7.2	0.6	3.8	0.1	14.4	16	- 3.9	25	0	14	- 3.9	60	81	- 25	30	9	0	71	51	3.2	30	19.7	28	4	7	12	12	6.2	
NEW YORK LA GUARDIA	3	1010.8	1012.0	7.8	1.1	4.3	- 0.6	19.4	16	- 2.8	25+	0	11	- 5.0	56	78	- 29	26	9	0	58	51	3.5	31	21.0	NW	4	7	11	13	6.3	
ROCHESTER	167	992.2	1012.9	1.7	- 5.6	- 1.9	- 2.1	13.9	15	-12.8	10	0	30	- 6.1	75	87	11	48	17	0	754	356	3.0	27	20.1	W	15	2	8	21	7.9	46
SYRACUSE	125	996.6	1011.7	2.8	- 3.9	- 0.4	- 0.8	14.4	15	-10.0	26	0	28	- 5.6	70	74	- 18	30	16	0	945	635	2.9	27	16.5	NW	4	6	5	20	7.3	49

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32°C or above	Temperature: No of days: Min 0°C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days sunrise to sunset: Clear 0.3	No. of days sunrise to sunset: Partly cloudy 4.7	No. of days sunrise to sunset: Cloudy 8.0	Sky cover tenths sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C.	C	C.		C.				C	%	Mm	Mm	Mm			Mm	Mm	M p.s		M p.s							
NORTH CAROLINA																																
ASHEVILLE	652	938.0	1015.0	12.8	3.0	6.2	- 0.8	21.7	14+	- 8.3	5	0	18	- 0.6	66	88	- 34	26	12	1	226	127	2.1	34	17.9	34	3	12	8	11	5.2	74
CAPE HATTERAS R	2	1014.2	1014.5	14.4	5.0	9.7	- 0.9	21.7	15+	- 3.3	25+	0	6	3.3	68	119	14	44	12	2	3	0	2.4	30	16.1	1	27+	13	7	11	5.4	67
CHARLOTTE	224	987.8	1015.6	13.9	1.7	7.9	- 2.1	23.3	14	- 6.1	9+	0	16	- 1.1	58	124	12	41	10	2	145	127	1.6	26	21.0	SW	15	12	7	12	5.5	63
GREENSBORO	273	982.7	1014.9	12.8	0.0	6.5	- 2.1	23.9	14	- 7.2	5	0	19	- 2.2	58	84	- 9	28	10	2	89	76	1.9	24	14.3	NW	4	11	7	13	5.5	70
RALEIGH	132	999.0	1015.1	13.9	0.6	7.3	- 2.4	24.4	14	- 6.1	9+	0	17	- 1.7	58	94	9	36	9	2	135	51	2.1	27	14.3	20	19	12	7	12	5.2	66
WILMINGTON	9	1014.2	1015.6	16.1	4.4	10.1	- 2.2	23.3	16+	- 1.7	5	0	4	2.2	63	116	14	28	13	3	T	0	2.0	28	16.1	SW	19	13	7	11	4.9	69
NORTH DAKOTA																																
BISMARCK	502	954.3	1015.9	2.8	- 7.2	- 2.1	1.1	21.1	30	-20.0	2	0	31	- 6.1	74	8	- 12	5	10	0	84	76	1.7	32	17.9	NW	31	4	6	21	7.5	65
FARGO	273	982.1	1015.9	2.2	- 6.7	- 2.4	1.8	15.0	30	-18.9	8	0	27	- 5.0	81	14	- 5	7	10	0	46	76	0.6	33	15.2	NW	31+	5	8	18	7.1	44
WILLISTON	579	945.5	1015.9	3.3	- 7.2	- 2.1	2.2	17.8	30	-16.1	7+	0	31	6.1	76	11	- 7	7	9	0	41	51	1.9	33	13.4	NW	31+	7	5	19	7.1	52
OHIO																																
AKRON	368	967.8	1015.5	6.1	- 3.9	1.3	- 1.4	21.1	14	-10.0	9	0	26	- 5.6	63	61	- 23	12	19	1	384	127	2.1	27	13.9	24	7	2	8	21	8.0	
CINCINNATI ABNE OB	232			10.0	- 0.6	4.7	- 1.3	22.8	14	- 8.9	4	0	20			59	- 39	16	11		163	102			12.1	W	7					55
CLEVELAND	237	984.4	1014.3	3.9	- 4.4	- 0.2	- 1.9	20.6	14	-12.2	9	0	28	- 6.1	66	51	- 28	9	14	1	422	102	1.9	26	18.8	SW	7	2	9	27	8.3	43
COLUMBUS	247	984.1	1014.8	7.2	- 2.2	2.6	- 1.3	22.2	14	-10.0	4	0	24	- 3.3	68	69	- 12	22	12	2	312	76	2.2	27	17.9	SW	15	5	7	19	7.4	38
DAYTON	305	978.0	1014.7	8.3	- 1.7	3.2	- 0.6	21.7	31	- 7.8	24+	0	23	- 3.3	67	47	- 33	13	11	3	279	76	2.1	26	17.9	W	15	5	7	19	7.5	46
MANSFIELD	395			6.1	- 3.9	1.2	- 0.6	20.6	14	-11.1	25+	0	26	- 4.4	71	45	- 51	13	13	1	343	102	2.5	25	13.0	25	15+	4	7	20	7.7	
TOLEDO	204	988.2	1013.8	5.6	- 4.4	0.5	- 1.3	20.6	31+	-12.2	25+	0	28	- 5.0	70	34	- 23	17	12	0	132	25	1.9	27	18.8	SW	15	3	6	22	7.9	51
YOUNGSTOWN	359	969.9	1013.8	3.3	- 5.0	- 0.9	- 2.8	19.4	14	-11.1	25	0	29	- 5.6	72	60	- 25	13	18	0	559	178	2.0	28	18.3	27	15	2	7	22	8.3	
OKLAHOMA																																
OKLAHOMA CITY	392	968.8	1015.6	17.2	1.7	9.5	0.3	30.0	13	- 7.8	3	0	11	- 1.7	50	2	- 48	2	1	0	18	25	0.2	25	21.0	NW	18	18	8	5	4.0	83
TULSA	198	991.5	1015.9	16.7	2.8	9.9	1.0	29.4	14	- 6.1	3	0	10	- 1.1	50	2	- 60	1	2	0	T	T	0.8	19	17.9		31	15	8	8	4.4	79
OREGON																																
ASTORIA	2	1016.6	1017.4	9.4	1.7	5.6	- 1.4	14.4	19	- 5.6	1	0	11	2.2	79	253	26	31	21	0	38	25	2.3	17	17.4	17	26	2	6	23	8.2	
BURNS O	1265	873.4	1019.0	7.2	- 5.6	0.8	- 2.2	16.1	29	-14.4	1	0	29	- 5.0	69	51	27	19	15		183	51	1.6	26				6	2	23	7.6	
EUGENE	109	1005.8	1019.4	10.6	1.7	6.2	- 1.6	16.1	19	- 6.1	1	0	10	2.2	80	203	93	36	20	2	23	25	2.3	18	19.7	21	11	3	4	24	8.3	
MEACHAM	1234	876.1	1019.2	2.8	- 5.0	- 1.3	- 2.1	12.2	29	-12.8	1	0	29			102	1	28	10		843	559			9.8	25	13	4	7	20	7.9	
MEDFORD	396	971.6	1020.1	12.2	2.2	7.2	0.3	20.0	20	- 3.3	2+	0	11	1.7	72	69	24	15	13	0	127	76	0.6	29	13.0	16	25	3	4	24	8.3	
PENDLETON	452	964.1	1018.7	10.0	- 0.6	4.7	- 2.6	15.0	29+	- 7.2	1	0	18	- 3.3	60	28	- 2	8	16	2	124	76	2.1	24	16.5	25	13	7	3	21	7.4	
PORTLAND	6	1017.6	1018.9	11.1	1.7	6.5	- 1.3	18.3	19	- 5.6	1	0	10	1.7	73	124	26	23	20	2	T	0	2.1	17	21.5	W	26	5	2	24	7.7	46
SALEM	60	1011.2	1018.8	10.6	0.6	5.5	- 1.9	16.7	19	-11.1	1	0	10	0.6	74	176	57	26	20	2	36	T	2.8	20	17.9	19	26	2	5	24	8.1	
SEXTON SUMMIT R	1169	884.2	1019.7	3.9	- 1.7	1.1	- 2.6	13.9	20+	- 9.4	1	0	22			187	99	46	17		810	660			26.4	19	11	4	6	24	8.4	
PACIFIC AREA																																
GUAM TAGUAC R	110	997.0	1009.3	29.4	22.2	25.8	- 0.2	31.1	19	19.4	24	0	0	23.3	88	430	363	85	27	0	0	0	5.1	9	11.2	SE	16	1	6	25	8.4	48
JOHNSTON	2	1013.5	1014.2	26.7	22.2	24.4	- 0.7	28.3	23	19.4	27+	0	0	20.6	77	173	114	52	20	2	0	0	6.6	9	17.9	NE	5	4	9	13	6.1	61
KOROR R	29	1006.1	1007.8	31.1	24.4	27.8	- 0.8	32.8	28	21.7	6	8	0	24.4	85	282	88	117	24	1	0	0	0.8	6	9.8	W	19	1	4	27	9.2	54
KWAJALEIN	2	1008.1	1008.9	30.6	25.6	27.8	0.9	31.7	25+	23.9	15+	0	0	23.3	79	109	- 55	37	16	2	0	0	6.0	8	13.0	10	11+	5	5	21	7.8	
MAJURO	3	1008.1	1009.6	29.4	25.0	27.2	0.2	30.0	28+	23.3	31+	0	0	23.3	79	249	- 49	72	18	2	0	0	5.4	8	12.5	E	14	3	9	19	7.5	39
PAGO PAGO	4	1011.2	1011.4	30.0	22.8	26.4		31.1	31+	20.6	9	0	0	23.3	84	195		51	26	1	0	0	2.0	7	9.4	NE	8	4	15	10	5.9	63
PONAPE R	37	1008.1	1008.4	30.0	22.8	26.4	- 0.6	31.7	31+	20.6	20+	0	0	23.3	85	507	138	116	25	0	0	0	2.0	9	7.6	NE	11+	1	7	23	8.5	68
TRUK MOEN ISLAND	2	1008.1	1008.3	30.0	25.0	27.5	0.4	31.7	5	22.8	18	0	0	23.9	81	250	53	52	21	1	0	0	4.0	8	11.7	W	14	1	4	27	9.1	38
WAKE	3	1012.9	1013.1	28.3	23.3	25.9	0.4	29.4	31+	20.6	23	0	0	20.6	75	41	4	14	16	0	0	0	5.8	8	12.1	N	12	0	18	9	9.7	78
YAP R	13			30.6	24.4	27.5	0.3	31.7	20+	22.2	18	0	0			342	206	65	27	0	0	0			8.9	SW	22	2	6	23	8.9	88
PENNSYLVANIA																																
ALLENTOWN	118	998.3	1012.4	6.7	- 2.8	2.1	- 1.1	20.0	15	- 7.2	25+	0	28	- 4.4	67	89	- 7	35	9	0	173	152	2.7	29	17.9	25	4	7	11	14	6.3	
ERIE	223	986.1	1013.6	2.8	- 5.0	- 1.1	2.0	18.3	14	-11.7	25	0	28	- 7.2	66	47	- 26	9	17	1	686	152	2.0	24	14.3	27	15	2	7	22	8.4	
HARRISBURG	131	1000.3	1013.2	8.3	- 1.1	3.7	- 0.9	18.9	15	- 6.7	27	0	21	- 5.0	56	68	- 19	29	15	0	135	127	2.9	25	18.8	NW	4	4	8	19	6.9	48
PHILADELPHIA	2	1011.5	1012.6	8.9	0.6	4.8	- 0.2	22.2	15	- 3.9	10	0	15	- 5.0	54	66	- 31	27	8	2	122	51	2.4	30	13.2	W	4	5	11	14	6.4	50
PITTSBURGH	347	988.5	1013.6	6.1	- 3.3	1.3	- 1.4	21.7	14	-10.0	25	0	27	- 5.0	66	81	- 3	25	19	2	407	254	3.0	28	20.6	27	14+	5	5	21	7.8	43
SCRANTON	284	977.7	1012.7	4.4	- 3.3	0.6	- 1.8	13.9	15+	-10.0	10	0	26	- 5.6	67	49	- 23	24	10	2	398	178	2.1	29	17.0	W	4	4	5	22	7.8	48
WILLIAMSPORT	160	993.6	1013.6	6.7	- 1.7	2.6	- 0.4	14.4	15	- 7.2	10	0	21	- 3.9	68	68	- 26	31	14	0	406	305	2.4	28	18.4	29	4	7	8	20	7.4	
RHODE ISLAND																																
BLOCK ISLAND	34			5.6	- 0.6	2.4	- 0.2	11.1	16	- 5.0	25+	0	19			78	- 25	34	6		T	0											
PROVIDENCE	16	1007.8	1016.2	7.2	- 1.7	2.6	- 0.2	18.3	16	- 7.8	25	0	24	- 5.6	67	97	- 8	37	8	0	155	76	3.2	30	20.6	26	4	8	8	15	6.3	57

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1972

State and Station	Elevation ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days Max 32.2°C or above	Temperature: No of days Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days 2.5 mm or more	Precipitation: No of days With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile 1.6 kilometer Speed	Wind: Fastest mile 1.6 kilometer Direction	Wind: Fastest mile 1.6 kilometer Date	No. of days (sunrise to sunset) Clear 0.3	No. of days (sunrise to sunset) Partly cloudy 4.7	No. of days (sunrise to sunset) Cloudy, 8.10	Sky cover, tenths sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C	C	C.		C				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							
SOUTH CAROLINA																																
CHARLESTON	12	1014.7	1016.7	17.2	5.0	11.1	- 2.7	25.6	15+	- 2.8	5	0	7	3.3	63	103	3	34	12	2	T	0	1.7	27	22.8Y	W	20+	14	6	11	5.0	72
CHARLESTON J	3			16.1	7.8	11.9	- 2.3	24.4	2	0.6	4	0	0			98	6	35	11		0	0			17.9	W	4+					
COLUMBIA	65	1008.1	1016.2	16.7	3.3	10.0	- 2.4	27.8	14	- 5.6	5	0	10	2.2	64	242	134	77	12	4	43	T	1.9	27	13.4	29	20	15	3	13	5.0	70
GRNVLLE SPRTNBRG	292	980.4	1015.4	14.4	1.7	7.9	- 2.8	23.9	14	- 7.2	5	0	16	- 1.1	58	140	20	39	14	1	168	178	1.3	27	14.8	N	30+	13	7	11	5.1	65
SOUTH DAKOTA																																
ABERDEEN	395	967.5	1015.7	5.6	- 6.7	- 0.3	1.8	23.9	30	-15.0	2	0	30	- 5.6	71	1	- 27	1	2	0	33	25	1.1	31	15.6	33	31	3	12	16	7.2	
HURON	390	967.8	1016.0	3.3	- 7.2	- 1.9	- 0.1	18.9	30	-18.9	2	0	30	- 5.0	82	4	- 24	2	5	0	48	152	0.8	29	16.1	N	31	4	17	17	7.4	59
RAPID CITY	964	902.1	1015.8	6.1	- 5.6	0.3	0.8	22.2	26	-13.9	22	0	30	- 6.1	66	32	6	19	11	0	351	178	2.8	34	21.0	NW	27	4	8	19	7.5	56
SIOUX FALLS	432	962.8	1015.8	5.0	- 5.6	- 0.4	0.6	22.8	31	-13.9	3	0	27	- 5.0	76	22	- 18	18	4	1	119	127	1.6	30	15.6	35	31	4	11	16	6.9	
TENNESSEE																																
BRISTOL	459	960.7	1015.5	12.2	0.0	6.1	- 1.7	23.9	14	- 6.7	5	0	19	- 2.2	60	87	- 14	22	17	2	160	51	2.1	26	11.2	27	20+	9	8	14	6.3	
CHATTANOOGA	203	991.2	1016.4	13.3	1.7	7.3	- 3.3	23.3	14	- 5.6	9+	0	15	0.0	63	170	- 27	46	15	5	114	51	1.3	29	13.4	SW	18	9	8	14	5.9	53
KNOXVILLE	299	980.7	1016.2	13.3	1.7	7.6	- 2.2	25.6	14	- 6.1	9	0	13	- 1.1	59	107	- 13	26	16	3	91	25	1.9	27	15.6	W	19	8	9	14	6.3	57
MEMPHIS	79	1007.1	1017.6	15.0	3.3	9.1	- 1.6	26.1	14	- 5.6	4	0	8	0.0	56	92	- 36	21	12	9	41	25	1.0	26	17.4	SW	14	9	8	14	5.8	69
NASHVILLE	180	994.2	1016.5	13.3	0.6	7.0	- 2.5	22.2	14	- 6.7	4	0	15	0.0	64	75	- 57	19	11	4	76	25	1.6	26	14.8	SW	15	8	10	13	6.0	56
OAK RIDGE R	276			12.2	1.1	6.9	- 1.7	24.4	14	- 6.7	5	0	14			117	- 25	21	17		66	T			17.9Y		18+	10	8	13	6.2	
TEXAS																																
ABILENE	537	953.6	1015.5	21.1	4.4	12.8	0.1	33.3	27	- 7.2	3	2	5	- 1.7	41	1	- 25	1	1	0	10	T	1.7	21	18.3	S	17	17	11	3	3.2	86
AMARILLO	1098	888.6	1012.6	18.3	0.0	9.1	0.4	34.4	27	-12.2	3	1	17	- 7.8	37	3	- 18	3	1	0	25	25	2.6	22	19.2	NW	18+	16	8	7	4.2	85
AUSTIN	182	993.9	1015.8	24.4	8.9	16.7	1.3	36.7	28	- 2.2	4	4	3	4.4	51	20	- 34	19	2	1	0	0	0.3	14	15.2	NW	3+	14	10	7	4.2	70
BROWNSVILLE	6	1014.9	1015.4	28.3	16.1	22.3	2.3	33.9	14+	3.3	4	6	0	13.9	63	T	- 26	T	0	0	0	0	3.6	14	20.1	N	2	12	9	10	4.9	73
CORPUS CHRISTI	12	1014.2	1015.6	27.2	13.9	20.4	1.9	36.1	25	0.6	4	6	0	12.2	66	T	- 37	T	0	0	0	0	3.5	13	16.1	SE	31	14	7	10	4.9	68
DALLAS	147	998.3	1015.9	21.7	7.2	14.2	0.8	33.3	13	- 4.4	3	1	4	1.7	48	7	- 65	7	3	1	20	25	1.2	16	15.6	NW	4	13	11	7	4.2	80
DEL RIO	313	978.7	1014.7	27.2	9.4	18.3	1.1	38.3	28	- 3.3	3	6	2	0.0	36	1	- 21	T	0	0	0	0	1.7	10	17.4	33	2	18	9	4	3.1	
EL PASO	1194	881.5	1013.1	23.3	6.1	14.5	1.8	31.1	27	-10.0	3	0	7	-10.6	17	0	- 9	0	0	0	0	0	2.8	28	21.5	W	5	22	9	0	2.4	99
FORT WORTH	164	995.9	1016.4	21.1	5.0	13.1	- 0.2	32.8	13	- 5.6	3	1	6	2.2	54	9	- 55	7	3	1	41	51	1.3	19	15.6	25	14	14	10	7	4.1	
GALVESTON U	2			18.9	12.8	15.9	- 0.4	25.0	25	2.2	3	0	0			16	- 56	6	7		0	0			16.5	NW	3+					50
HOUSTON INTERCON	29	1013.5	1017.2	22.2	8.3	15.2	- 0.2	31.1	22	- 3.9	4	0	5	8.3	66	31	- 40	13	5	3	0	0	1.0	13	12.5	33	3	11	4	16	5.8	55
LUBBOCK	992	901.8	1013.6	20.0	1.1	10.6	0.8	34.4	27	-12.8	3	1	13	- 5.6	39	5	- 13	5	1	0	53	25	1.3	25	17.9	29	14	15	8	8	3.9	
MIDLAND	869	915.3	1013.8	23.3	3.3	13.2	0.3	35.0	27	- 9.4	3	1	7	- 7.8	29	T	- 9	T	0	0	T	T	1.4	21	15.6	31	14	19	8	4	3.0	
PORT ARTHUR	5	1016.6		22.2	10.0	15.9	- 0.2	29.4	25	- 1.1	4	0	1	10.0	71	29	- 58	15	5	2	0	0	1.3	15	13.4	SW	25+	9	8	14	6.0	53
SAN ANGELO	580	948.2	1014.7	25.0	5.6	15.3	1.4	35.6	27	- 7.8	3	3	5	- 2.8	35	T	- 24	T	0	0	T	T	1.9	21	15.6	27	14	22	4	5	2.8	
SAN ANTONIO	240	987.8	1015.6	27.2	9.4	18.1	2.0	37.8	28	- 3.9	4	6	4	4.4	48	1	- 41	1	2	1	0	0	0.8	12	14.8	NW	2	18	7	6	3.8	81
VICTORIA	32	1012.2	1016.2	29.6	10.6	17.9	0.6	35.0	22	- 1.1	4	4	2	9.4	64	5	- 54	3	4	3	0	0	1.7	14	20.1Y	N	2	11	9	11	5.3	
WACO	153	998.0	1016.0	23.9	8.3	16.0	1.6	37.8	28	- 1.7	3	2	1	3.3	48	16	- 43	12	3	2	T	T	1.1	18	13.4	24	14	19	5	7	3.4	
WICHITA FALLS	303	978.3	1015.3	20.6	2.2	11.4	- 0.7	37.8	27	- 8.9	3	2	11	- 1.1	49	3	- 36	2	2	0	76	76	0.6	15	20.6	30	14	14	10	7	4.4	
UTAH																																
MILFORD	1533	846.3		12.2	- 5.0	3.6	- 0.1	23.3	30	-15.6	2	0	26			8	- 18	6	5		117	51						14	9	8	4.5	
SALT LAKE CITY	1286	872.7	1018.5	10.6	- 1.7	4.7	0.0	22.2	26	-16.1	2	0	22	- 3.9	58	26	- 14	7	9	0	226	102	0.4	23	14.3	SE	26	8	3	20	6.9	71
WENDOVER	1291	871.7	1018.7	10.0	- 1.7	4.2	- 1.1	22.2	30	-10.6	6	0	18			2	- 8	1	5		23	25	1.3	33				10	9	12	5.8	
VERMONT																																
BURLINGTON	101	998.0	1010.9	0.0	- 8.9	- 4.4	- 1.4	8.3	15	-22.8	10	0	30	- 8.9	67	69	15	41	12	0	841	787	1.1	30	20.1	SW	15	8	8	15	6.6	65
VIRGINIA																																
LYNCHBURG	279			12.2	0.6	6.2	- 1.3	21.7	14+	- 6.7	25	0	17			67	- 25	19	6		198	178			13.9	NW	4	12	9	10	5.1	69
NORFOLK	7	1012.5	1013.6	12.8	3.3	8.3	- 0.6	26.1	15	- 1.7	10	0	7	- 1.1	57	99	11	35	12	1	107	51	2.1	29	20.1	NE	26	11	8	12	5.3	63
RICHMOND	50	1007.8	1014.2	13.3	1.1	6.9	- 1.8	23.9	15	- 4.4	18+	0	16	- 2.8	56	68	- 19	25	11	1	213	203	1.4	27	13.9	W	19+	9	13	9	5.4	64
ROANOKE	350	971.6	1013.9	12.8	0.0	6.4	- 1.1	23.9	14	- 8.3	25	0	17	- 5.0	49	58	- 32	22	10	0	185	178	2.7	29	15.6	31	4	10	12	9	5.4	
WALLOPS ISLAND	3			10.6	2.2	6.4		18.9	22	- 2.8	25	0	11			71		23	12		140	51			27.7Y	W	4					
WASHINGTON																																
OLYMPIA	59	1009.8	1017.2	9.4	- 0.6	4.4	- 2.3	15.6	19	- 7.8	1	0	17	1.7	84	231	94	37	20	0	155	25	2.7	19	15.6	20	26	1	8	22	8.4	
QUILLAYUTE	55	1008.1	1015.6	8.3	0.0	4.1	- 2.0	13.3	19+	- 7.2	1	0	18	1.1	82	377	95	55	24	0	259	127	1.6	17	13.0	SE	11	1	8	22	8.2	29
SEATTLE TACOMA	122	1000.3	1017.0	8.3	2.2	5.2	- 1.4	12.8	29+	- 5.0	1	0	8	0.6	73	181	85	25	20	0	48	25	2.4	17	18.3	SW	26	1	8	22	8.3	39
SPOKANE	718	931.3	1016.6	6.1	- 2.2	1.8	- 1.6	12.8	29	-17.2	1	0	25	- 4.4	68	54	15	15	13	0	38	102	3.4	21	24.1	SW	26	5	9	17	7.1	41
STAMPEDE PASS R	1206	876.1		- 1.1	- 5.6	- 3.3	- 2.2	4.4	29	-12.2	1	0	31			281	12	43	25		2253	4775						2	3	26	8.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MARCH 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C	C.	C	C.	C		C.				C.	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							%
WASHINGTON																																
WALLA WALLA U	289			11.1	2.2	6.6	- 1.2	16.1	29	- 6.1	1	0	9			31	- 9	9	13		102	51			18.8	W	10	5	5	21	7.8	37
YAKIMA	321	978.7	1017.9	10.0	- 2.8	3.7	- 1.8	16.7	29	-10.6	5	0	26	- 3.9	60	40	24	15	13	0	274	76	1.8	26	15.6	20	26	7	8	16	6.9	
WEST INDIES																																
SAN JUAN P.R.	4	1013.9	1016.3	29.4	22.8	26.1	2.0	32.2	30+	20.6	25+	2	0	19.4	68	45	- 11	18	10	0	0	0	3.2	9	12.1	E	20	7	23	1	4.9	89
WEST VIRGINIA																																
BECKLEY	763	924.5	1015.3	7.8	- 3.3	2.2	- 2.2	21.7	14	-11.7	4	0	24	- 3.9	66	73	- 55	13	18	0	503	127	3.0	26	11.6	29	19+	9	4	18	7.0	
CHARLESTON	286	980.0	1014.9	10.0	- 1.7	4.3	- 2.6	25.0	14	- 8.9	5	0	22	- 3.9	59	50	- 60	17	15	0	297	102	2.2	26	13.4	28	20	2	13	16	7.3	
ELKINS	594	941.1		7.8	- 5.0	1.4	- 2.8	22.8	14	-17.8	25	0	29			74	- 31	16	19		851	127						3	7	21	7.8	
HUNTINGTON	252	984.1	1014.9	11.1	0.0	5.5	- 1.6	25.0	14	- 6.1	25+	0	16	- 2.8	59	50	- 57	22	14	1	279	178	1.9	25	16.5	25	15	4	7	20	7.4	
PARKERSBURG U	187			9.4	- 1.7	4.1	- 1.8	25.0	14	- 9.4	4	0	20			33	- 56	11	11		140	102			16.1	W	15					43
WISCONSIN																																
GREEN BAY	208	988.2	1014.4	1.1	- 8.3	- 3.4	- 1.3	7.8	31	-18.3	4	0	29	- 7.2	73	52	18	22	11	1	376	356	1.4	29	13.9	NE	19	7	9	15	6.6	51
LA CROSSE	198	990.5	1015.9	2.8	- 6.7	- 2.2	- 1.3	21.1	31	-16.7	3	0	28	- 6.1	76	28	- 24		5	0	142		1.3	30								
MADISON	262	982.4	1014.7	2.8	- 6.7	- 1.9	- 0.3	21.1	31	-16.1	9	0	28	- 6.7	71	39	- 8	24	9	2	511	356	1.6	29	13.4	N	19+	9	4	18	6.6	52
MILWAUKEE	205	988.8	1014.7	1.7	- 5.6	- 1.9	- 1.3	18.3	31	-13.9	9	0	28	- 7.2	69	72	13	41	12	1	460	229	2.0	29	17.9	SW	15	6	6	19	7.1	52
WYOMING																																
CASPER	1627	833.7	1015.0	6.1	- 6.7	- 0.2	- 0.2	21.1	30	-21.1	2	0	27	- 7.8	62	30	4	9	10	1	376	127	3.6	26	14.8	28	26	2	14	15	7.1	
CHEYENNE	1867	808.3	1015.4	6.7	- 6.1	0.2	0.0	21.1	30	-17.8	2	0	29	-10.0	49	27	- 3	19	7	0	386	229	5.3	30	21.9	W	20	6	12	13	6.4	72
LANDER	1696	825.3	1014.7	7.8	- 6.7	0.3	0.2	19.4	30	-16.7	2	0	31	-10.6	49	22	- 8	14	4	1	411	203	1.6	26	27.3	SW	13	5	11	15	6.6	82
SHERIDAN	1208	876.4	1016.1	7.2	- 5.6	0.8	1.4	22.2	30	-18.3	2	0	27	- 7.8	56	16	- 20	3	13	0	191	51	2.1	32	14.8	NW	26	3	11	17	7.2	67

Data from airport unless otherwise specified U indicates Urban, R indicates Rural, sites

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1 C or above for Alaskan Stations
Y Peak Gust
+ And also on an earlier date or dates
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication

Data in this table are obtained by conversion from data in the English Units table

HEATING DEGREE DAYS

(Base 65°F.)

MARCH 1971

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALASKA			
[illegible]	[illegible]	[illegible]	2434
[illegible]	[illegible]	2968	2913
MOBILE	[illegible]	[illegible]	1518
[illegible]	[illegible]	2194	2201
ALASKA			
ANCHORAGE	1574	9603	8977
[illegible]	[illegible]	6011	5610
[illegible]	[illegible]	17104	[illegible]
BARTER ISLAND	[illegible]	17072	[illegible]
BETHEL	[illegible]	11823	10815
BETTLES	[illegible]	15329	
[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	7836	[illegible]
[illegible]	2030	13415	12434
[illegible]	1730	12866	
HOMER	[illegible]	9019	
JUNEAU	1112	8129	7283
KING SALMON	[illegible]	10546	9296
[illegible]	[illegible]	[illegible]	12858
[illegible]	2116	13567	[illegible]
NOME	2124	12795	11354
[illegible]	1552	8809	8439
[illegible]	1066	7289	7269
SUMMIT	[illegible]	13074	
TALKEETNA	1693	11143	[illegible]
UNALAKLEET	2171	12801	
YAKUTAT	[illegible]	[illegible]	7.85
ARIZONA			
FLAGSTAFF	862	5761	5884
[illegible]	123	[illegible]	1690
TUCSON	200	[illegible]	1719
[illegible]	583	4388	4395
YUMA	105	1043	1188
ARKANSAS			
FORT SMITH	[illegible]	[illegible]	3126
[illegible]	[illegible]	2931	3084
CALIFORNIA			
[illegible]	225	1902	1998
[illegible]	[illegible]	3719	3742
BLUE CANYON	872	4580	4333
[illegible]	[illegible]	3786	3548
FRESNO	322	2358	2286
LONG BEACH	[illegible]	1230	[illegible]
LOS ANGELES	[illegible]	1211	[illegible]
LOS ANGELES U	[illegible]	916	1140
[illegible]	834	4893	4691
OAKLAND	366	2468	[illegible]
RED BLUFF	403	[illegible]	2300
SACRAMENTO	379	2445	2449
[illegible]	638	3623	[illegible]
SAN DIEGO	215	1221	1196
SAN FRANCISCO	394	2552	2396
SAN FRANCISCO U	354	2566	2303
SANTA MARIA	427	2690	[illegible]
STOCKTON	[illegible]	2407	2456
COLORADO			
ALAMOSA	1042	7149	7225
[illegible]	[illegible]	[illegible]	5438
DENVER	817	5322	5371
GRAND JUNCTION	[illegible]	[illegible]	5087
PUEBLO	[illegible]	4434	4844
CONNECTICUT			
BRIDGEPORT	825	4719	4872
HARTFORD	911	5529	5476
DELAWARE			
WILMINGTON	746	4308	4425
DIST.OF COLUMBIA			
WASHINGTON DULLES	776	4453	
WASHINGTON NATIONAL	670	3815	3862
FLORIDA			
APALACHICOLA U	[illegible]	[illegible]	1275
DAYTONA BEACH	[illegible]	930	864
FORT MYERS	63	352	442
JACKSONVILLE	259	1303	[illegible]
KEY WEST	4	61	108
LAKELAND U	115	[illegible]	661
MIAMI	31	[illegible]	214
ORLANDO	92	571	760
PENSACOLA	230	1438	1427
TALLAHASSEE	338	1829	1449
TAMPA	[illegible]	734	[illegible]
WEST PALM BEACH	79	[illegible]	253
GEORGIA			
ATHENS	521	[illegible]	2766
ATLANTA	533	2847	2790
AUGUSTA	[illegible]	2599	2307
COLUMBUS	397	[illegible]	[illegible]
MACON	387	2114	2073
ROME	580	3237	[illegible]
SAVANNAH	338	[illegible]	1774
IDAHO			
BOISE	763	[illegible]	5045
LEWISTON	740	4684	4787
POCATELLO	997	6264	6018
ILLINOIS			
CAIRO U	[illegible]	[illegible]	3579
CHICAGO O HARE	923	5540	5773
CHICAGO MIDWAY	903	5470	[illegible]
[illegible]	931	5894	5730
PEORIA	906	5655	5383
ROCKFORD	1007	[illegible]	[illegible]
SPRINGFIELD	793	4985	4921
INDIANA			
EVANSVILLE	707	[illegible]	4130
FORT WAYNE	[illegible]	[illegible]	5506
[illegible]	[illegible]	5140	5051
SOUTH BEND	959	5639	5615
IOWA			
BURLINGTON	913	5761	5478
DES MOINES	915	[illegible]	6069
DUBUQUE	1090	[illegible]	6492
SIOUX CITY	918	6467	6215
WATERLOO	1095	[illegible]	6506
KANSAS			
CONCORDIA	787	5454	4940
[illegible]	701	4889	4499
GOODLAND	777	5228	5356
TOPEKA	735	5114	4716
WICHITA	643	[illegible]	[illegible]
KENTUCKY			
COVINGTON	758	4436	4702
LEXINGTON	759	[illegible]	4253
LOUISVILLE	707	4198	4231
LOUISIANA			
ALEXANDRIA	[illegible]	2073	1852
BATON ROUGE	250	1648	1527
LAKE CHARLES	204	1294	[illegible]
NEW ORLEANS	216	1429	1345
SHREVEPORT	316	1945	2103
MAINE			
[illegible]	1224	8039	8258
PORTLAND	1028	6556	6353
MARYLAND			
BALTIMORE	[illegible]	4035	4237
MASSACHUSETTS			
BLUE HILL OBS R	945	5677	[illegible]
BOSTON	868	5192	4877
WORCESTER	1083	6286	[illegible]
MICHIGAN			
ALPENA	1269	7056	7127
DETROIT	990	5518	5448
DETROIT METRO	1015	5740	5641
FLINT	1088	6096	5933
GRAND RAPIDS	1110	6276	6025
HOUGHTON LAKE	1282	7122	7076
LANSING	1069	6159	[illegible]
[illegible]	1189	6935	6977
MUSKEGON	1098	6070	5714
SAULT STE MARIE	[illegible]	7965	7560
MINNESOTA			
DULUTH	1332	8561	8472
INTERNATIONAL FALLS	1352	9326	9161
[illegible]	[illegible]	7367	[illegible]
ROCHESTER	1195	7513	7271
ST CLOUD	1237	8014	7782
MISSISSIPPI			
JACKSON	394	2185	2125
MERIDIAN	408	[illegible]	[illegible]
MISSOURI			
COLUMBIA REGIONAL	711	4609	4589
KANSAS CITY	659	4408	4368
ST JOSEPH	699	4754	4988
ST LOUIS	718	4552	4452
SPRINGFIELD	642	4357	4159
MONTANA			
BILLINGS	972	[illegible]	6092
GLASGOW	1245	[illegible]	7863
GREAT FALLS	1031	6826	6538
HAVRE	1074	[illegible]	7543
HELENA	1020	7100	6902
KALISPELL	986	7018	6948
MILES CITY	1032	7306	6769
MISSOULA	[illegible]	6446	6894
NEBRASKA			
GRAND ISLAND	891	5952	5812
LINCOLN U	847	5664	5261
NORFOLK	962	6479	6200
NORTH PLATTE	974	6314	5860
OMAHA	853	5832	5619
SCOTTSBLUFF	937	6150	5761
VALENTINE	1002	6819	6474
NEVADA			
ELKO	891	6022	6211
ELY	933	6497	6380
LAS VEGAS	306	2394	2592
[illegible]	739	4944	5276
WINNEMUCCA	834	5329	5672
NEW HAMPSHIRE			
CONCORD	1064	6631	6374
MT WASHINGTON OBS	1746	11009	11024
NEW JERSEY			
ATLANTIC CITY	798	4393	4244
ATLANTIC CITY U	738	4069	[illegible]
NEWARK	[illegible]	4328	4520
TRENTON U	759	4360	[illegible]
NEW MEXICO			
ALBUQUERQUE	[illegible]	4147	3979
CLAYTON	690	4654	4525
ROSWELL	384	3231	[illegible]
NEW YORK			
ALBANY	1059	6279	6027
BINGHAMTON	1130	6497	6229
BUFFALO	[illegible]	5792	6040
NEW YORK U	764	4434	4336
NEW YORK KENNEDY	803	[illegible]	[illegible]
NEW YORK LA GUARDIA	774	4266	4267
ROCHESTER	1122	5992	5824
SYRACUSE	1040	6032	5893
NORTH CAROLINA			
ASHEVILLE	672	3724	4034
CAPE HATTERAS R	476	2516	2410
CHARLOTTE	574	[illegible]	[illegible]
GREENSBORO	653	3743	3524
RALEIGH	611	3430	3179
WILMINGTON	450	2348	2251
NORTH DAKOTA			
BISMARCK	1134	8276	7760
FARGO	1153	8334	8105
WILLISTON	1135	8394	8064
OHIO			
AKRON	946	5250	5307
CINCINNATI OBS	756	4515	4343
CLEVELAND	1031	5551	5346
COLUMBUS	871	5060	5036
DAYTON	836	4999	4996
MANSFIELD	955	5289	5555
TOLEDO	987	5749	5649
YOUNGSTOWN	1070	5772	5569
OKLAHOMA			
OKLAHOMA CITY	492	3558	3502
TULSA	463	3566	3600
OREGON			
ASTORIA	[illegible]	4359	4112
BURNS U	973	6098	5844
EUGENE	671	3978	3886
MEACHAM	1089	6506	6282
MEDFORD	617	3980	4256
PENDLETON	755	4655	4463
PORTLAND	653	3853	3889
SALEM	706	4355	3920
[illegible]	954	5238	4901
PENNSYLVANIA			
ALLENTOWN	900	5228	5148
ERIE	1078	5764	5518
HARRISBURG	812	[illegible]	4719
PHILADELPHIA	746	4311	4584
PITTSBURGH	949	5271	5273
SCRANTON	985	5784	5528
WILLIAMSPORT	871	5037	5265
RHODE ISLAND			
BLOCK ISLAND	883	4835	4749
PROVIDENCE	868	5285	5133
SOUTH CAROLINA			
CHARLESTON	404	[illegible]	1979
CHARLESTON U	355	1813	[illegible]
COLUMBIA	462	2556	2403
GRNVLLE SPRTNBRG	572	3227	2876
SOUTH DAKOTA			
ABERDEEN	1035	7601	7482
HURON	1127	7484	7248
RAPID CITY	996	6780	6278
SIOUX FALLS	1041	7386	6918
TENNESSEE			
BRISTOL	676	3807	3814
CHATTANOOGA	606	3414	3079
KNOXVILLE	596	3378	3253
MEMPHIS	509	3066	3063
NASHVILLE	624	3624	3349
OAK RIDGE R	633	3598	3533
TEXAS			
ABILENE	326	[illegible]	2510
AMARILLO	524	3698	3677
AUSTIN	171	1348	[illegible]
BROWNSVILLE	38	382	600
CORPUS CHRISTI	64	621	914
DALLAS	257	1924	2267
DEL RIO	107	1174	1486
EL PASO	254	2462	2598
FORT WORTH	307	2108	2306
GALVESTON U	143	938	1205
HOUSTON INTERCON	219	1345	1631
LUBBOCK	438	3207	3346
MIDLAND	297	2310	2501
PORT ARTHUR	167	1099	1408
SAN ANGELO	211	1821	2189
SAN ANTONIO	134	1176	1507
VICTORIA	120	952	1152
WACO	188	1613	1964
WICHITA FALLS	395	2932	2706
UTAH			
MILFORD	819	5485	5612
SALT LAKE CITY	754	5130	5276
WENDOVER	783	5324	5142
VERMONT			
BURLINGTON	1265	7234	7112
VIRGINIA			
LYNCHBURG	673	3891	3821
NORFOLK	555	2988	3168
RICHMOND	627	3633	3593
ROANOKE	658	3878	3824
WALLOPS ISLAND	659	3706	
WASHINGTON			
OLYMPIA	771	4832	4302
QUILLAYUTE	787	4848	4532
SEATTLE TACOMA	728	4205	4217
SPOKANE	918	5776	5701
STAMPEDE PASS R	1200	7546	7291
WALLA WALLA U	653	4073	4241
YAKIMA	813	5168	5217
WEST VIRGINIA			
BECKLEY	890	4843	4769
CHARLESTON	778	4372	4071
ELKINS	938	5314	4985
HUNTINGTON	711	4145	4041
PARKERSBURG U	787	4355	4294
WISCONSIN			
GREEN BAY	1206	7375	6941
LA CROSSE	1137	7141	6735
MADISON	1124	6936	6833
MILWAUKEE	1122	6572	6486
WYOMING			
CASPER	1025	6541	6243
CHEYENNE	1007	6211	6123
LANDER	997	6674	6682
SHERIDAN	968	6834	6525

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

MARCH 1971

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	0	11	
HUNTSVILLE	0	0	
MOBILE	37	68	
MONTGOMERY	2	9	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	0	0	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	0	0	
BIG DELTA	0	0	
COLD BAY	0	0	
FAIRBANKS	0	0	
GULKANA	0	0	
HOMER	0	0	
JUNEA	0	0	
KING SALMON	0	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	0	
PHOENIX	76	85	
TUCSON	45	51	
WINSLOW	1	1	
YUMA	84	117	
ARKANSAS			
FORT SMITH	2	2	
LITTLE ROCK	11	11	
CALIFORNIA			
BAKERSFIELD	7	7	
BISHOP	0	0	
BLUE CANYON	0	0	
EUREKA U	0	0	
FRESNO	0	0	
LONG BEACH	25	44	
LOS ANGELES	0	31	
LOS ANGELES U	16	115	
MT SHASTA R	0	0	
OAKLAND	0	0	
RED BLUFF	0	0	
SACRAMENTO	0	0	
SANDBERG R	0	0	
SAN DIEGO	0	8	
SAN FRANCISCO	0	0	
SAN FRANCISCO U	0	0	
SANTA MARIA	0	7	
STOCKTON	0	0	
COLORADO			
ALAMOSA	0	0	
COLORADO SPRINGS	0	0	
DENVER	0	0	
GRAND JUNCTION	0	0	
PUEBLO	0	0	
CONNECTICUT			
BRIDGEPORT	0	0	
HARTFORD	0	0	
DELAWARE			
WILMINGTON	0	0	
DIST.OF COLUMBIA			
WASHINGTON DULLES	0	0	
WASHINGTON NATIONAL	0	0	
FLORIDA			
APALACHICOLA U	17	22	
DAYTONA BEACH	45	149	
FORT MYERS	96	335	
JACKSONVILLE	32	89	
KEY WEST	241	665	
LAKELAND U	73	219	
MIAMI	202	597	
ORLANDO	93	264	
PENSACOLA	20	46	
TALLAHASSEE	22	58	
TAMPA	58	198	
WEST PALM BEACH	116	384	
GEORGIA			
ATHENS	0	0	
ATLANTA	0	0	
AUGUSTA	0	0	
COLUMBUS	1	3	
MACON	2	3	
ROME	0	0	
SAVANNAH	18	32	
HAWAII			
HILO	142	546	
HONOLULU	284	769	
KAHULUI	271	640	
LIHUE	283	692	
IDAHO			
BOISE	0	0	
LEWISTON	0	0	
POCATELLO	0	1	
ILLINOIS			
CAIRO U	0	0	
CHICAGO O HARE	0	0	
CHICAGO MIDWAY	0	0	
MOLINE	0	0	
PEORIA	0	0	
ROCKFORD	0	0	
SPRINGFIELD	0	0	
INDIANA			
EVANSVILLE	0	0	
FORT WAYNE	0	0	
INDIANAPOLIS	0	0	
SOUTH BEND	0	0	
IOWA			
BURLINGTON	0	0	
DES MOINES	0	0	
DUBUQUE	0	0	
SIOUX CITY	0	0	
WATERLOO	0	0	
KANSAS			
CONCORDIA	0	0	
DODGE CITY	2	2	
GOODLAND	0	0	
TOPEKA	3	3	
WICHITA	0	0	
KENTUCKY			
COVINGTON	0	0	
LEXINGTON	0	0	
LOUISVILLE	0	0	
LOUISIANA			
ALEXANDRIA	17	37	
BATON ROUGE	21	54	
LAKE CHARLES	28	68	
NEW ORLEANS	44	98	
SHREVEPORT	24	47	
MAINE			
CARIBOU	0	0	
PORTLAND	0	0	
MARYLAND			
BALTIMORE	0	0	
MASSACHUSETTS			
BLUE HILL OBS R	0	0	
BOSTON	0	0	
WORCESTER	0	0	
MICHIGAN			
ALPENA	0	0	
DETROIT	0	0	
DETROIT METRO	0	0	
FLINT	0	0	
GRAND RAPIDS	0	0	
HOUGHTON LAKE	0	0	
LANSING	0	0	
MARQUETTE U	0	0	
MUSKEGON	0	0	
SAULT STE MARIE	0	0	
MINNESOTA			
DULUTH	0	0	
INTERNATIONAL FALLS	0	0	
MINNEAPOLIS	0	0	
ROCHESTER	0	0	
ST CLOUD	0	0	
MISSISSIPPI			
JACKSON	10	26	
MERIDIAN	4	11	
MISSOURI			
COLUMBIA REGIONAL	0	0	
KANSAS CITY	5	5	
ST JOSEPH	4	4	
ST LOUIS	2	2	
SPRINGFIELD	0	0	
MONTANA			
BILLINGS	0	0	
GLASGOW	0	0	
GREAT FALLS	0	0	
HAVRE	0	0	
HELENA	0	0	
KALISPELL	0	0	
MILES CITY	0	0	
MISSOULA	0	0	
NEBRASKA			
GRAND ISLAND	0	0	
LINCOLN U	0	0	
NORFOLK	0	0	
NEBRASKA			
NORTH PLATTE	0	0	
OMAHA	0	0	
SCOTTSBLUFF	0	0	
VALENTINE	0	0	
NEVADA			
ELKO	0	0	
ELY	0	0	
LAS VEGAS	24	24	
RENO	0	0	
WINNEMUCCA	0	0	
NEW HAMPSHIRE			
CONCORD	0	0	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	0	0	
ATLANTIC CITY U	0	0	
NEWARK	0	0	
TRENTON U	0	0	
NEW MEXICO			
ALBUQUERQUE	5	5	
CLAYTON	4	4	
ROSWELL	14	14	
NEW YORK			
ALBANY	0	0	
BINGHAMTON	0	0	
BUFFALO	0	0	
NEW YORK U	0	0	
NEW YORK KENNEDY	0	0	
NEW YORK LA GUARDIA	0	0	
ROCHESTER	0	0	
SYRACUSE	0	0	
NORTH CAROLINA			
ASHEVILLE	0	0	
CAPE HATTERAS R	0	0	
CHARLOTTE	0	0	
GREENSBORO	0	0	
RALEIGH	0	0	
WILMINGTON	0	0	
NORTH DAKOTA			
BISMARCK	0	0	
FARGO	0	0	
WILLISTON	0	0	
OHIO			
AKRON	0	0	
CINCINNATI ABBE OB	0	0	
CLEVELAND	0	0	
COLUMBUS	0	0	
DAYTON	0	0	
MANSFIELD	0	0	
TOLEDO	0	0	
YOUNGSTOWN	0	0	
OKLAHOMA			
OKLAHOMA CITY	4	4	
TULSA	3	3	
OREGON			
ASTORIA	0	0	
BURNS U	0	0	
EUGENE	0	0	
MEACHAM	0	0	
MEDFORD	0	0	
PENDLETON	0	0	
PORTLAND	0	0	
SALEM	0	0	
SEXTON SUMMIT R	0	0	
PACIFIC AREA			
GUAM TAGUAC R	427	1210	
JOHNSTON	349	1041	
KOROR R	537	1514	
KWAJALEIN	438	1307	
MAJURO	500	1448	
PAGO PAGO	454	1338	
PONAPE R	454	1353	
TRUK MOEN ISLAND	515	1497	
WAKE	426	1144	
YAP R	521	1441	
PENNSYLVANIA			
ALLENTOWN	0	0	
ERIE	0	0	
HARRISBURG	0	0	
PHILADELPHIA	0	0	
PITTSBURGH	0	0	
SCRANTON	0	0	
WILLIAMSPORT	0	0	
RHODE ISLAND			
BLOCK ISLAND	0	0	
PROVIDENCE	0	0	
SOUTH CAROLINA			
CHARLESTON	5	12	
CHARLESTON U	0	0	
COLUMBIA	2	5	
GRNVLLE SPRTNBRG	0	0	
SOUTH DAKOTA			
ABERDEEN	0	0	
HURON	0	0	
RAPID CITY	0	0	
SIOUX FALLS	0	0	
TENNESSEE			
BRISTOL	0	0	
CHATTANOOGA	0	0	
KNOXVILLE	0	0	
MEMPHIS	1	3	
NASHVILLE	0	0	
OAK RIDGE R	0	0	
TEXAS			
ABILENE	26	26	
AMARILLO	13	13	
AUSTIN	86	86	
BROWNSVILLE	293	593	
CORPUS CHRISTI	187	187	
DALLAS	36	45	
DEL RIO	114	143	
EL PASO	45	45	
FORT WORTH	21	27	
GALVESTON U	45	45	
HOUSTON INTERCON	98	121	
LUBBOCK	14	14	
MIDLAND	19	19	
PORT ARTHUR	42	108	
SAN ANGELO	43	53	
SAN ANTONIO	131	180	
VICTORIA	104	104	
WACO	66	86	
WICHITA FALLS	14	14	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	0	0	
WENDOVER	0	0	
VERMONT			
BURLINGTON	0	0	
VIRGINIA			
LYNCHBURG	0	0	
NORFOLK	0	0	
RICHMOND	0	0	
ROANOKE	0	0	
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	0	0	
QUILLAYUTE	0	0	
SEATTLE TACOMA	0	0	
SPOKANE	0	0	
STAMPEDE PASS R	0	0	
WALLA WALLA U	0	0	
YAKIMA	0	0	
WEST INDIES			
SAN JUAN P.R.	448	1189	
WEST VIRGINIA			
BECKLEY	0	0	
CHARLESTON	0	0	
ELKINS	0	0	
HUNTINGTON	0	0	
PARKERSBURG U	0	0	
WISCONSIN			
GREEN BAY	0	0	
LA CROSSE	0	0	
MADISON	0	0	
MILWAUKEE	0	0	
WYOMING			
CASPER	0	0	
CHEYENNE	0	0	
LANDER	0	0	
SHERIDAN	0	0	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural.

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
								† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	5	4	0	2	6	0	0	5	4	0	1	5	0																
Alaska																		0	0	4	0								
Arizona *																													
Arkansas	1	1	0	0	3	0	0	3	0	0	0	4	0																
California *																													
Colorado										1	4	5	0																
Connecticut										0	0	4	0									0	0	4	0				
Delaware										0	0	4	0					0	0	4	0								
Florida	8	2	0	0	4	0	0	0	3	0	2	4	0	1	0	0	0												
Georgia	1	1	0	0	4					0	4	5	0	0	0	1	0					2	2	6	0	0	0	6	4
Hawaii *																													
Idaho										3	1	5						0	0	4									
Illinois	1	1	0	0	2					0	1	?	0																
Indiana	5	2	0	7	5					0	5	5	0																
Iowa																		0	0	6	0								
Kansas										0	36	6	4													0	0	0	4
Kentucky										0	3	5	0					?	?	?	0					0	0	°6	C
Louisiana	1	1	1	7	6	0	0	?	?	0	30	5	0																
Maine										0	0	6	0					0	0	4	0								
Maryland										1	0	5	0					0	0	4	0								
Massachusetts										0	0	7	0					0	0	4	0	0	0	3	0				
Michigan																		0	0	4	0								
Minnesota *																													
Mississippi	1	1	0	0	5	0	0	?	0	0	0	?	0	0	0	5	0									0	0	4	0
Missouri	2	2	0	0	5					0	3	5	0	1	0	0	0												
Montana										0	0	5	0																
Nebraska																		1	10	6	0								
Nevada										0	0	?	0																
New Hampshire										0	0	5	0					0	0	5	0								
New Jersey *																													
New Mexico	1	1	0	0	0																								
New York											4	5						4										4	
North Carolina	1	1	0	0	5					1	0	6	0	0	0	4	0	1	15	5	4					0	0	4	4
North Dakota *																													
Ohio										0	2	6						6	8	6		0	9	?					
Oklahoma	2	1	0	4	5	0	0	3	0	0	0	3	0													0	0	?	?
Oregon										0	0	5	5					0	0	?	0								
Pacific Area *																													
Pennsylvania										0	0	5	0					1	4	5	0								
Puerto Rico *																													
Rhode Island										0	0	5	0									0	0	4	0				
South Carolina	1	1	0	0	4					0	2	4	0					7	12	6	3	0	5	4	0	0	0	5	4
South Dakota														0	0	5	0					0	0	5	0				
Tennessee	1	1	0	0	6	0	0	5	0	0	5	6	0	0	0	4	0												
Texas	10	3	1	10	5	0	0	5	0	0	1	2	0	0	0	3	0												
Utah *																													
Vermont										0	0	5	0					0	0	6	0								
U.S. Virgin Is. *																													
Virginia										1	1	4	0					0	0	4	0								
Washington										2		6																	
West Virginia *																													
Wisconsin														0	0	4	0	0	0	5	0								
Wyoming *																													

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
\# Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
MARCH 1971

Elmer R. Nelson, Office of Hydrology

Moderate to severe flooding occurred in some areas in the South Atlantic and East Gulf of Mexico Drainages during March. Flooding on the Ocmulgee River at Macon, Ga., was of record proportions. The Oconee River at Milledgeville, Ga., reached its highest level since 1886. Major flooding occurred along the Flint and Apalachicola Rivers in Georgia, the Pee Dee, lower Broad and Congaree Rivers in South Carolina and on the Tallapossa and Alabama Rivers in Alabama. Widespread lowland flooding occurred along the Pearl River in Mississippi and Louisiana.

At Fairbanks, Alaska, water equivalent of snow on the ground on Mar. 24 was reported to be more than 8 inches. At some points in the Chena River Basin, the snowpack was reportedly as much as twice the average for this time of year.

ST. LAWRENCE DRAINAGE

Lake Michigan.--Rapid snowmelt during mid-March caused minor flooding on the Red Cedar River at Williamston, Mich., on the 15-16th. No flooding occurred downstream at East Lansing, Mich.

Ice jams on the Grand River caused fluctuations in the river level in the Comstock Park area at Grand Rapids, Mich., between Feb. 23 and Mar. 4. Most of the damage resulted from ice action. About 40 homes were evacuated due to high water.

Lake Huron.--Minor flooding occurred on the Shiawassee River at Owosso, Mich., on the 15th. No damage resulted.

Lake Erie.--The flooding on the St. Joseph River at Montpelier, Ohio, in the beginning of the month was due to heavy rain on frozen ground on Feb. 19-20. The crest on Feb. 21 was 4.2 ft. above flood stage. The St. Joseph River exceeded flood stage again on Mar. 15-19. The crest on the 17th was 3 ft. lower than the first crest.

Lake Ontario.--Minor flooding occurred on Oatka Creek at Garbutt, N. Y., from Feb. 28 to Mar. 1 and on Mar. 16-17. No damage resulted from the two rises.

Extensive flooding occurred in the lower Black Creek Valley at Churchville, N. Y., on Feb. 27 to Mar. 3 and on Mar. 16-18. No damage resulted from the two rises as the high water occurred over pasture land, or land not in use at this time of the year. State route 258 was flooded for more than one week and route 63 was flooded with 2/3 foot of water on the night of Mar. 15.

ATLANTIC SLOPE DRAINAGE

Warm temperatures and snowmelt with substantial rainfall resulted in some minor rural lowland flooding in the Wallkill Basin and on Wappinger Creek in eastern New York. An ice jam on the Wallkill near New Paltz, N. Y., caused some lowland flooding for about one week, affecting several homes and one highway.

Minor flooding occurred on the Chemung and Susquehanna River in New York on the 16-17th. Crests on the Chemung River ranged from 2 to 4 ft. above flood stage on the 16th. No damage, however, was reported.

All 13 major water supply reservoirs in New Jersey were filled to 100% capacity by the end of March, with most of them overflowing. The pumped storage reservoir at Round Valley was filled to 92% capacity, the highest storage yet recorded. New York City's three reservoirs on the upper Delaware increased storage by 50.5 billion gallons during March and are now at 86% of usable capacity with Cannonsville already filled to capacity and spilling from the 21st to the end of the month. Lake Wallenpaupack increased storage by 9.4 billion gallons and is now at 72% of usable capacity.

The lower Neuse River at Kinston, N. C., was slightly above flood stage in the beginning of the month from the widespread precipitation during the closing days of February. Heavy rain during the 48 hour period ending at 7 a.m. on the 4th caused general flooding along the Neuse and Cape Fear Rivers and local flooding on the Roanoke and Tar Rivers. The precipitation totaled 2 to 4 inches over most of the Cape Fear, Tar and Neuse Basins and 1 to 2 inches over the Roanoke. Portions of the lower Cape Fear River rose some 15 ft. over its banks and the lower Neuse up to 6 ft. above bankfull.

The highest flooding since Oct. 1964 occurred along the Rocky River at Norwood, N. C. The crest on the 3d was over 10 ft. above flood stage. The highest flooding in a number of years occurred on the Lynches River at Effingham, N. C., on the 3d-12th. The Lumber River at Lumberton, N. C., has continued in flood from Jan. 30 and was still in flood at the end of March. The highest crest occurred on Mar. 5 when it reached a stage of 14.4 ft., 5.4 ft. above flood stage. The flooding along the lower Waccamaw River from the 14th through the 22d made closing of the railroad drawbridge at Conway, S. C., necessary for 5 or 6 days. Lowland and swampland were the principal areas affected along the Black River. The crest of 15.2 ft. at Kingstree, S. C., lacked less than 1 foot of equalling the 1945 flood level. Flooding occurred on the Little Pee Dee River almost all month and was the highest since 1964. Major flooding occurred along the Pee Dee River from below Blewett Lake, N. C., downstream to Cheraw and Peedee, S. C., to the coast. The rapid rise of over 18 ft. within 24 hrs. at Cheraw, S. C., gave little time for protective measures. The crest of 38.3 ft. (flood stage 30 ft.) at Cheraw equalled the August 1970 flood. At Peedee, S. C., the crest of 24.0 ft. was the highest since Oct. 1964. Flooding occurred along the Saluda River from below Lake Greenwood to the upper end of Lake Murray on the 2d-5th. Major flooding occurred along the lower Broad River from Blair, S. C., to Columbia, S. C., and along the Congaree River below Columbia, S. C., from the 3d through the 7th. A rapid rise occurred in Wateree Lake level on the 3d with a crest 2.3 ft. above full lake on the 5th. The North Fork Edisto at Orangeburg, S. C., and the Edisto River at Givhans, S. C., rose 3.5 to 4 ft. above flood stage between the 3d and 19th. Flooding began again on the North Fork and Edisto on the 28-29th and continued the rest of the month. The total damages from the flooding were estimated at $348,100.

Moderate to heavy flooding occurred on the Savannah and Ogeechee Rivers in Georgia during March. Butler Creek near Augusta, Ga., and the Savannah River reached their highest stages since April 1964. The Ogeechee River at Midville, Ga., crested at its highest stage (9.1 ft.) since March 1944. Light to moderate damage resulted from the overflows.

Record flooding occurred on the Ocmulgee River at Macon, Ga., on the 3d-7th. The crest of 28.95 on the 4th exceeded the previous record stage of 28.0 reported on Nov. 29, 1948 by nearly 1 foot. No major damage resulted from the record high stage. Three or four homes along the river were evacuated. The Geological Survey lost their river gaging equipment at Macon which was valued at about $1,000. Some sand-bagging of low areas at Hawkinsville, Ga., prevented major damage. The Oconee River at Milledgeville, Ga., reached

its highest level (40.2 ft.) since 1886. This was prior to gage records when a stage of 46.6 ft. was recorded from a high water mark. The crest of 40.2 ft. exceeded the previous highest stage of 38.7 ft. recorded in Aug. 1928 by 1.5 ft. The only area of damages occurred in Jones County where the State Highway Commission reported several culverts and dirt roads under construction were washed out. The record to near record flooding was due to 5 to 6 inches of rain during the first 3 days of March.

EAST GULF OF MEXICO DRAINAGE

Heavy and prolonged rainfall during the first week of the month caused flash floods along some small streams in Georgia and major flooding along the Apalachicola, Flint and Chattahoochee Rivers. Another period of heavy rain on the 25-26th caused sharp rises on main streams and minor flooding on the Apalachicola and Flint Rivers. Crest stages on the Flint River during the first 2 weeks of March ranged from about 11 ft. above flood level in the Albany, Ga., area to near 5 ft. above flood level upstream from Crisp County Dam and 3 ft. above flood stage in the lower portion of the river near the pool of Jim Woodruff Dam. On the Chattahoochee River, flooding occurred during the first week of March downstream from West Point, Ga. The crest of the flood ranged from 2.5 ft. above flood stage at West Point to about 8.5 ft. above the flood level in the lower portion of the river. Except for two days (Mar. 23-24) the Apalachicola River at Blountstown, Fla., was above flood stage the entire month.

The most extensive flooding since 1964 occurred in Alabama during March. Major floods occurred on the Alabama and Tallapoosa Rivers with all points exceeding flood stage by several feet. The lower Choctawhatchee River at Caryville, Fla., rose above flood stage on two occasions. Minor flooding occurred on the upper Cahaba River early in the month. The most severe flooding occurred on the Tallapoosa and Alabama Rivers with extensive overflow of pastures and woodlands but very little in urban areas. About 25 families were evacuated in the Montgomery area. The total damages were estimated by the Corps of Engineers at $939,500.

Widespread lowland flooding continued during March along the Pearl River from Edinburg, Miss., downstream to Pearl River, La., from the latter part of February. Lowland flooding in the Jackson, Miss., area was limited due to the levee system around the city. Levees were patroled by Civil Defense Units and minor boils in the levee were contained by the Corps of Engineers. Low-lying farm and timber lands adjacent to the river south of Jackson to Pearl River, La., were inundated most of the month. Farming and timber cutting operations were halted in these areas. Lowland flooding on the Chickasawhay, Leaf and Pascagoula Rivers was brief and of little consequence. Flooding along the lower Pearl and at Jackson, Miss., continued into April. Rainfall amounts over Mississippi during March were heavy and ranged from 3.5 inches over the northwest to almost 14.5 inches in the southeast. Rainfall amounts were evenly distributed throughout the month with precipitation occurring every three days. The heavier amounts (1 to 3 inches) occurred on the 1st and around the 18th of the month.

MISSISSIPPI SYSTEM

Upper Mississippi Basin.--There was an unusually heavy snow cover over the Upper Mississippi Basin in Minnesota and Wisconsin in the beginning of March. The blizzard that swept across Minnesota on Feb. 26-27 deposited up to 19 inches of snow. This added to the snowpack an amount of precipitation equalling or exceeding that normally expected during the entire month of March. Precipitation during March was below to much below normal except near normal over the upper portion of the St. Croix and Chippewa Basins. Departures were as much as 0.5 to 0.75 inch below long-term means. Most of the precipitation fell as snow during the 10-day period Mar. 10-20. March temperatures were near the long-term mean.

During the last half of March daytime temperatures were frequently above freezing dropping to below freezing at night. As a result, runoff came in a series of pulses rather than in a single rapid melt. This favorable temperature regime helped to keep crests lower than had the snowmelt occurred rapidly.

The Minnesota River crested at Mankato, Minn., on Mar. 19, at a stage of 17.0 ft., 2 ft. below flood stage. Crests in the Jordan to Savage, Minn., reach on Mar. 23-27 were up to 5.2 ft. above flood stage. Tributaries crested about the same time. Quite frequently the Mankato crest coincides with that of the Mississippi River at St. Paul. This spring the crest of the Minnesota River was about 3 weeks ahead of the Mississippi River crest and as a result the crest at St. Paul was reduced considerably.

The Pecatonica and Rock Rivers in northern Illinois which had crested in late February receded to below flood stage during the first week in March. Rains of 1/2 to 1 inch and warm temperatures melted the remainder of the snow causing the tributaries to rise to near bankfull stage around the middle of the month.

The flooding along streams in Iowa in the beginning of the month was due to heavy precipitation on Feb. 17-18 and snowmelt runoff. Considerable ice action along these rivers during the high water caused the water level to fluctuate considerably as the ice jams formed and broke up. Flooding was generally restricted to low-lying farm lands. No significant rain fell on the snowpack during March. This coupled with alternating freeze-thaw cycles allowed melting of the snow with a minimum of flooding. A sharp warming trend on Mar. 10-14 resulted in sudden snowmelt which caused minor flooding of the Des Moines, Iowa, Raccoon, Skunk and East Fork of the Des Moines River and Black Hawk Creek. The greatest flooding was in the middle reaches of the Skunk and Iowa Rivers where it was 3 ft. out of banks. The snowmelt was halted on Mar. 15 as temperatures turned much colder. Crests moved downstream resulting in flooding of only low-lying farm lands.

The minor to moderate flooding in central Illinois in the beginning of the month was due to moderate to heavy rains (1 to 2 inches) on Feb. 21-22. The Big Muddy River at Murphysboro, Ill., which crested nearly 10 feet above flood stage on Feb. 27 receded within its banks on Mar. 8.

Minor flooding occurred early in the month along the Mississippi River from Hannibal, Mo., downstream to Grafton, Ill. Overflows ranged from near bankfull at Winfield, Mo., and Grafton, Ill., to 1.5 ft. above flood stage at Hannibal. This flooding was due to precipitation which occurred upstream late in February.

Missouri Basin.--Minor flooding occurred during March in the Missouri Basin along the Cannonball River at Breien, N. Dak., and west of Mandan on the Heart River. Minor flooding occurred farther west on the Heart River at the junction of Highway 31 where it crosses the Heart River below its confluence with Big Muddy Creek. Favorable fluctuations in temperature

and generally light precipitation decreased the intensity of the flooding from the heavier than normal snowfall during the winter of 1970-71. No significant damage to property or injuries resulted from the minor flooding.

Ice jams on the lower Bad River in South Dakota caused the river to rise 1.4 ft. above bankfull stage on the 14th. There was no actual overflow as the ice jams occurred just below the gage. The lower river banks which overflow at 16 ft. are farther downstream. Ice jams caused the White River at Oacoma, S. Dak., to rise 2.4 ft. above flood stage between the 12th and 15th. Only lowland flooding resulted.

The flooding on Bazile Creek at Niobrara, Nebr., in the beginning of the month was due to runoff from snowmelt and ice jams during the latter half of February. Ice jams early in March caused Bazile Creek to rise above bankfull stage on the 4-7th. The 16.15 foot crest on the 5th was more than 4 ft. lower than the record crest of 20.4 ft. on Feb. 19.

Minor flooding occurred on the James River at Scotland, S. Dak., on the 16-17th. The river at Mitchell, S. Dak., rose to a foot below bankfull level on the 18th and 1/2 bankfull at Huron, S. Dak., on the 16th.

An ice jam on the Sioux River near Brookings, S. Dak., caused the river to rise 5 1/2 ft. over flood stage between the 13th and 19th. The flooding was local, inundating only about 50 acres.

Snowmelt caused the Little Sioux River in western Iowa to rise 1 to 3 ft. above flood stage in the upper reaches and near and below flood stage downstream from Cherokee, Iowa. Most of the high water covered lowland farm areas. Property damage was very light.

Ice breakup and runoff from snowmelt occurred in the Big Blue Basin of southern Nebraska during the middle of the month. Light to moderate overflows developed along the Big Blue River and its tributaries above Beatrice, Nebr. In general only the lower lowlands were inundated. Damage was confined mainly to fences, roads and bridges.

Minor flooding occurred on the Little Osage River at Schell City, Mo., from Feb. 26 to Mar. 3.

Local flooding occurred along the Missouri River at Nebraska City, Nebr., on the 14-15th and at St. Joseph, Mo., on the 14-16th. The flooding was very light and no damages were reported.

Ohio Basin.--The flooding in the Ohio Basin during March was mostly a continuation of the flooding that began during the last 10 days of February. Most of the streams crested during February except for the main stem of the Ohio in the reach at and below Mt. Vernon, Ind. This flooding was due to heavy rainfall (2.5 inches) over the basin above Addison, Ky., (Dam 45) and 1 to 2 inches over the lower basin on Feb. 21-23. These rains caused considerable flooding in the lower portion. Flood damage was generally confined to farm lands and roads and was estimated at nearly $3 million during February and March.

White Basin.--Flooding continued along the Cache River at Patterson, Ark., from Feb. 14 to Mar. 24. The crest on Mar. 1 was 1.6 ft. above flood stage. The flooding was due to heavy rain on Feb. 12-13 and Feb. 21-22. No damage resulted from the flooding.

Lower Mississippi Basin.--The flooding on the St. Francis River at St. Francis, Ark., on Feb. 22 to Mar. 4 was due to heavy rains (2 inches) on Feb. 21. The crest on Feb. 23 was 1.5 ft. above flood stage.

Lowland flooding continued along the Big Black River at Bovina, Miss., from Feb. 26 to Mar. 24 and again from Mar. 25 to Mar. 31. The first rise was due to heavy rains on Feb. 23. Precipitation was evenly distributed throughout March with precipitation occurring every 3 days. Heavier amounts fell on the first and again on the 18th of March. One to 3 inches of rain fell in each period. The first crest on Mar. 4 was 10.3 ft. above flood stage and the second crest on Mar. 25 was 1.7 ft. above flood stage.

The Lower Mississippi River at New Madrid and Caruthersville, Mo., rose above flood stage on Feb. 25 and receded within its banks on Mar. 12-14. The crests observed on Mar. 6-7 were the highest since May 1970.

WEST GULF OF MEXICO DRAINAGE

The only flooding in the West Gulf of Mexico Drainage during March occurred on the Calcasieu River at Hineston, La. The first rise occurred on Mar. 1-8 and the second on Mar. 22-25. The flooding was minor and no damage was reported.

PACIFIC SLOPE DRAINAGE

Central Coastal Basins.--Minor flooding occurred on the Van Duzen and Eel Rivers in northern California on Mar. 26. This was the first flooding on the Eel River during the month of March since 1949. The only record of the Eel River reaching flood stage in March prior to that year was in 1940. Approximately 2,200 acres were inundated in the Eel River delta and Starvation Flats area on the Van Duzen River. However, this same acreage had not been restored from the previous high water in January. This flooding was due to rainfall that averaged 6 inches on Mar. 22-25. Over one half of this amount (3.4 inches) occurred on Mar. 25.

Heavy rain (2 to 4 inches) on the 11-13th caused minor flooding on the South Fork Coquille River at Myrtle Point, Oreg., on the 12th. No damage resulted from this rise.

Columbia Basin.--An intense storm moved into the middle and upper Snake River Basin late on the 25th and 26th. Rains of 0.5 to 0.75 inch brought a surge to streams along the Weiser River. The Weiser River rose to a crest of 8.5 ft., 0.5 ft. above flood stage, on the 26th. The flood waters receded below flood stage on the 28th. No property damage was reported. During this same period, the Owyhee and Portneuf Rivers showed a marked increase in flow. No flooding occurred from the Portneuf, although water was reported over the bank in the vicinity of Inkom and McCammon, Idaho. The only high water on the Owyhee River was from the large discharge released from the reservoir causing high water along the channel from the damsite to its confluence with the Snake River above Nyssa, Oreg. High water also occurred in Willow Creek on the outskirts of Idaho Falls, Idaho, on Mar. 25 & 26. Some localized flooding occurred.

Late on the 9th, the first of a warmer storm series began bringing 2-inch precipitation amounts to coastal areas (northern Oregon beaches) and daily one-inch amounts to Coast Range Willamette Valley locations. This lasted through the morning of the 12th. The 3-day storm total was about 6 inches at northern coastal stations and near 3 inches at Coast Range locations. All Coast Range Willamette tributaries responded with substantial rises. The Marys River near Philomath, Oreg., crested 0.3 ft. below flood stage on the 12th. The Luckiamute River near Suver, Oreg., crested just under flood stage (27 ft.) on the 12th near 26.9 ft. The Nehalem River near Foss, Oreg., had an initial crest on the 11th, very close to the 13 foot flood stage and then reached a secondary and higher crest of near 16 ft., on the 12th. The South Yamhill River near

Whiteson, Oreg., rose steadily to slightly above bankfull stage by mid-afternoon on the 11th, leveled off for several hours and then rose rapidly to a crest near 41.8 ft. about 9 p.m. on the 12th. The more sluggish basins (the Pudding and Tualatin) responded with gradual rises which eventually resulted in crests of 21.0 ft. at Aurora, Oreg., and 32.3 ft. at Farmington, Oreg., on the 14th, 1.0 and 3.3 ft. above their respective flood stages. Minor rises were noted on the main stem of the Willamette during this period. The Corps of Engineers estimated the damage from overbank flows at $276,000.

Northern Coastal Basin.--Minor overflow occurred along the Chehalis River at Centralia, Wash., on the 12-13th. The river crested 1.3 ft. above flood stage on the 13th. This overflow was due to heavy rains totalling about 5 inches in 2 days in the Willapa Hills, but less elsewhere in the basin. Damage was minor.

FLOOD STAGE DATA

All dates in 1951 unless otherwise indicated. Apr. 1951

River and station	Flood stage	Above flood stages -dates From-	To-	Crest * Stage	Date
ST. LAWRENCE DRAINAGE	Ft.			Ft.	
Lake Michigan					
Red Cedar: Williamston, Mich.	7		15 16	7.5	16
Grand: Grand Rapids (Comstock Park), Mich.	12	Feb. 23	4	15.3	1
Lake Huron					
Shiawassee: Owosso, Mich.	7		15 15	7.0	15
Lake Erie					
St. Joseph: Montpelier, Ohio	10	Feb. 20	2	11.2	Feb. 21
Lake Ontario					
Canaseraga Creek: Groveland, N. Y	11	15	16	13.7	15
Oatka Creek: Garbutt, N. Y.	5	Feb. 28 16	2 17	5.4 E 6.0	Feb. 28 17
Black Creek: Churchville, N. Y.	5	Feb. 25 16	3 18	7.15 7.1	1 17
Genesee: Scio, N. Y.	8	15	16	9.2	16
ATLANTIC SLOPE DRAINAGE					
Chemung: Elmira, N. Y.	10	16	16	E12.0	16
Chemung, N. Y.	12	16	17	15.9	16
Susquehanna: Conklin, N. Y.	11	16	17	E11.5	16
Roanoke: Williamston, N. C.	10	5	18	10.9	12-14
Tar: Greenville, N. C.	13	7	10	13.1	8
Neuse: Neuse, N. C.	14	5	6	14.9	6
Smithfield, N. C.	13	3	9	18.5	6
Goldsboro, N. C.	14	3	14	20.4	10
Kinston, N. C.	14	Feb. 28	17	17.6	13
Cape Fear: Moncure, N. C.	20	4	4	20.2	4
Fayetteville, N. C.	35	4	7	42.8	5
William O. Huske L&D (nr), Tarheel, N. C.	42	3	9	56.8	5
Lock No. 2, Elizabethtown, N. C.	20	3	10	31.2	6
Rocky: Norwood, N. C.	15	3	3	25.25	3
Lynches: Effingham, N. C.	14	3	12	17.4	5
Lumber: Lumberton, N. C.	9	Jan. 30	Apr. 17	11.8 11.4 14.4	Feb. 10 Feb.26-28 5
Waccamaw: Conway, S. C.	7	14	22	7.8	16-18
Black: Kingstree, S. C.	12	4	12	15.2	7
Little Pee Dee: Galivants Ferry, S. C.	9	2	Apr. 11	12.3	8
Pee Dee: Cheraw, S. C.	30	4	6	38.3	5
Peedee, S. C.	19	Feb. 25	21	24.0	10
Saluda: Chappells, S. C.	14	2	5	22.5	4
Broad: Blair, S. C.	14	3	6	23.9	4
Congaree: Columbia, S. C.	19	3	5	21.55	4
Wateree: Lake Wateree, S. C.	100	4	6	102.3	5
Camden, S. C.	23	5	5	23.5	5
North Fork Edisto: Orangeburg, S. C.	8	3 28	10 Apr. 1	11.6 8.7	5 28
Edisto: Givhans, S. C.	10	4 29	19 Apr. 17	13.9 11.5	11 2-3
Broad: Carlton Bridge, Ga.	15	3	4	#22.4	1
Stevens Creek: Modoc, S. C.	18	2 26	5 27	#32.5 #24.4	3-4 26
Butler Creek: Augusta(8SSE), Ga.	21	4	7	#23.4	5
Savannah: Wade Plantation, Ga.	15	7	21	#19.5	9
Glyo, Ga.	11	4	Apr. 13	#18.9 13.9	14 Apr. 6-7
Ogeechee: Midville, Ga.	6	6 31	9 Apr. 1	#9.1 #6.5	7 31
Dover, Ga.	7	4 29	17 Apr. 7	#11.0 #7.7	10 Apr. 3
Eden, Ga.	9	4 31	25 Apr. 13	#13.6 #10.4	13 Apr. 7
Ocmulgee: Macon, Ga.	18	2 26	7 28	28.95 19.95	4 28
Hawkinsville, Ga.	25	6	16	42.1	7

River and station	Flood stage	Above flood stages -dates From-	To-	Crest * Stage	Date
ATLANTIC SLOPE DRAINAGE	Ft.			Ft.	
Ocmulgee: Abbeville, Ga.	12	8	14	18.6	10
Lumber City, Ga.	15	11	18	20.3	14
Oconee: Milledgeville, Ga.	20	2 21	7 27	40.2 25.1	3 27
Dublin, Ga.	21	1 30	11 31	30.4 22.2	7 30
Mt. Vernon, Ga.	20	7 31	15 Apr. 1	22.9 17.75	12 Apr. 2
Altamaha: Charlotte, Ga.	15	9	20	24.25	13
Doctortown, Ga.	10	13	18	10.7	15-16
EAST GULF OF MEXICO DRAINAGE					
Chattahoochee: West Point, Ga.	19	3	4	#21.5	1
Columbus, Ga.	34	3	4	A38.4	4
Fort Gaines Dam, Ga.	134	4	7	#142.5	6
Columbia L&D, Ala	114	5	7	5	
Flint: Montezuma, Ga.	20	5	8	#24.7	6
Albany, Ga.	20	4 29 29	12 29 Apr. 1	#30.8 #21.2 #21.2	9 29 31
Newton, Ga.	24	9	13	#30.3	11
Bainbridge, Ga.	25	9	14	#27.9	12
Apalachicola: Jim Woodruff Dam, Fla.	66	4 29	9 29	#70.0 #66.0	8 29
Blountstown, Fla.	15	1 25	22 Apr. 11	#23.4 #21.5	8 30
Choctawhatchee: Newton, Ala.	19	27	28	22.7	27
Caryville, Fla	12	12 29	13 Apr. 3	12.1 13.2	12-13 31
Tallapossa: Milstead, Ala.	40	4	5	44.2	4
Cahaba: Centreville, Ala.	23	3	3	25.4	3
Alabama: Montgomery, Ala.	35	3	9	44.4	3
Selma, Ala.	45	4	10	49.3	6
Millers Ferry(L&D Tailwater), Ala.	71	3	12	78.4	8
Claiborne, Ala.	40	Feb. 27 29	17 Apr. 4	48.3 41.7	10-11 Apr. 1
East Fork Tombigbee: Fulton, Miss.	16	Feb. 27	1	16.7	Feb. 27
Tibbee: Tibbee, Miss.	23	Feb. 23	4	26.3	Feb. 28
Black Warrior: Warrior L&D, Ala.	30	Feb. 23	10	36.4 36.4	Feb. 26 6
Tombigbee: Aberdeen, Miss.	34	Feb. 23	1	39.0	Feb. 27
Columbus, Miss.	29	Feb. 25	3	33.4	1
Gainesville, Ala.	36	Feb. 23	12	47.9	6
Demopolis L&D, Ala.	48	Feb. 23	16	60.8	7
Coffeeville L&D, Ala (formerly Jackson L&D)	43	Feb. 23 27	24 Apr. 8	56.4 45.8	7 Apr. 1
Chickasawhay: Enterprise, Miss.	20	4	5	20.8	4
Shubuta, Miss.	30	3	4	30.05	3
Pascagoula: Merrill, Miss.	22	4	12	23.9	7
Pearl: Edinburg, Miss.	20	Feb. 24	9	23.1	Feb. 27
Jackson, Miss.	18	Feb. 23	Apr. 7	32.1	3
Monticello, Miss.	19	Feb. 27	25	26.7	3
Columbia, Miss.	17	3	23	19.4	7
Bogalusa, La.	15	Feb. 24	Apr. 12	19.6	10
Pearl River, La.	12	Feb. 27	Apr. 11	15.5	8
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Crow: Delano, Minn.	8	25	Apr. 8	#9.8	9
Yellow Medicine: Granite Falls (nr), Minn.	9	15	16	6.2	16
Redwood: Redwood Falls, Minn.	8	18	19	7.1	18
Cottonwood: New Ulm(nr), Minn.	11	15	17	#14.4	15
Minnesota: Jordan(nr), Minn.	20	19	Apr. 13	(25.2 (24.0	2 4
Chaska, Minn.	18	25	Apr. 11	(21.5 (21.0	25 3

FLOOD STAGE DATA

(All dates in March unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From—	To—	Crest * Stage	Date
MISSISSIPPI SYSTEM	Ft.			Ft.	
Minnesota: Savage, Minn.	698	22	Apr. 17	700.3	27
				700.9	5
Root: Hokah, Minn.	47	15	16	#49.7	16
		(31	Apr. 3	48.9	Apr. 2
[illegible]	14	31	Apr. 2	15.1	Apr. 1
Pecatonica: Martintown, Wis.	11	Feb. 19	4	16.0	Feb. 22
Freeport, Ill.	13	Feb. 20	1	16.3	Feb. 20
Shirland, Ill.	12	Feb. 19	6	16.9	Feb. 22
Rock [illegible], Ill	12	Feb. 20	3	17.7	Feb. 23
Moline, Ill.	12	Feb. 21	3	15.2	Feb. 24
Black Hawk Creek: Hudson, Iowa	12	14	17	15.5	14
Iowa: Wapello, Iowa	10	Feb. 21	5	13.9	Feb 23
		21	28	10.8	24
[illegible]	13	14	23	16 9	15
Skunk: Oskaloosa, Iowa	15	Feb. 19	4	20.2	Feb 27
		14	17	16.2	15
Brighton, Iowa	14	Feb 21	6	16.8	Feb. 26
East Fork Des Moines: Burt, Iowa	10	14	Apr. 13	11.9	17
North Raccoon: Jefferson, Iowa	10	Feb 19	1	15.7	Feb. 21
		12	20	13.9	15
		29	Apr 5	10.4	30
Raccoon: Van Meter, Iowa	13	14	15	14.5	14
Des Moines: Des Moines (SE 14th St), Iowa	21	14	17	21.5	15
Tracy, Iowa	14	Feb. 22	5	15.55	Feb. 27
		16	25	14.5	19
[illegible]	15	Feb. 20	5	18.0	Feb. 27
		17	26	15.7	18
Ottumwa, Iowa	10	Feb. 25	1	10.8	Feb. 27
Illinois: Havana, Ill	14	Feb. 23	7	14.7	Feb. 24
		23	29	14.3	25-27
Beardstown, Ill.	14	Feb. 25	7	14.6	2
Big Muddy: Murphysboro, Ill.	16	Feb. 15	8	25.7	Feb 27
Mississippi: Hannibal, Mo.	16	Feb. 26	4	17.5	1
Louisiana, Mo.	15	Feb. 27	3	16.25	1
Dam 24, Clarksville, Mo.	25	Feb. 27	4	26.4	1
Dam 25, Winfield, Mo	26	Feb. 28	3	26.4	Feb 28
Grafton, Ill.	18	1	4	18.4	4
Missouri Basin					
Heart: Mandan, N. Dak.	17	16	22	20.65	16
		30	31	17.4	31
Cannonball: Breien, N. Dak.	8	15	22	12.0	15
Bad: Fort Pierre, S. Dak.	16	14	14	17.4	14
White: Oacoma, S. Dak.	13	12	15	17.4	14
Bazile Creek: Niobrara, Nebr.	15	Feb. 19	2	20.4	Feb. 19
				18.4	Feb. 26
		4	7	16.15	5
James: Scotland, S. Dak.	13	16	17	13.2	17
Big Sioux: Brookings, S. Dak.	6	13	19	11.5	15
Little Sioux: Spencer, Iowa	10	Feb. 19	M	13.8	Feb 19
		13	20	13.0	14
		28	Apr. 4	11.5	30
Linn Grove, Iowa	12	13	24	17.3	15
		28	Apr. 7	15.0	Apr. 1
Peterson, Iowa	10	14	17	17.4	15
Cherokee, Iowa	17	17	17	17.5	17
Nishnabotna: Hamburg, Iowa	18	12	12	18.0	12
		13	13	18.7	13
Lincoln Creek: Seward 2W, Nebr.	13	13	14	H16.6	14
West Fork Big Blue: Dorchester 7NW, Nebr.	15	14	14	15.0	14
Turkey Creek: Wilber 2W, Nebr.	11	12	16	#12.5	13
Big Blue: Ulysses, Nebr.	15	M	M	#20 7	14
Seward, Nebr.	T22	14	15	23.1	15
Crete 2S, Nebr.	18	12	17	#22.7	16
[illegible]	5 5	1	1	6.0	1.7
Platte: Grand Island(nr), Nebr.	3.5	1	11	4.9	1
				4.8	8

River and station	Flood stage	Above flood stages -dates From—	To—	Crest * Stage	Date
MISSISSIPPI SYSTEM	Ft			Ft.	
Grand: Sumner, Mo.	26	Feb. 27	2	30.6	Feb. 28
Brunswick, Mo.	12	Feb. 27	2	14.65	Feb. 28
		14	16	12.65	15
Osage: Schell City, Mo.	25	Feb. 26	3	27.5	2
Missouri Nebraska City, Nebr.	18	14	15	18.35	14
St. Joseph, Mo.	17	14	16	18.2	15
Ohio Basin					
Green: Lock 2, Calhoun, Ky.	23	Feb. 22	3	#26.0	Feb. 26
Embarrass: Lawrenceville, Ill.	T15	Feb. 23	2	16.3	Feb. 27
White: Elliston, Ind.	18	Feb. 19	2	25.4	Feb. 24
Edwardsport, Ind.	15	M	4	21.9	Feb. 26
Petersburg, Ind.	16	Feb. 20	6	23.1	Feb. 28
Hazleton, Ind.	16	Feb. 21	M	24.1	Feb. 28
Little Wabash: Wilcox, Ill.	16	Feb. 19	1	#20.4	Feb. 24
Carmi, Ill.	27	Feb. 23	1	#28.2	Feb. 27
Wabash: Lafayette, Ind.	11	Feb. 19	3	15.8	Feb. 23
		15	18	13.7	16
Covington, Ind.	16	M	3	19.5	Feb. 23
		16	18	17.2	17
Montezuma, Ind.	14	Feb. 19	5	20.5	Feb. 23
		16	20	16.2	18
Terre Haute, Ind.	14	Feb. 20	5	18.0	Feb. 24
		17	20	14.4	19
Hutsonville, Ill.	20	Feb. 23	3	21.0	Feb. 27
Riverton, Ind.	18	Feb. 24	2	18.7	Feb. 27
Vincennes, Ind.	16	Feb. 23	5	18.6	Feb. 28
Mt. Carmel, Ill.	17	Feb. 22	8	23.8	2
New Harmony, Ind.	15	Feb. 25	8	#17.9	3
South Chickamauga Creek: Chickamauga(nr), Tenn.	10	3	3	11.7	3
Tennessee: Whitesburg, Ala.	560	Feb. 26	2	562.1	Feb. 28
Gilbertsville, Ky.	320	Feb. 22	16	330.4	Feb. 25
Ohio: Tell City, Ind.	38	Feb. 23	1	#40.6	Feb. 25
Dam 47, Newburgh, Ind.	38	Feb. 23	4	#42.6	Feb. 27
Dam 48, Cypress, Ind.	38	Feb. 24	5	#42.4	Feb. 27
Mt. Vernon, Ind.	35	Feb. 23	7	#40.0	Feb.28-1
Dam 49, Uniontown, Ky.	37	Feb. 24	8	#42.6	2
Shawneetown, Ill.	33	Feb. 22	16	#42.3	2
Dam 50, Fords Ferry, Ky.	34	Feb. 21	17	#45.3	3
Dam 51, Golconda, Ill.	40	Feb. 26	8	42.6	3
Paducah, Ky.	39	Feb. 24	10	42.3	4
Dam 52, Brookport, Ill.	37	Feb. 23	13	43.2	4
Dam 53, Grand Chain, Ill.	42	Feb. 23	15	49.1	4
Cairo, Ill.	40	Feb. 23	15	48.2	5
White Basin					
Cache: Patterson, Ark.	7	Feb. 14	24	8.6	1
Lower Mississippi Basin					
St. Francis: St. Francis, Ark.	18	Feb. 22	4	19.5	Feb. 23
Big Black: Bovina, Miss.	28	Feb. 26	24	38.3	4
		25	31	29.7	25
Mississippi: New Madrid, Mo.	34	Feb. 25	12	37.5	6
Caruthersville, Mo.	32	Feb. 25	14	36.5	6-7
WEST GULF OF MEXICO DRAINAGE					
Calcasieu: Hineston, La.	12	1	8	14.1	4
		22	25	13.5	24
PACIFIC SLOPE DRAINAGE					
Central Coastal Basins					
Van Duzen: Bridgeville(nr), Calif.	17	26	26	17.2	26
Eel: Fernbridge, Calif.	20	26	26	20.0	26
South Fork Coquille: Myrtle Point, Oreg.	35	12	12	36.0	12
				35.6	12

FLOOD STAGE DATA

(All dates in March or last preceding unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date
PACIFIC SLOPE DRAINAGE	*Ft.*			*Ft.*	
Columbia Basin					
Weiser: Weiser (10ENE), Idaho	8	26	28	8.5	26
South Yamhill: Whiteson, Oreg.	38	11	14	41.8	12
Pudding: Aurora, Oreg.	20	13	16	21.0	14
Tualatin: Farmington, Oreg.	29	13	18	32.3	14
Nehalem: Foss, Oreg.	13	11	14	16.0	12
Northern Coastal Basin					
Chehalis: Centralia, Wash.	63	12	13	E64.3	13

River and station	Flood stage	Above flood stages -dates		Crest *	
		From–	To–	Stage	Date

* Provisional
P Highest stage observed
Record stage
\ ABR-BDT discontinued
Reading taken at Eagle and Phenix Mills gage and adjusted to regular gage site.
B Bankfull
C Columbia Dam inundated Mar. 5-6 & 7
E Estimated
H High water mark
M Missing
T Tentative

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. 1001 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	96	-3.1	-7.4	29	2.0
1000	30	94			32	3.1
950	30	500	-4.2	-9.1	29	5.7
900	30	925	-6.3	-10.7	29	7.6
850	30	1,371	-8.0	-13.8	29	9.3
800	30	1,841	-9.0	-17.0	29	10.3
750	30	2,339	-10.9	-20.4	29	11.[illegible]
700	30	2,857	-13.0	-21.0	29	12.1
650	29	3,434	-15.5	-24.5	27	14.3
600	29	4,034	-18.8	-27.8	27	15.8
550	29	4,678	-22.8	-31.7	27	17.6
500	29	5,370	-27.6	-36.6	27	19.3
450	29	6,120	-32.8	-40.7	27	20.5
400	29	6,94[illegible]	-38.0	-45.8	27	25.0
350	29	7,852	-43.5	-48.7	27	26.3
300	28	8,896	-48.4		27	26.8
250	27	10,017	-50.1		27	29.1
200	27	11,540	-48.9		27	25.6
175	26	12,415	-49.2		27	22.7
150	23	13,410	-50.6		27	19.4
125	23	14,596	-52.1		27	16.5
100	22	16,028	-54.5		27	13.3
80	21	17,456	-55.8		27	9.6
70	21	18,304	-57.1		27	7.8
60	21	19,28[illegible]	-56.9		25	6.7
50	21	20,435	-57.2		25	4.7
40	21	21,849	-56.8		26	3.6
30	20	23,670	-56.2		25	4.5
25	20	24,830	-55.8		25	5.6
20	19	26,254	-54.8		25	5.8
15	16	28,108	-53.2		25	8.8
10	8	30,724	-49.6			
7						
5						

ALBUQUERQUE, N. MEX. 837 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	2.2	-12.7	01	1.1
1000	31	158				
950	31	584				
900	31	1,029				
850	31	1,495				
800	31	1,988	4.0	-15.2	30	4.3
750	31	2,510	1.1	-17.1	30	7.8
700	31	3,061	-2.3	-18.9	30	10.3
650	31	3,645	-5.9	-21.5	29	12.8
600	31	4,268	-9.3	-25.6	29	15.9
550	31	4,936	-13.5	-30.1	28	18.5
500	31	5,654	-18.4	-33.2	28	21.5
450	31	6,432	-23.8	-37.5	28	23.8
400	31	7,282	-29.8	-43.2	28	26.3
350	31	8,223	-36.4	-47.3	28	28.3
300	31	9,272	-44.0	-52.0	28	30.6
250	31	10,476	-51.6		27	35.4
200	31	11,907	-55.6		27	36.4
175	31	12,756	-57.3		27	35.9
150	31	13,724	-59.6		27	31.8
125	30	14,857	-63.5		27	29.1
100	29	16,218	-67.4		27	24.7
80	28	17,562	-66.9		27	19.9
70	27	18,375	-65.6		28	13.7
60	24	19,318	-65.0		27	8.3
50	24	20,434	-63.1		28	6.7
40	24	21,811	-61.5		28	4.9
30	22	23,614	-58.4		27	6.1
25	19	24,765	-56.9		27	8.6
20	14	26,199	-54.6		26	12.3
15	12	28,070	-51.3		27	15.4
10	6	30,740	-44.5			
7						
5						

AMARILLO, TEXAS 889 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	1.8	-7.5	24	1.8
1000	31	135				
950	31	557				
900	31	997				
850	31	1,461	4.6	-7.3	28	5.0
800	31	1,955	4.4	-10.1	28	7.9
750	31	2,479	2.4	-12.5	28	11.4
700	31	3,033	-1.2	-15.4	28	12.4
650	31	3,619	-5.1	-18.7	28	13.6
600	31	4,244	-8.9	-22.6	28	16.5
550	31	4,911	-13.5	-26.9	28	18.7
500	31	5,629	-18.6	-31.3	28	21.4
450	31	6,406	-24.1	-36.2	28	25.1
400	31	7,255	-30.3	-41.7	28	29.2
350	31	8,195	-37.0	-45.6	28	31.2
300	31	9,240	-44.8		28	34.8
250	31	10,440	-51.8		28	37.1
200	31	11,873	-55.6		28	38.5
175	31	12,721	-57.4		28	38.3
150	31	13,689	-59.8		27	35.6
125	30	14,818	-62.1		28	34.1
100	29	16,188	-64.8		28	27.6
80	27	17,545	-65.8		28	18.4
70	26	18,359	-65.7		28	13.7
60	26	19,300	-64.0		27	9.0
50	24	20,421	-62.9		28	8.0
40	24	21,804	-60.9		28	5.8
30	24	23,606	-57.5		27	8.4
25	23	24,762	-56.3		27	9.8
20	22	26,185	-55.2		27	10.8
15	22	28,039	-51.0		27	15.4
10	15	30,735	-42.3		27	23.0
7						
5						

* ANCHORAGE, ALASKA 1001 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	-10.9	-15.2	01	1.1
1000	31	50			01	1.4
950	31	446	-10.4	-17.0	02	3.1
900	31	861	-11.9	-18.1	04	2.9
850	31	1,297	-13.7	-19.9	08	2.4
800	31	1,757	-15.6	-22.8	12	2.4
750	31	2,241	-18.6	-26.0	15	3.4
700	31	2,753	-21.6	-29.5	15	4.3
650	31	3,295	-24.9	-33.6	16	4.2
600	31	3,873	-28.8	-36.2	17	3.6
550	31	4,490	-32.9	-39.1	18	3.3
500	31	5,155	-36.9	-41.9	17	3.3
450	31	5,878	-40.9	-44.8	17	3.7
400	31	6,671	-45.4		19	3.9
350	31	7,557	-49.2		19	4.6
300	31	8,558	-52.0		23	4.1
250	31	9,742	-50.6		26	4.9
200	31	11,205	-48.7		25	5.3
175	31	12,084	-48.1		26	5.5
150	31	13,101	-47.6		25	5.2
125	31	14,304	-48.1		26	5.2
100	31	15,771	-49.5		26	5.0
80	31	17,230	-50.2		26	4.4
70	31	18,101	-51.0		26	3.8
60	31	19,102	-51.7		26	3.1
50	30	20,287	-52.4		28	2.2
40	29	21,727	-53.4		36	1.3
30	26	23,573	-54.5		05	3.0
25	24	24,737	-54.9		05	4.8
20	18	26,173	-55.0		05	7.7
15	11	28,020	-57.1			
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* ANNETTE, ALASKA 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	1.4	-1.5	12	3.6
1000	31	59			13	2.6
950	31	471	-1.6	-4.5	15	5.4
900	31	899	-4.5	-6.9	16	7.8
850	31	1,347	-7.5	-9.4	18	8.4
800	31	1,816	-10.3	-12.6	18	8.8
750	31	2,311	-13.4	-16.4	20	9.7
700	31	2,832	-16.7	-20.3	19	9.4
650	31	3,386	-20.2	-23.9	20	9.1
600	31	3,974	-24.2	-28.3	20	9.6
550	31	4,603	-28.3	-33.2	20	9.7
500	31	5,281	-32.6	-37.7	21	10.7
450	31	6,016	-37.6	-39.6	22	11.0
400	31	6,819	-43.4	-42.8	22	12.0
350	31	7,709	-48.8		23	12.3
300	31	8,708	-53.4		24	12.8
250	31	9,881	-53.2		25	13.3
200	31	11,326	-51.0		25	13.4
175	31	12,197	-50.4		25	13.0
150	30	13,205	-50.3		25	11.7
125	29	14,396	-50.8		26	10.4
100	29	15,844	-52.3		25	9.8
80	29	17,283	-53.5		26	7.5
70	29	18,141	-54.2		26	6.3
60	28	19,125	-55.6		26	4.9
50	28	20,283	-57.2		27	3.8
40	27	21,692	-57.9		29	2.9
30	26	23,502	-58.8		34	2.4
25	25	24,646	-59.4		36	2.9
20	24	26,032	-60.1		03	3.8
15	24	27,826	-60.7		05	4.2
10	20	30,335	-61.2		03	4.7
7	11	32,546	-60.5		29	7.2
5	10	34,662	-57.3			

ATHENS, GEORGIA 987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	246	4.4	-.4	29	1.3
1000	29	136				
950	29	556	5.1	-2.6	29	3.9
900	29	996	3.9	-5.8	28	6.4
850	29	1,460	2.5	-8.5	28	9.2
800	29	1,949	1.0	-10.8	28	12.3
750	29	2,466	-1.1	-14.4	28	15.4
700	29	3,014	-4.0	-17.5	28	17.9
650	29	3,596	-6.6	-20.8	28	20.1
600	29	4,218	-10.0	-24.4	28	22.4
550	29	4,883	-14.0	-27.5	28	26.0
500	29	5,601	-18.4	-32.2	27	28.9
450	29	6,379	-23.5	-36.2	27	32.2
400	29	7,230	-29.6	-41.8	27	33.7
350	29	8,173	-36.1	-46.6	27	35.6
300	29	9,224	-43.3	-52.0	27	39.4
250	29	10,430	-50.7		27	42.3
200	28	11,866	-54.7		27	45.1
175	28	12,718	-55.7		27	45.8
150	27	13,685	-58.0		28	42.5
125	27	14,823	-61.7		27	38.6
100	27	16,196	-64.8		27	27.8
80	27	17,551	-66.1		27	19.9
70	25	18,359	-64.8		27	16.0
60	23	19,299	-63.5		28	13.0
50	22	20,423	-61.6		28	8.3
40	21	21,813	-59.2		28	7.1
30	19	23,624	-56.9		28	8.8
25	18	24,782	-55.8		28	9.3
20	17	26,204	-54.1		28	9.2
15	14	28,078	-49.7		27	12.6
10	12	30,766	-42.2		27	25.7
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* BARROW, ALASKA 1024 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[illegible]	-28.5	-28.6	07	2.0
1000	30	180	-22.8	-27.4	09	4.5
950	30	559	-20.0	-26.0	09	5.6
900	30	961	-18.9	-26.3	09	6.4
850	30	1,386	-19.2	-27.5	09	6.4
800	30	1,836	-20.6	-28.9	09	7.0
750	30	2,312	-21.9	-29.8	09	7.9
700	30	2,817	-24.3	-32.4	09	8.3
650	30	3,354	-27.4	-34.8	09	8.5
600	30	3,926	-30.8	-37.3	09	9.2
550	30	4,539	-34.8	-40.3	09	9.3
500	30	5,198	-39.1	-42.7	09	9.0
450	30	5,914	-43.3	-45.7	09	9.5
400	30	6,699	-47.8		09	9.4
350	29	7,578	-51.8		09	8.8
300	29	8,568	-54.1		09	8.1
250	29	9,739	-53.6		10	5.7
200	29	11,192	-50.9		12	2.7
175	29	12,053	-49.9		15	1.6
150	29	13,062	-49.5		15	2.3
125	29	14,257	-49.3		19	2.1
100	29	15,719	-49.7		21	3.5
80	28	17,179	-50.2		21	4.1
70	28	18,051	-50.4		21	4.6
60	25	19,065	-50.7		21	4.0
50	24	20,254	-51.4		23	2.4
40	24	21,704	-51.6		23	2.9
30	20	23,581	-51.8		20	1.7
25	15	24,773	-52.3		23	1.7
20	10	26,262	-51.8			
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BARTER IS., ALASKA 1021 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-28.6	-31.5	27	1.3
1000	30	168	-24.2	-30.0	07	.9
950	30	544	-21.5	-27.0	06	1.0
900	30	944	-19.9	-25.6	09	2.4
850	30	1,369	-19.0	-24.9	10	3.7
800	30	1,820	-19.3	-24.8	09	4.8
750	30	2,299	-21.0	-27.0	10	5.3
700	30	2,806	-23.5	-29.9	09	6.1
650	30	3,345	-26.4	-32.6	10	6.3
600	30	3,920	-29.6	-35.4	10	6.4
550	30	4,536	-33.1	-38.2	11	6.8
500	30	5,200	-37.2	-41.3	12	6.9
450	30	5,922	-41.4	-42.0	12	7.1
400	30	6,713	-46.3		13	7.3
350	30	7,594	-51.0		13	7.8
300	30	8,586	-54.1		14	7.3
250	30	9,758	-52.8		13	5.1
200	30	11,209	-49.5		14	3.3
175	30	12,085	-49.1		17	2.3
150	29	13,100	-48.7		15	1.6
125	29	14,300	-48.7		20	1.6
100	29	15,766	-49.1		24	1.8
80	29	17,230	-49.5		25	1.7
70	29	18,104	-50.1		26	1.6
60	29	19,110	-50.7		27	1.6
50	29	20,296	-51.3		31	1.2
40	26	21,749	-51.5		35	1.7
30	26	23,614	-52.2		36	1.9
25	25	24,796	-53.2		02	2.6
20	25	26,229	-55.0		03	4.2
15	19	28,080	-56.9		04	6.5
10	9	30,689	-59.2			
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BETHEL, ALASKA 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	22	39	-23.6	-26.4	01	2.9
1000	22	76			36	2.2
950	22	458	-18.4	-24.3	04	4.0
900	22	862	-18.1	-24.4	02	2.8
850	22	1,289	-18.7	-25.9	36	3.1
800	22	1,740	-19.3	-27.4	34	3.2
750	22	2,218	-21.3	-29.4	31	4.2
700	22	2,725	-23.7	-31.9	31	5.3
650	22	3,264	-26.2	-34.8	30	5.7
600	22	3,839	-29.6	-38.1	29	6.2
550	22	4,455	-33.0	-40.2	29	6.6
500	22	5,120	-37.1	-42.9	29	8.4
450	22	5,843	-41.2		29	8.7
400	22	6,634	-46.0		27	8.0
350	22	7,518	-49.8		26	7.4
300	22	8,519	-51.2		25	7.3
250	22	9,708	-49.7		26	7.3
200	22	11,174	-48.0		25	7.1
175	21	12,041	-46.7		26	6.7
150	21	13,064	-46.4		25	6.4
125	21	14,274	-47.0		24	6.3
100	21	15,750	-47.7		24	5.1
80	21	17,218	-49.2		25	4.2
70	21	18,093	-49.5		25	3.5
60	20	19,106	-50.5		25	2.8
50	20	20,292	-51.4		27	2.3
40	19	21,738	-51.3		28	2.2
30	18	23,599	-51.8		36	2.6
25	17	24,784	-53.1		02	4.7
20	17	26,217	-54.8		03	7.2
15	17	28,051	-56.1		02	9.7
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* BISMARCK, N. DAK. 954 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	503	-5.3	-8.0	33	1.3
1000	31	132				
950	31	537			33	1.1
900	31	962	-5.3	-10.3	31	3.6
850	31	1,410	-6.4	-13.0	30	5.1
800	31	1,883	-8.1	-16.1	30	6.2
750	31	2,382	-10.7	-18.4	30	8.2
700	31	2,909	-13.8	-20.6	30	10.1
650	31	3,469	-17.1	-24.4	30	12.5
600	31	4,065	-20.9	-29.5	30	14.9
550	31	4,703	-24.9	-33.8	30	16.4
500	31	5,390	-29.6	-37.6	30	18.8
450	31	6,134	-34.5	-40.9	30	21.6
400	31	6,948	-40.4	-45.6	30	23.8
350	31	7,848	-46.8		30	25.2
300	31	8,853	-52.8		29	26.8
250	31	10,022	-54.7		29	25.4
200	31	11,458	-52.1		29	23.1
175	31	12,323	-51.7		29	21.1
150	31	13,324	-51.6		29	19.4
125	31	14,506	-52.4		29	16.7
100	31	15,941	-54.9		29	13.2
80	31	17,361	-56.6		29	11.3
70	31	18,206	-57.4		29	9.6
60	30	19,178	-58.2		29	7.0
50	30	20,325	-58.4		29	5.9
40	30	21,729	-58.5		30	3.6
30	30	23,537	-58.8		29	1.5
25	30	24,682	-58.6		28	1.8
20	30	26,085	-58.6		27	2.8
15	30	27,893	-58.2		27	5.2
10	29	30,465	-54.5		27	12.8
7	24	32,791	-47.9		27	22.1
5	12	35,069	-40.2			

BOISE, IDAHO 917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	871	1.5	-4.3	13	1.6
1000	31	166				
950	31	585				
900	31	1,022	2.4	-5.7	13	.5
850	31	1,483	.0	-8.7	28	4.6
800	31	1,966	-3.3	-10.4	23	6.9
750	31	2,473	-6.9	-13.2	28	8.3
700	31	3,008	-10.5	-17.1	28	10.7
650	31	3,575	-13.7	-22.3	28	12.0
600	31	4,180	-16.7	-26.4	28	14.6
550	31	4,828	-20.7	-30.3	28	16.7
500	31	5,527	-25.3	-35.0	28	18.8
450	31	6,284	-30.3	-37.9	28	21.1
400	31	7,112	-36.0	-42.4	28	24.6
350	31	8,031	-42.1	-43.4	29	28.4
300	31	9,057	-48.5		29	32.1
250	31	10,240	-54.4		29	34.8
200	31	11,660	-55.2		28	33.1
175	31	12,510	-55.3		28	30.0
150	31	13,495	-55.3		28	26.4
125	30	14,650	-57.2		28	23.5
100	30	16,055	-59.0		28	18.3
80	30	17,455	-59.0		28	12.7
70	30	18,291	-60.0		28	9.3
60	30	19,251	-61.0		28	5.6
50	29	20,385	-61.0		28	5.3
40	28	21,772	-60.4		30	4.0
30	24	23,571	-59.6		29	2.8
25	23	24,713	-59.3		29	2.8
20	22	26,111	-59.0		29	2.6
15	1[illegible]	27,931	-58.2		29	4.8
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* BROWNSVILLE, TEXAS 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	18.7	13.7	15	2.1
1000	31	127	18.6	14.4	15	4.1
950	31	567	16.8	9.1	16	7.0
900	31	1,027	15.7	2.6	17	6.0
850	31	1,512	14.7	-4.3	19	4.3
800	31	2,023	12.8	-8.1	22	4.4
750	31	2,562	10.3	-11.2	25	4.6
700	31	3,132	7.0	-15.1	27	6.2
650	31	3,736	2.5	-16.5	28	9.1
600	31	4,377	-2.2	-19.0	28	11.4
550	31	5,062	-7.1	-23.7	27	13.9
500	31	5,797	-12.6	-27.4	27	16.4
450	31	6,594	-17.6	-33.1	27	19.8
400	31	7,465	-23.9	-39.1	27	22.5
350	31	8,429	-30.8	-45.3	27	27.6
300	31	9,502	-39.3	-51.4	27	30.1
250	30	10,727	-47.3		26	34.0
200	30	12,176	-55.8		26	33.1
175	30	13,018	-60.0		26	32.6
150	30	13,971	-64.1		26	30.6
125	30	15,074	-69.2		26	26.3
100	29	16,391	-74.3		27	20.1
80	27	17,682	-76.7		27	12.6
70	24	18,458	-73.1		27	10.3
60	24	19,368	-69.9		27	6.9
50	24	20,470	-63.8		27	4.3
40	24	21,854	-59.6		26	4.2
30	24	23,670	-55.8		28	2.2
25	22	24,838	-53.6		29	.9
20	22	26,282	-50.8		26	2.7
15	21	28,173	-46.3		26	6.0
10	20	30,923	-38.0		27	10.6
7	1[illegible]	33,422	-31.5		[illegible]	5.9
5	8	35,848	-30.4			

BUFFALO, N. Y. 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	-3.4	-6.2	26	3.1
1000	31	105				
950	31	512	-3.9	-8.0	27	5.1
900	31	937	-6.3	-11.1	27	7.5
850	31	1,383	-8.2	-14.7	27	9.2
800	31	1,852	-9.9	-16.3	28	10.2
750	31	2,348	-11.9	-18.7	28	11.7
700	31	2,874	-14.2	-21.2	28	13.1
650	31	3,434	-16.8	-22.9	28	13.7
600	31	4,032	-20.0	-26.5	28	15.8
550	31	4,671	-24.0	-31.5	28	17.0
500	31	5,362	-28.0	-36.2	27	19.6
450	31	6,111	-33.0	-41.0	27	21.7
400	31	6,929	-39.0	-43.3	27	25.4
350	31	7,836	-44.6		27	28.5
300	31	8,855	-48.9		27	29.1
250	31	10,046	-50.5		27	29.8
200	31	11,507	-49.1		27	24.1
175	30	12,390	-49.5		27	21.7
150	29	13,384	-50.4		27	20.1
125	29	14,570	-52.1		27	17.4
100	28	16,002	-54.1		27	13.7
80	27	17,428	-56.3		27	10.7
70	27	18,275	-57.3		27	9.6
60	25	19,248	-57.7		27	8.5
50	24	20,397	-58.0		26	6.1
40	24	21,803	-58.0		27	4.5
30	23	23,620	-57.2		27	4.2
25	22	24,779	-56.7		29	4.9
20	19	26,196	-56.1		26	5.6
15	19	28,029	-54.9		26	8.4
10	15	30,653	-49.1			
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CAPE HATTERAS, N. C. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	7.7	3.4	32	3.4
1000	31	123	8.6	.7	31	4.3
950	31	546	6.2	-2.1	30	6.9
900	31	988	3.7	-4.7	29	7.8
850	31	1,450	1.7	-9.6	28	9.3
800	31	1,937	-.4	-11.9	27	11.4
750	31	2,452	-2.4	-15.2	27	14.2
700	31	2,997	-5.0	-17.4	27	17.8
650	31	3,576	-7.7	-20.0	27	20.6
600	31	4,195	-10.9	-23.5	27	23.6
550	31	4,859	-14.8	-27.2	27	26.6
500	31	5,575	-19.2	-32.4	27	29.0
450	31	6,351	-24.0	-36.9	26	31.5
400	31	7,201	-29.6	-41.4	27	35.5
350	31	8,145	-35.8	-46.4	27	37.7
300	31	9,197	-42.9	-49.8	27	40.8
250	31	10,409	-49.3		27	44.7
200	31	11,863	-51.1		27	45.2
175	31	12,728	-53.0		27	43.6
150	31	13,717	-55.8		27	40.0
125	31	14,868	-59.3		27	36.2
100	29	16,253	-62.6		27	27.8
80	29	17,627	-62.9		27	19.4
70	28	18,447	-62.3		27	14.2
60	27	19,400	-60.9		27	9.7
50	27	20,537	-59.8		27	7.3
40	26	21,936	-57.4		28	5.7
30	25	23,762	-55.9		28	6.3
25	25	24,927	-54.1		28	7.1
20	25	26,366	-52.0		28	9.8
15	23	28,239	-48.8		28	12.1
10	15	30,928	-41.9		27	25.5
7	7	33,330	-35.6			
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* CARIBOU, MAINE 983 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	-6.9	-9.8	30	3.2
1000	31	55				
950	31	457	-6.7	-9.9	32	4.8
900	31	878	-8.4	-11.9	33	5.1
850	31	1,321	-9.7	-14.8	32	5.3
800	31	1,788	-11.1	-16.8	31	5.6
750	31	2,282	-12.8	-18.7	30	6.9
700	31	2,806	-15.2	-22.5	29	7.8
650	31	3,363	-18.0	-26.1	28	7.9
600	31	3,958	-21.1	-30.1	27	9.6
550	31	4,596	-24.7	-34.4	27	10.8
500	31	5,284	-28.8	-38.0	27	11.9
450	31	6,031	-33.8	-42.8	27	13.3
400	31	6,847	-39.2	-45.3	27	15.6
350	31	7,754	-44.6		26	17.4
300	31	8,774	-48.3		25	20.9
250	31	9,973	-48.4		25	22.6
200	31	11,446	-47.3		25	20.3
175	31	12,329	-47.6		25	19.4
150	31	13,346	-48.5		26	15.8
125	31	14,541	-50.4		25	13.5
100	29	15,987	-52.5		26	11.6
80	28	17,423	-54.1		25	8.5
70	28	18,278	-55.2		25	6.5
60	28	19,261	-55.8		24	5.8
50	28	20,419	-56.8		25	5.7
40	28	21,832	-57.2		25	4.5
30	27	23,652	-57.6		25	4.5
25	26	24,804	-57.7		28	2.5
20	24	26,209	-57.0		27	3.5
15	20	28,055	-55.7		25	8.1
10	11	30,671	-50.9			
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

CHARLESTON, S. C. — 1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	7.4	3.4	29	1.5
1000	31	136	9.1	2.0	29	2.7
950	31	561	8.3	-1.2	29	6.0
900	31	1,007	6.5	-5.1	28	8.5
850	31	1,474	4.6	-7.1	27	11.3
800	31	1,967	2.9	-9.7	27	13.7
750	31	2,487	.5	-13.0	27	15.5
700	31	3,038	-2.4	-16.4	27	18.5
650	31	3,623	-5.6	-19.9	27	20.6
600	31	4,247	-8.8	-23.4	27	22.8
550	31	4,916	-12.8	-26.8	27	25.7
500	31	5,637	-17.3	-30.3	27	29.7
450	31	6,419	-22.3	-35.3	27	32.0
400	31	7,275	-28.2	-41.4	27	34.3
350	31	8,223	-34.7	-46.4	27	36.9
300	31	9,280	-42.2	-50.5	27	39.8
250	31	10,494	-49.0		27	44.4
200	31	11,943	-53.7		27	47.9
175	31	12,798	-55.5		27	45.9
150	31	13,774	-58.7		27	42.5
125	30	14,908	-62.6		27	36.4
100	30	16,270	-66.5		27	27.7
80	30	17,618	-67.1		27	20.0
70	30	18,426	-65.3		27	15.4
60	30	19,369	-63.7		27	10.1
50	30	20,495	-61.0		27	7.8
40	30	21,890	-58.8		28	8.1
30	30	23,707	-56.4		28	6.6
25	29	24,871	-54.6		29	7.4
20	27	26,313	-51.8		29	8.3
15	23	28,196	-48.2		27	11.2
10	14	30,886	-39.7			
7						

CHATHAM, MASS. — 1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	16	.6	-3.5	29	2.4
1000	31	75			31	3.2
950	31	486	-1.3	-7.8	30	5.5
900	31	915	-2.8	-10.2	29	6.2
850	31	1,367	-4.3	-12.3	29	8.4
800	31	1,844	-6.3	-14.5	28	10.0
750	31	2,346	-8.5	-17.6	27	12.5
700	31	2,879	-11.0	-20.8	27	14.5
650	31	3,446	-13.6	-24.1	27	17.0
600	31	4,051	-16.9	-27.4	27	18.8
550	31	4,699	-20.9	-31.0	27	19.7
500	31	5,397	-25.4	-35.0	27	21.5
450	31	6,154	-30.5	-38.4	27	23.4
400	31	6,982	-35.6	-43.8	27	26.5
350	31	7,903	-41.1	-45.3	26	28.8
300	31	8,937	-46.0		26	31.8
250	31	10,140	-49.3		26	34.1
200	31	11,602	-48.9		26	28.2
175	31	12,478	-49.6		26	25.0
150	29	13,481	-51.3		27	23.3
125	28	14,658	-53.0		26	20.1
100	27	16,085	-55.6		26	18.4
80	27	17,503	-56.9		26	13.2
70	27	18,347	-57.8		26	10.6
60	26	19,321	-57.6		26	9.7
50	25	20,472	-57.9		27	8.2
40	24	21,884	-57.3		26	5.2
30	22	23,713	-56.5		26	5.2
25	22	24,871	-56.0		27	6.5
20	21	26,292	-55.0		27	8.5
15	17	26,156	-52.7		27	11.7
10	10	30,810	-48.1			

CHIHUAHUA, MEXICO — 857 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	8.9	-10.5	26	.9
1000	31	123				
950	31	559				
900	31	1,014				
850	31	1,491	12.0	-7.0	26	1.1
800	31	2,000	11.9	-7.1	27	3.5
750	31	2,537	8.8	-9.2	26	5.9
700	31	3,104	5.8	-11.4	26	8.3
650	31	3,706	1.9	-14.8	26	10.0
600	31	4,346	-2.8	-18.4	27	11.0
550	31	5,029	-7.8	-22.4	26	12.9
500	31	5,762	-13.2	-27.1	27	14.2
450	31	6,557	-18.4	-32.0	27	16.3
400	31	7,425	-24.8	-37.9	27	18.4
350	31	8,384	-32.4	-43.6	27	20.0
300	31	9,450	-40.4	-48.2	27	19.7
250	31	10,670	-48.8		27	22.2
200	31	12,112	-55.6		27	24.0
175	31	12,957	-58.6		27	23.3
150	31	13,917	-62.4		27	22.4
125	30	15,029	-66.9		27	21.5
100	30	16,363	-70.9		27	19.2
80	29	17,676	-73.1		29	14.9
70	28	18,460	-72.0		28	11.2
60	27	19,376	-69.1		29	8.3
50	27	20,476	-64.9		29	6.8
40	26	21,853	-60.3		27	5.8
30	26	23,662	-56.5		26	7.8
25	26	24,824	-54.8		26	9.0
20	24	26,256	-52.5		27	8.7
15	20	28,136	-48.0		27	13.1
10	9	30,839	-41.6			

* COLD BAY, ALASKA — 1003 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	30	-7.5	-9.5	30	.8
1000	26	55			22	.4
950	26	454	-9.0	-13.7	27	1.0
900	26	872	-10.1	-16.2	26	1.3
850	26	1,312	-10.5	-18.1	27	2.4
800	26	1,777	-12.4	-20.6	28	4.3
750	26	2,268	-14.6	-23.2	28	6.0
700	26	2,788	-17.8	-25.3	28	7.4
650	26	3,339	-20.7	-27.4	28	9.5
600	26	3,927	-24.2	-30.4	29	11.2
550	26	4,556	-28.2	-34.1	28	12.3
500	26	5,234	-32.5	-37.7	28	12.6
450	26	5,969	-37.6	-40.7	27	13.7
400	26	6,772	-43.3	-44.9	28	16.5
350	26	7,663	-48.7		28	18.4
300	26	8,663	-53.0		27	18.1
250	26	9,834	-53.8		27	15.5
200	26	11,279	-50.3		27	12.7
175	26	12,153	-49.5		27	12.1
150	26	13,163	-49.8		27	12.8
125	26	14,357	-49.8		27	10.2
100	26	15,813	-50.9		26	8.1
80	25	17,257	-51.7		26	6.3
70	25	18,122	-52.1		26	5.1
60	23	19,115	-52.5		26	5.0
50	21	20,296	-53.1		26	4.3
40	20	21,729	-53.9		28	3.3
30	19	23,577	-54.6		36	3.0
25	18	24,742	-54.7		02	4.3
20	17	26,173	-54.8		03	5.7
15	15	28,001	-56.3		03	8.1
10	10	30,604	-56.4			
7	6	32,843	-57.8			

DAYTON, OHIO — 979 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	299	-1.0	-4.0	26	1.3
1000	31	128				
950	31	539	-.9	-5.3	27	4.0
900	31	969	-2.7	-7.9	28	7.2
850	31	1,421	-4.6	-10.2	28	8.9
800	31	1,877	-6.5	-14.8	28	10.3
750	31	2,400	-8.3	-16.7	29	12.8
700	31	2,934	-11.2	-19.7	28	14.6
650	30	3,495	-13.9	-21.6	28	16.4
600	30	4,100	-16.9	-25.6	28	18.7
550	30	4,749	-20.6	-29.6	28	21.9
500	30	5,447	-25.0	-34.3	28	25.1
450	30	6,206	-30.1	-39.2	27	28.6
400	30	7,034	-36.0	-43.8	27	30.1
350	30	7,953	-41.9	-46.7	28	34.5
300	30	8,979	-48.1		27	39.8
250	30	10,169	-51.9		27	42.2
200	30	11,619	-50.7		28	37.6
175	29	12,489	-51.4		27	35.2
150	29	13,487	-52.9		27	32.3
125	27	14,643	-54.5		27	26.7
100	27	16,064	-56.8		27	19.9
80	26	17,469	-58.7		27	15.0
70	26	18,309	-58.5		27	12.0
60	26	19,277	-59.0		27	10.0
50	24	20,426	-58.7		27	6.1
40	24	21,829	-58.5		28	4.3
30	23	23,646	-57.1		28	3.5
25	23	24,803	-56.1		27	4.4
20	23	26,227	-54.6		27	6.5
15	19	28,083	-51.8		27	10.2
10	13	30,744	-45.2			

DEL RIO, TEXAS — 979 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	12.4	2.1	09	2.0
1000	31	131				
950	31	564	13.8	2.3	14	4.3
900	31	1,019	12.7	.0	18	5.2
850	31	1,498	12.9	-6.2	22	4.3
800	31	2,006	11.1	-10.6	26	5.7
750	31	2,541	8.2	-13.8	27	8.0
700	31	3,106	4.4	-17.7	28	10.3
650	31	3,705	.4	-20.4	28	12.6
600	31	4,341	-4.3	-23.3	28	14.1
550	31	5,021	-9.0	-26.5	27	15.3
500	31	5,751	-14.3	-31.7	27	17.9
450	31	6,541	-19.6	-36.7	27	19.7
400	31	7,406	-25.8	-42.7	27	23.1
350	31	8,362	-33.0	-47.3	27	26.8
300	31	9,426	-41.0	-51.9	27	30.9
250	31	10,642	-49.4		27	34.4
200	31	12,084	-55.4		27	34.6
175	31	12,930	-58.3		27	35.0
150	30	13,889	-62.2		27	33.1
125	30	15,004	-66.8		27	30.0
100	28	16,337	-71.4		27	23.1
80	25	17,642	-72.7		28	16.9
70	25	18,430	-71.2		28	13.7
60	25	19,347	-68.6		28	10.0
50	25	20,451	-64.2		27	7.4
40	25	21,834	-59.3		26	6.2
30	24	23,648	-56.8		27	7.6
25	23	24,807	-55.2		26	7.3
20	20	26,250	-52.3		27	9.4
15	15	28,133	-47.8		27	11.9
10	11	30,850	-39.5			

DENVER, COLO. — 834 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	-1.8	-7.6	21	1.2
1000	31	139				
950	31	558				
900	31	996				
850	31	1,455				
800	31	1,941	1.3	-12.3	29	3.9
750	31	2,459	-1.4	-15.4	29	7.1
700	31	3,004	-5.2	-18.3	30	9.9
650	31	3,582	-9.2	-21.5	30	12.5
600	31	4,196	-13.6	-24.8	30	14.2
550	31	4,851	-18.1	-29.2	30	16.4
500	31	5,557	-22.9	-33.9	30	19.8
450	31	6,320	-28.7	-37.7	29	20.6
400	31	7,153	-34.9	-44.2	29	23.7
350	31	8,074	-41.5	-46.6	29	28.4
300	31	9,104	-47.6		29	31.3
250	31	10,293	-53.1		29	34.6
200	31	11,721	-55.3		28	32.7
175	30	12,571	-55.7		28	32.9
150	30	13,552	-56.4		28	30.3
125	30	14,704	-59.0		28	25.7
100	30	16,096	-60.7		28	19.3
80	30	17,480	-61.8		28	10.4
70	29	18,312	-62.0		28	9.6
60	29	19,266	-61.6		28	7.4
50	29	20,397	-61.1		28	6.2
40	28	21,784	-60.4		29	3.3
30	26	23,580	-59.2		27	4.2
25	25	24,726	-58.0		28	5.2
20	20	26,144	-55.9		28	7.3
15	13	27,992	-53.0		28	9.5
10	6	30,728	-39.4			

DODGE CITY, KANS. — 923 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	-.1	-5.0	31	1.5
1000	31	138				
950	31	554				
900	31	989	2.1	-7.1	31	2.4
850	31	1,452	3.2	-10.9	31	4.6
800	31	1,942	1.4	-13.6	30	6.6
750	31	2,460	-1.1	-15.8	29	8.7
700	31	3,006	-4.6	-18.0	28	11.3
650	31	3,585	-8.4	-20.9	28	13.4
600	31	4,202	-12.3	-25.7	28	15.2
550	31	4,861	-16.9	-29.0	28	16.9
500	31	5,570	-21.5	-33.7	28	20.4
450	31	6,338	-26.8	-38.2	28	22.9
400	31	7,176	-33.5	-43.9	28	26.1
350	31	8,103	-40.0	-45.2	28	30.4
300	31	9,137	-46.9		28	33.8
250	31	10,330	-52.5		28	38.0
200	29	11,766	-55.2		29	38.8
175	28	12,607	-55.6		28	38.0
150	28	13,586	-57.3		28	34.2
125	27	14,727	-59.5		28	30.6
100	24	16,104	-61.8		29	23.2
80	21	17,489	-62.3		28	14.8
70	21	18,314	-62.5		27	11.6
60	21	19,266	-62.6		27	9.6
50	19	20,397	-61.2		28	5.3
40	19	21,782	-60.6		27	4.9
30	19	23,583	-58.5		27	4.7
25	17	24,730	-57.7		27	5.9
20	16	26,145	-55.6		27	8.1
15	16	27,987	-53.6		27	10.9
10	13	30,632	-46.1			

EL PASO, TEXAS — 882 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	9.9	-12.2	30	2.3
1000	31	129				
950	31	564				
900	31	1,019				
850	31	1,496	11.4	-8.0	30	4.0
800	31	2,000	8.3	-10.4	28	8.2
750	31	2,529	5.3	-12.8	28	10.9
700	31	3,089	2.0	-15.6	27	12.4
650	31	3,683	-1.5	-18.0	27	13.4
600	31	4,316	-5.4	-22.3	27	14.1
550	31	4,993	-9.9	-26.0	27	17.0
500	31	5,721	-14.9	-29.8	27	20.9
450	31	6,510	-20.5	-34.6	27	22.6
400	31	7,370	-26.9	-39.8	27	24.9
350	31	8,322	-34.2	-45.3	27	26.7
300	31	9,381	-41.7	-49.2	27	31.6
250	31	10,595	-50.0		27	31.2
200	31	12,032	-55.7		27	34.5
175	31	12,878	-57.8		27	34.5
150	31	13,844	-61.0		27	35.0
125	30	14,964	-64.9		27	30.8
100	30	16,311	-69.0		27	23.7
80	28	17,644	-69.6		28	17.6
70	27	18,444	-68.6		29	12.6
60	26	19,370	-66.9		29	8.3
50	24	20,484	-63.4		28	7.1
40	24	21,865	-60.6		29	4.7
30	23	23,672	-56.9		26	6.9
25	23	24,834	-54.6		27	7.5
20	20	26,272	-51.9		27	10.6
15	19	28,147	-47.9		26	18.1
10	9	30,899	-39.8			

ELY, NEV. — 808 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	-3.7	-9.5	21	1.6
1000	31	190				
950	31	608				
900	31	1,044				
850	31	1,502				
800	31	1,985	-.9	-9.4	22	1.4
750	31	2,499	-2.5	-12.4	29	2.5
700	31	3,043	-5.9	-15.3	29	6.6
650	31	3,620	-9.3	-18.7	29	10.2
600	31	4,235	-12.3	-22.3	29	13.7
550	31	4,895	-16.3	-26.0	28	17.4
500	31	5,606	-21.0	-30.1	28	19.8
450	31	6,376	-26.6	-34.8	28	23.0
400	31	7,216	-32.2	-40.0	28	25.6
350	31	8,149	-38.5	-44.7	28	28.6
300	31	9,190	-45.9		29	30.6
250	31	10,383	-53.3		29	33.3
200	31	11,804	-57.2		28	34.2
175	30	12,651	-57.4		28	32.7
150	29	13,622	-57.9		28	29.3
125	29	14,767	-60.4		28	25.1
100	27	16,148	-61.6		28	19.2
80	27	17,526	-62.8		28	13.7
70	27	18,349	-62.7		28	10.5
60	25	19,302	-61.9		29	7.9
50	25	20,430	-61.8		29	5.8
40	25	21,813	-61.2		29	4.7
30	21	23,613	-59.2		29	4.8
25	21	24,758	-58.6		29	4.4
20	20	26,174	-56.1		28	5.9
15	16	28,012	-53.4		27	9.3
10	9	30,636	-46.5			

EMPALME, MEXICO — 1012 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	13.3	.2	32	2.1
1000	31	114	17.9	-1.3	33	2.7
950	31	556	20.4	-2.9	34	4.1
900	31	1,020	18.3	-5.0	33	4.0
850	31	1,507	16.0	-7.8	31	3.2
800	31	2,018	12.9	-10.4	28	3.3
750	31	2,556	9.7	-13.2	27	5.0
700	31	3,125	6.1	-15.9	27	6.7
650	31	3,727	2.1	-18.2	27	8.5
600	31	4,367	-2.6	-21.4	27	9.7
550	31	5,050	-7.6	-24.7	27	11.3
500	31	5,784	-13.1	-29.7	27	14.0
450	31	6,578	-18.5	-34.2	27	16.5
400	31	7,446	-25.0	-39.4	26	18.9
350	31	8,405	-32.2	-43.9	27	20.4
300	31	9,472	-40.3	-49.9	27	23.5
250	31	10,692	-49.1		27	25.5
200	30	12,130	-56.4		26	28.1
175	30	12,973	-58.9		26	25.8
150	30	13,932	-63.0		26	25.6
125	28	15,041	-67.5		26	23.3
100	25	16,373	-71.6		27	19.5
80	25	17,683	-73.9		27	14.3
70	22	18,469	-73.0		27	12.8
60	21	19,378	-71.0		28	8.5
50	21	20,471	-66.7		28	7.4
40	21	21,838	-61.6		28	6.7
30	20	23,639	-58.0		26	6.9
25	19	24,795	-55.7		25	9.2
20	19	26,231	-51.5		26	10.5
15	15	28,107	-49.7		26	13.2
10	9	30,848	-39.2			
7						

* FAIRBANKS, ALASKA — 996 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	-19.7	-28.2	01	2.8
1000	31	106			03	3.5
950	31	490	-17.7	-25.0	07	5.0
900	31	894	-18.0	-24.5	10	4.8
850	31	1,320	-18.7	-24.7	11	5.2
800	31	1,772	-18.7	-25.5	11	5.4
750	31	2,253	-19.8	-27.1	13	5.1
700	31	2,762	-22.6	-29.3	15	4.6
650	31	3,303	-25.7	-32.5	15	4.3
600	31	3,879	-29.3	-35.4	16	4.5
550	31	4,495	-33.4	-38.8	18	5.9
500	31	5,158	-37.7	-42.5	18	6.1
450	31	5,879	-41.4	-43.1	19	5.7
400	31	6,671	-46.3		21	6.0
350	31	7,552	-50.5		21	5.9
300	31	8,547	-53.6		21	6.2
250	31	9,722	-51.8		23	4.4
200	30	11,183	-49.3		23	4.0
175	30	12,059	-48.9		23	5.4
150	30	13,073	-48.4		24	4.1
125	30	14,274	-48.4		25	3.9
100	30	15,741	-49.3		25	3.4
80	30	17,203	-50.0		26	3.1
70	27	18,084	-50.6		27	3.1
60	24	19,093	-51.3		26	2.4
50	24	20,280	-52.3		29	1.3
40	21	21,720	-52.8		23	.7
30	19	23,577	-53.1		06	1.2
25	17	24,753	-53.9		06	3.9
20	15	26,182	-54.6		05	6.2
15	11	28,014	-56.4		05	7.9

FLINT, MICH. — 985 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	236	-3.6	-5.7	28	1.7
1000	31	112				
950	31	518	-4.2	-8.2	29	3.5
900	31	943	-6.0	-10.1	30	5.8
850	31	1,389	-7.7	-14.4	30	7.5
800	31	1,859	-9.6	-17.4	29	9.1
750	31	2,356	-11.6	-19.3	29	9.9
700	31	2,882	-13.9	-21.4	29	11.9
650	31	3,443	-16.8	-24.7	29	13.4
600	31	4,040	-19.9	-27.7	29	15.6
550	31	4,681	-23.8	-31.3	29	17.5
500	31	5,371	-28.2	-36.3	28	20.6
450	31	6,119	-33.4	-40.7	28	24.1
400	31	6,936	-39.1	-44.1	28	27.1
350	31	7,844	-44.8		28	30.9
300	31	8,860	-49.7		28	34.5
250	31	10,048	-50.8		28	33.8
200	31	11,505	-49.8		28	29.1
175	31	12,378	-49.9		28	27.2
150	31	13,385	-50.8		28	23.7
125	31	14,569	-52.3		28	20.3
100	30	16,005	-54.8		27	16.8
80	30	17,426	-56.4		28	12.7
70	30	18,273	-57.1		27	9.8
60	30	19,247	-57.8		28	7.5
50	30	20,396	-58.1		27	5.3
40	29	21,802	-58.2		28	4.2
30	28	23,616	-57.5		29	3.2
25	28	24,770	-56.8		28	3.2
20	28	26,187	-56.0		28	5.6
15	24	28,031	-54.7		27	8.0
10	19	30,639	-51.1			
7	5	32,994	-44.4			

FORT WORTH, TEXAS — 995 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	8.3	.0	19	1.0
1000	31	133				
950	31	558	9.1	-.4	20	3.8
900	31	1,006	9.2	-2.4	23	5.4
850	31	1,480	9.0	-5.4	26	8.2
800	31	1,981	7.4	-9.4	28	10.1
750	31	2,509	4.5	-11.9	28	12.1
700	31	3,068	1.1	-15.7	28	14.3
650	31	3,659	-2.6	-19.4	28	16.5
600	31	4,289	-7.0	-22.9	28	18.0
550	31	4,961	-11.9	-26.3	28	20.5
500	31	5,684	-16.8	-30.8	28	24.3
450	31	6,467	-22.1	-35.4	28	26.6
400	31	7,322	-28.3	-41.6	28	28.8
350	31	8,270	-34.7	-47.2	28	33.0
300	31	9,326	-42.4	-51.3	27	37.5
250	31	10,538	-49.7		27	42.1
200	30	11,979	-54.3		27	41.6
175	29	12,830	-57.0		27	39.9
150	29	13,800	-59.7		27	39.5
125	28	14,934	-64.2		27	33.3
100	24	16,278	-67.4		28	28.1
80	23	17,617	-68.1		28	19.5
70	23	18,421	-67.1		28	14.6
60	23	19,356	-65.0		27	11.6
50	23	20,476	-62.3		28	8.6
40	23	21,864	-59.4		27	7.7
30	22	23,676	-56.8		27	8.8
25	22	24,836	-54.8		27	10.7
20	22	26,272	-52.5		27	12.2
15	19	28,142	-50.1		27	15.5
10	15	30,829	-42.0			

GLASGOW, MONT. — 932 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	-6.6	-9.4	07	1.6
1000	31	140				
950	31	545				
900	31	970	-3.8	-8.6	30	2.5
850	31	1,422	-4.3	-11.9	29	6.4
800	31	1,898	-6.6	-14.5	30	7.9
750	31	2,400	-9.6	-16.6	30	9.7
700	31	2,929	-13.0	-19.2	29	11.0
650	31	3,491	-16.3	-22.4	29	11.7
600	31	4,089	-20.2	-27.0	29	13.3
550	31	4,728	-24.5	-30.4	29	13.7
500	31	5,416	-29.2	-34.9	29	14.9
450	31	6,161	-34.1	-40.0	29	17.0
400	31	6,975	-40.0	-42.6	29	21.2
350	31	7,877	-46.6		29	22.5
300	31	8,883	-52.6		29	25.1
250	31	10,053	-54.3		30	26.5
200	31	11,491	-52.0		29	22.2
175	31	12,358	-51.3		29	20.2
150	31	13,360	-51.4		29	17.2
125	30	14,545	-52.1		29	16.2
100	29	15,982	-54.4		29	12.9
80	29	17,408	-55.7		29	9.7
70	29	18,256	-56.8		29	8.4
60	29	19,232	-57.6		29	6.9
50	29	20,381	-58.3		29	4.4
40	29	21,785	-58.4		29	2.8
30	27	23,598	-58.8		32	1.5
25	24	24,743	-59.1		28	1.3
20	21	26,153	-59.1		29	2.5
15	18	27,957	-59.0		27	4.7
10	6	30,556	-55.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

[illegible]

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	-.3	[illegible]	[illegible]	1.9
1000	31	165				
950	31	585				
900	31	1,024				
850	31	1,485			13	2.2
800	31	1,975	1.6	-12.0	20	2.7
750	31	2,492	-1.9	[illegible]	25	4.3
700	31	3,035	-5.8	-16.3	27	7.8
650	31	3,613	-9.5	-19.1	28	10.1
600	31	4,227	-13.5	-22.7	28	13.0
550	31	4,884	-17.7	-27.8	28	15.8
500	31	5,590	-22.5	-31.8	28	[illegible]
450	31	6,356	-27.6	-36.3	28	22.5
400	31	7,192	-34.0	-41.1	29	25.2
350	31	8,118	-40.0	-44.5	29	28.7
300	31	9,152	-46.8		29	31.7
250	31	10,344	-53.0		29	35.6
200	31	11,772	-55.4		29	35.2
175	31	12,623	-55.9		28	33.9
150	31	13,603	-56.6		28	30.6
125	31	14,753	-59.1		28	24.9
100	31	16,140	-62.6		28	18.7
80	31	17,512	-63.8		29	14.0
70	31	18,393	-62.8		29	11.6
60	30	19,285	-62.1		28	8.5
50	30	[illegible]	-61.9		28	[illegible]
40	29	21,794	-61.9		28	4.2
30	28	23,589	-59.1		27	4.5
25	26	24,734	-58.4		27	4.9
20	27	26,142	-57.5		28	7.1
15	16	27,976	-54.9			
10	5	30,541	-51.9			
7						

* GREAT FALLS, MONT. 884 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,118	-3.0	-9.6	23	5.2
1000	31	131				
950	31	545				
900	31	977				
850	31	1,431	-3.2	-11.5	25	9.2
800	31	1,909	-5.9	-13.1	27	8.5
750	31	2,411	-9.3	-15.6	28	10.0
700	31	2,941	-12.7	-19.2	28	11.9
650	31	3,503	-16.0	-23.0	29	14.3
600	31	4,102	-19.6	-28.4	28	14.2
550	31	4,743	-24.0	-32.0	29	14.8
500	31	5,432	-28.9	-37.0	28	17.0
450	31	6,177	-34.4	-40.6	28	17.9
400	31	6,991	-40.5	-44.3	28	19.8
350	31	7,841	-46.6		28	22.1
300	31	8,899	-51.6		29	26.2
250	31	10,071	-54.5		29	28.6
200	30	11,499	-53.4		29	24.5
175	30	12,361	-52.4		28	19.7
150	30	13,357	-52.9		28	20.0
125	29	14,534	-53.5		29	16.2
100	29	15,963	-55.6		28	13.0
80	27	17,375	-57.2		28	11.0
70	27	18,218	-58.1		28	9.0
60	27	19,189	-58.1		29	6.7
50	25	20,331	-59.1		28	4.6
40	24	21,726	-59.6		30	2.7
30	24	23,525	-59.3		31	1.8
25	24	24,668	-59.1		31	2.6
20	20	26,063	-59.1		30	2.3
15	16	27,860	-59.9		28	4.8
10	16	30,400	-57.6		27	11.7
7	10	32,651	-53.2			

GREEN BAY, WIS. 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	210	-6.0	-9.1	30	1.4
1000	30	114				
950	30	518	-5.5	-9.3	32	2.3
900	30	941	-7.1	-12.8	31	3.2
850	30	1,385	-8.8	-15.9	30	4.6
800	30	1,854	-9.9	-18.5	30	6.6
750	30	2,350	-11.9	-22.0	30	8.0
700	30	2,876	-14.7	-25.2	30	8.9
650	30	3,433	-17.8	-27.2	30	10.1
600	30	4,028	-21.2	-30.6	30	11.8
550	30	4,666	-25.2	-35.4	30	14.2
500	30	5,352	-29.5	-40.4	29	16.3
450	30	6,096	-34.6	-43.7	29	18.3
400	30	6,909	-40.5	-47.4	29	21.1
350	29	7,797	-46.6		28	25.1
300	28	8,806	-51.5		29	26.9
250	28	9,987	-51.7		28	26.7
200	27	11,440	-50.0		28	24.3
175	25	12,303	-49.9		28	22.4
150	24	13,314	-50.5		28	20.8
125	24	14,499	-51.8		28	17.7
100	23	15,941	-54.1		28	14.4
80	22	17,363	-55.3		27	10.3
70	22	18,213	-56.7		27	7.5
60	22	19,188	-57.5		27	7.3
50	22	20,340	-57.7		26	5.2
40	21	21,747	-57.8		28	3.3
30	20	23,557	-57.7		27	2.3
25	19	24,708	-57.5		28	3.3
20	18	26,116	-57.2		28	4.4
15	14	27,945	-55.5		28	8.4
10	15	30,557	-51.5		27	16.8
7	5	32,947	-44.9			

GREENSBORO, N. C. 983 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	2.1	-2.7	28	2.0
1000	31	131				
950	31	548	3.9	-5.4	29	5.0
900	31	986	1.6	-7.7	29	7.8
850	31	1,445	-.4	-9.3	29	9.4
800	31	1,929	-1.7	-12.9	28	10.7
750	31	2,441	-3.7	-16.5	28	13.1
700	31	2,983	-6.1	-18.6	28	15.8
650	31	3,561	-8.7	-21.3	27	18.3
600	31	4,178	-12.0	-25.0	28	20.1
550	31	4,839	-16.0	-28.5	28	23.3
500	31	5,550	-21.0	-32.0	27	26.2
450	31	6,320	-26.2	-36.5	28	29.1
400	30	7,159	-32.1	-41.5	28	33.7
350	30	8,093	-37.9	-43.9	28	38.3
300	30	9,139	-44.3		28	40.1
250	30	10,344	-50.5		27	45.2
200	30	11,789	-52.8		27	46.4
175	30	12,652	-52.8		27	43.1
150	29	13,645	-55.1		27	37.3
125	29	14,800	-58.4		27	31.5
100	28	16,195	-62.1		27	26.0
80	27	17,572	-62.6		27	18.6
70	25	18,400	-62.5		27	15.0
60	23	19,352	-61.3		28	7.4
50	21	20,489	-59.9		27	8.4
40	17	21,890	-58.1		29	6.3
30	17	23,710	-55.6		29	5.8
25	17	24,873	-54.8		28	8.1
20	15	26,309	-53.2		29	11.2
15	10	28,164	-50.3		28	14.7
10	10	30,858	-42.1			
7						

HILO, HAWAII 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	19.4	16.5	23	1.5
1000	30	160	19.7	15.6	23	1.1
950	30	601	16.9	13.9	11	2.6
900	30	1,061	13.7	11.4	11	4.1
850	30	1,541	10.9	7.0	11	3.5
800	30	2,045	8.7	1.6	10	3.2
750	30	2,577	7.1	-7.3	10	3.3
700	30	3,143	5.4	-12.2	10	3.3
650	30	3,746	2.7	-15.7	09	1.9
600	30	4,389	-.5	-21.2	10	1.1
550	30	5,079	-5.0	-24.7	30	.3
500	30	5,820	-10.3	-28.5	30	2.0
450	30	6,623	-16.1	-32.4	29	3.0
400	30	7,498	-22.6	-37.8	29	3.8
350	30	8,467	-30.0	-42.2	29	6.3
300	30	9,543	-38.3	-49.4	30	7.6
250	30	10,773	-46.9		30	9.9
200	30	12,222	-56.3		31	11.4
175	30	13,061	-61.0		32	11.6
150	30	14,008	-65.6		32	10.7
125	30	15,103	-70.6		31	8.9
100	30	16,411	-74.7		32	5.0
80	30	17,708	-73.7		28	2.4
70	30	18,493	-71.4		24	2.3
60	30	19,411	-68.4		22	2.3
50	30	20,514	-65.1		28	1.0
40	28	21,883	-61.9		33	.7
30	27	23,680	-58.0		01	.7
25	25	24,832	-54.9		25	1.4
20	24	26,271	-51.5		26	5.3
15	23	28,159	-46.5		26	7.7
10	20	30,895	-40.0		25	1.5
7	9	33,360	-37.2			

HUNTINGTON W. VA. 985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	[illegible]	1.7	-3.4	25	2.1
1000	31	126				
950	31	540	1.8	-5.1	26	4.1
900	31	975	-.7	-6.3	27	7.4
850	31	1,429	-3.2	-8.8	27	9.6
800	31	1,908	-5.0	-11.8	27	11.0
750	31	2,414	-6.7	-15.1	28	13.5
700	31	2,950	-9.1	-18.5	28	15.4
650	31	3,521	-11.7	-20.6	28	17.9
600	31	4,130	-14.8	-24.3	28	20.3
550	31	4,784	-18.7	-28.5	28	22.8
500	31	5,488	-23.2	-33.7	28	25.6
450	31	6,252	-28.4	-37.8	29	27.9
400	31	7,086	-34.1	-42.3	28	32.0
350	31	8,013	-40.0	-45.8	27	36.8
300	31	9,049	-46.4		27	40.5
250	31	10,247	-50.9		27	44.0
200	31	11,696	-51.3		27	41.9
175	31	12,563	-51.6		27	39.6
150	31	13,560	-53.5		27	35.8
125	30	14,729	-56.2		27	29.2
100	30	16,138	-58.3		27	23.6
80	29	17,538	-59.4		27	16.6
70	27	18,375	-59.9		27	12.2
60	27	19,337	-59.9		27	10.4
50	26	20,481	-58.7		28	7.2
40	25	21,886	-58.3		27	5.1
30	24	23,702	-56.9		28	6.0
25	23	24,858	-55.6		28	5.9
20	23	26,285	-54.1		28	7.8
15	19	28,126	-52.0		28	9.4
10	12	30,761	-45.8			
7						
5						
4						

* INTERNATIONAL FALLS, MINN. 97[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-9.2	-13.2	28	.6
1000	31	126				
950	31	525	-7.4	-11.6	31	1.4
900	31	945	-8.7	-12.7	30	2.4
850	31	1,387	-10.2	-16.3	31	3.8
800	31	1,853	-11.7	-18.0	30	4.5
750	31	2,346	-13.9	-21.3	31	5.8
700	31	2,867	-16.5	-24.8	31	7.2
650	31	3,421	-19.7	-27.1	30	8.7
600	31	4,012	-23.4	-31.1	30	9.8
550	31	4,643	-27.7	-35.3	30	10.9
500	31	5,321	-32.4	-39.9	30	11.6
450	31	6,057	-37.3	-42.5	29	13.2
400	31	6,861	-42.6	-44.6	29	15.1
350	31	7,755	-48.1		29	15.5
300	31	8,757	-53.0		29	16.8
250	31	9,932	-52.0		29	17.5
200	31	11,386	-49.8		29	15.2
175	31	12,260	-49.6		29	15.5
150	31	13,269	-50.3		29	13.7
125	31	14,456	-51.5		29	12.6
100	31	15,899	-53.4		29	10.5
80	31	17,329	-55.2		29	8.4
70	31	18,181	-55.7		29	7.3
60	31	19,161	-56.4		29	5.4
50	31	20,317	-57.1		29	3.7
40	31	21,727	-57.9		29	2.9
30	31	23,540	-58.1		31	1.4
25	31	24,588	-58.5		29	1.3
20	30	26,091	-58.7		29	2.8
15	29	27,902	-58.2		28	4.2
10	28	30,462	-56.3		27	9.2
7	23	32,775	-49.8		27	20.4
5	21	35,004	-43.1			
4	9	36,545	-39.0			

JACKSON, MISS. 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	7.6	2.9	11	.1
1000	31	149			29	.3
950	31	573	8.1	-1.4	28	2.8
900	31	1,019	6.5	-3.4	29	6.3
850	31	1,487	5.7	-7.7	28	9.2
800	31	1,982	4.0	-11.4	28	11.9
750	31	2,505	2.1	-16.5	29	14.5
700	31	3,059	-.6	-19.9	28	16.7
650	31	3,648	-3.6	-22.9	28	19.4
600	31	4,276	-7.3	-25.8	28	22.1
550	31	4,948	-11.5	-29.2	27	25.2
500	31	5,671	-16.9	-32.9	27	27.4
450	31	6,454	-22.2	-36.9	27	29.5
400	31	7,310	-27.8	-41.3	27	31.5
350	31	8,259	-34.6	-47.8	27	35.0
300	31	9,317	-42.2	-52.9	27	39.4
250	31	10,529	-49.7		27	42.7
200	31	11,973	-54.4		27	46.1
175	31	12,824	-57.2		27	43.9
150	31	13,792	-60.3		27	40.1
125	31	14,920	-64.1		27	35.6
100	30	16,275	-67.7		27	28.2
80	30	17,612	-68.9		27	18.9
70	30	18,413	-67.8		26	15.1
60	30	19,347	-64.7		27	11.5
50	29	20,469	-62.0		27	7.4
40	29	21,859	-59.3		27	7.6
30	27	23,676	-56.0		27	8.3
25	27	24,839	-54.9		28	8.9
20	26	26,274	-52.3		28	10.5
15	24	28,154	-48.7		27	11.9
10	17	30,865	-41.2			
7						
5						
4						

JOHN F. KENNEDY INT. AP NY 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	1.7	-5.5	32	3.6
1000	31	103	1.3	-7.7	32	4.4
950	31	515	-.8	-8.2	32	6.3
900	31	945	-2.4	-10.0	30	7.7
850	31	1,397	-4.3	-12.9	29	9.9
800	31	1,873	-6.2	-14.8	28	12.5
750	31	2,376	-8.2	-17.3	28	13.8
700	30	2,909	-10.8	-19.8	27	15.2
650	29	3,478	-13.8	-21.3	27	17.4
600	29	4,083	-17.3	-25.7	27	20.4
550	29	4,730	-21.0	-30.3	27	22.6
500	29	5,428	-25.8	-34.8	27	25.4
450	29	6,184	-30.6	-40.2	27	29.0
400	29	7,011	-35.9	-44.6	27	33.3
350	28	7,919	-42.0	-47.3	26	37.7
300	27	8,945	-46.8		27	38.8
250	26	10,132	-50.1		26	39.5
200	26	11,592	-49.3		27	36.8
175	25	12,461	-49.8		27	31.1
150	25	13,468	-50.9		27	27.8
125	23	14,663	-52.9		26	26.2
100	23	16,093	-55.7		26	21.3
80	23	17,509	-57.3		27	15.9
70	23	18,353	-57.5		27	12.4
60	22	19,336	-57.4		26	8.2
50	22	20,489	-57.1		26	5.5
40	21	21,902	-56.4		25	3.3
30	18	23,738	-55.1		27	1.6
25	17	24,900	-54.1		27	4.4
20	16	26,316	-52.9		27	6.3
15	13	28,176	-50.5		27	15.3
10	9	30,808	-45.9			
7						
5						
4						

JOHNSTON IS., PACIFIC AREA 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	24.5	20.5	09	9.6
1000	31	128	23.0	19.6	09	8.7
950	31	574	19.6	17.2	09	8.1
900	31	1,038	16.5	13.6	10	8.2
850	31	1,523	13.6	9.9	10	6.8
800	31	2,032	10.9	5.6	11	5.2
750	31	2,570	9.5	-2.7	11	3.7
700	31	3,140	6.7	-7.4	12	2.4
650	31	3,745	3.3	-12.0	12	1.7
600	31	4,390	-.2	-15.5	12	1.9
550	31	5,081	-4.4	-19.8	11	1.8
500	31	5,825	-9.0	-24.8	05	1.1
450	31	6,633	-14.3	-29.5	01	.7
400	31	7,515	-20.2	-34.6	31	2.5
350	31	8,494	-26.9	-39.4	32	5.1
300	31	9,586	-34.7	-47.2	32	9.1
250	31	10,835	-44.2		32	10.9
200	31	12,298	-54.1		32	12.8
175	31	13,144	-59.7		33	12.8
150	30	14,101	-65.8		33	12.3
125	30	15,191	-72.0		34	10.6
100	27	16,483	-77.1		35	8.2
80	23	17,757	-76.4		03	3.1
70	23	18,534	-72.8		06	.9
60	22	19,449	-68.6		11	2.3
50	22	20,551	-64.8		10	3.1
40	21	21,926	-61.3		09	4.1
30	21	23,734	-56.3		09	1.4
25	20	24,901	-52.9		26	2.8
20	17	26,361	-48.3		29	6.3
15	17	28,278	-45.0		30	6.3
10	12	31,012	-40.3		08	3.8
7	6	33,467	-38.9			
5						
4						

KEY WEST, FLA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	20.1	16.5	08	2.2
1000	30	148	19.5	15.2	09	2.6
950	30	588	16.9	[illegible]	12	2.4
900	30	1,049	15.0	4.6	22	1.0
850	30	1,532	13.3	-3.4	27	3.8
800	30	2,040	11.3	-5.8	27	5.1
750	30	2,574	8.8	-10.6	27	6.2
700	30	3,145	6.6	-14.4	27	7.5
650	30	3,740	3.0	-16.2	28	9.1
600	30	4,392	-1.3	-23.1	28	11.3
550	30	5,068	-5.9	-26.9	28	12.4
500	30	5,820	-10.3	-31.5	28	14.1
450	30	6,617	-15.7	-36.3	28	17.6
400	30	7,502	-22.0	-41.0	28	21.8
350	30	8,470	-29.4	-46.6	27	23.1
300	30	9,554	-36.9	-52.4	27	28.2
250	30	10,794	-45.2		26	31.2
200	30	12,249	-55.7		26	32.2
175	30	13,090	-60.1		26	31.9
150	30	14,042	-64.6		26	29.0
125	30	15,142	-69.9		27	25.5
100	30	16,453	-74.5		27	19.5
80	27	17,746	-74.8		27	10.9
70	27	18,526	-71.8		27	6.9
60	27	19,444	-67.3		27	4.9
50	27	20,558	-62.3		29	3.7
40	26	21,949	-58.7		35	3.3
30	25	23,775	-54.9		01	3.2
25	25	24,949	-51.9		01	3.7
20	25	26,413	-47.2		30	2.4
15	[illegible]	28,330	-43.1		26	5.3
10	19	31,110	-35.5		26	12.3
7	6	[illegible]	-32.9			
5						

KING SALMON, ALASKA 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-15.4	-21.5	02	2.0
1000	31	51			01	2.9
950	31	442	-13.6	-19.9	02	4.5
900	31	853	-14.0	-20.7	02	3.9
850	31	1,287	-14.6	-22.2	36	4.8
800	30	1,751	-15.9	-23.8	33	4.8
750	30	2,235	-18.0	-26.0	32	5.4
700	30	2,748	-20.6	-28.6	31	6.0
650	30	3,293	-23.6	-32.2	31	7.2
600	30	3,874	-27.0	-36.5	30	8.0
550	30	4,497	-30.8	-40.0	30	9.1
500	30	5,168	-34.8	-43.4	29	11.2
450	30	5,896	-39.6	-44.5	29	12.6
400	30	6,693	-44.7		28	12.3
350	30	7,580	-49.1		28	12.2
300	30	8,582	-51.7		28	11.1
250	30	9,768	-50.1		28	9.4
200	30	11,229	-48.9		28	8.2
175	30	12,108	-48.4		27	8.2
150	30	13,123	-48.5		27	7.2
125	30	14,324	-48.2		26	6.1
100	30	15,789	-49.5		25	5.5
80	30	17,246	-51.2		23	4.3
70	30	18,113	-51.4		23	4.5
60	28	19,112	-51.8		21	3.9
50	27	20,290	-52.7		22	3.0
40	26	21,727	-53.3		23	.8
30	26	23,575	-54.0		05	1.7
25	26	24,745	-54.3		06	3.6
20	26	26,174	-54.6		05	5.4
15	22	27,997	-55.8		04	7.6
10	7	30,541	-58.5			
7						
5						

* KOROR, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	27.4	24.5	07	1.0
1000	31	75	26.6	22.8	07	1.1
950	31	528	23.6	19.8	07	1.5
900	31	1,000	20.7	16.5	08	1.4
850	31	1,493	17.9	12.7	09	1.7
800	31	2,011	15.7	8.6	11	1.7
750	31	2,557	13.1	4.8	10	2.9
700	31	3,135	9.9	1.7	11	3.3
650	31	3,747	6.7	-2.5	11	3.6
600	31	4,401	3.0	-6.4	10	4.8
550	31	5,101	-.9	-11.7	10	5.6
500	31	5,356	-5.2	-13.0	10	7.1
450	31	6,676	-9.7	-22.5	10	8.5
400	31	7,576	-15.2	-28.9	10	9.1
350	31	8,575	-21.9	-36.9	10	10.2
300	31	9,588	-30.4	-44.7	10	10.9
250	31	10,957	-40.8	-53.3	10	12.1
200	31	12,435	-53.3		10	13.4
175	31	13,281	-60.3		10	14.4
150	31	14,224	-68.2		10	15.2
125	31	15,298	-76.1		10	17.3
100	31	16,559	-83.4		10	18.7
80	31	17,808	-79.5		09	8.8
70	30	18,572	-75.5		08	6.6
60	30	19,477	-70.8		09	11.2
50	30	20,572	-64.7		09	18.7
40	29	21,957	-58.2		09	12.9
30	28	23,794	-52.2		28	4.4
25	25	24,978	-50.2		27	8.9
20	23	26,441	-47.7		27	12.0
15	21	28,360	-45.2		27	12.8
10	17	31,098	-40.7		26	6.3
7	10	33,542	-38.2			
5						

KOTZEBUE, ALASKA 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	-23.7	-26.8	07	2.3
1000	30	128	-17.9	-28.6	09	3.6
950	30	512	-18.2	-25.1	09	5.5
900	30	915	-19.3	-25.9	09	5.5
850	30	1,338	-20.9	-27.4	09	5.6
800	30	1,786	-21.9	-28.2	08	5.5
750	30	2,260	-23.3	-29.8	08	4.2
700	30	2,762	-25.5	-31.9	08	3.9
650	30	3,297	-27.9	-35.1	08	3.6
600	30	3,869	-30.9	-37.1	07	3.5
550	30	4,482	-34.4	-39.5	07	2.4
500	30	5,143	-38.2	-41.9	07	1.5
450	30	5,862	-42.2	-45.7	10	2.1
400	30	6,651	-46.5		11	3.1
350	30	7,534	-49.7		14	2.2
300	30	8,536	-50.9		18	3.2
250	30	9,724	-50.4		20	2.8
200	30	11,187	-48.8		21	3.0
175	30	12,056	-48.1		21	2.8
150	30	13,093	-48.2		21	3.6
125	30	14,285	-47.9		20	4.6
100	30	15,754	-49.0		21	4.5
80	30	17,217	-49.6		21	5.1
70	30	18,092	-49.6		21	5.1
60	30	19,100	-50.1		21	4.5
50	30	20,291	-50.4		21	4.1
40	30	21,746	-50.9		19	3.1
30	28	23,615	-51.4		23	1.4
25	28	24,798	-52.2		10	.9
20	20	26,238	-53.9		08	2.5
15	13	28,076	-54.3			
10						
7						
5						

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.8	23.4	08	6.0
1000	31	88	26.1	22.7	08	6.8
950	31	539	22.5	20.1	08	8.8
900	31	1,009	19.5	15.8	09	8.8
850	31	1,500	16.8	11.3	09	8.0
800	31	2,016	14.6	6.5	09	6.8
750	31	2,560	12.1	2.0	09	5.5
700	31	3,135	9.3	-3.3	09	4.7
650	31	3,746	6.2	-8.7	08	4.2
600	31	4,398	2.6	-12.3	07	4.5
550	31	5,096	-1.6	-15.6	07	4.3
500	31	5,850	-5.7	-20.7	07	4.2
450	31	6,669	-10.2	-25.8	06	4.9
400	31	7,567	-15.5	-31.1	04	4.1
350	31	8,562	-22.3	-37.5	02	3.8
300	31	9,676	-30.9	-45.3	36	1.9
250	31	10,942	-41.2	-54.1	30	1.6
200	31	12,416	-53.9	-64.1	29	2.1
175	31	13,250	-60.9		31	3.2
150	31	14,201	-68.6		34	4.1
125	31	15,270	-77.0		02	6.0
100	26	16,529	-84.0		06	9.2
80	23	17,764	-81.8		08	10.0
70	23	18,524	-75.7		10	5.9
60	23	19,424	-72.5		03	9.4
50	23	20,507	-67.6		07	16.4
40	22	21,870	-61.0		09	13.7
30	21	23,690	-54.1		30	2.8
25	21	24,866	-51.8		27	7.8
20	21	26,323	-48.3		27	11.6
15	20	28,222	-46.0		27	9.8
10	18	30,953	-42.0		28	1.5
7	16	33,372	-40.2		08	6.8
5	8	35,703	-36.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

LAKE CHARLES, LA. 1016 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	5	11.0	6.5	10	.9
1000	31	141	12.8	6.0	11	.8
950	31	571	11.3	4.0	21	2.[illegible]
900	31	1,073	10.3	-.7	25	4.8
850	31	1,447	9.0	-6.8	26	7.4
800	31	1,998	7.8	-10.5	27	10.2
750	31	2,528	5.3	-14.6	28	11.6
700	31	3,069	2.5	-17.4	28	13.8
650	31	3,684	-1.2	-20.7	28	16.4
600	31	4,317	-5.4	-22.9	27	17.8
550	31	4,993	-9.9	-25.9	27	19.8
500	31	5,721	-15.1	-30.5	27	22.4
450	31	6,510	-20.4	-35.7	27	25.8
400	31	7,371	-26.4	-41.1	27	28.0
350	30	8,328	-33.1	-46.6	27	31.6
300	30	9,392	-40.7	-52.1	27	35.6
250	30	10,610	-49.0		27	39.4
200	30	12,056	-55.0		27	37.9
175	30	12,932	-58.2		27	38.0
150	30	13,866	-61.6		27	34.5
125	30	14,932	-66.5		27	32.3
100	30	16,318	-70.6		27	25.7
80	28	17,535	-71.5		27	16.3
70	27	18,426	-70.4		27	13.1
60	26	19,350	-66.8		27	9.5
50	25	20,465	-62.6		27	7.2
40	25	21,853	-59.3		27	6.4
30	24	23,673	-55.6		28	7.6
25	23	24,842	-54.0		28	7.4
20	23	26,242	-51.9		27	9.1
15	21	28,171	-47.3		27	11.9
10	13	30,903	-39.8			
7						
5						

LANDER, WYO. 825 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	1,697	-4.0	-11.5	24	2.4
1000	31	149				
950	31	565				
900	31	1,000				
850	31	1,456				
800	31	1,938	-1.9	-12.9	27	1.2
750	31	2,649	-4.5	-14.8	28	4.2
700	31	2,989	-7.8	-17.9	28	9.4
650	31	3,561	-11.8	-20.7	28	12.4
600	31	4,168	-16.0	-24.6	28	15.3
550	31	4,818	-20.4	-28.5	28	16.9
500	31	5,518	-25.0	-34.5	28	18.8
450	31	6,275	-30.5	-37.5	28	21.8
400	31	7,102	-36.4	-42.6	29	25.2
350	31	8,019	-42.6	-46.8	29	27.1
300	31	9,041	-49.4		29	31.7
250	31	10,222	-54.2		29	35.0
200	31	11,649	-54.9		29	31.4
175	31	12,503	-54.6		28	29.9
150	31	13,492	-54.0		28	26.9
125	31	14,658	-56.1		28	21.9
100	31	16,070	-57.9		28	15.8
80	30	17,468	-59.4		28	12.0
70	29	18,301	-60.0		28	8.5
60	29	19,262	-60.6		28	7.1
50	28	20,400	-59.5		28	4.8
40	25	21,799	-60.0		29	3.0
30	23	23,604	-58.6		29	4.2
25	19	24,753	-58.3		30	3.9
20	15	26,139	-57.5		30	3.0
15	12	27,953	-56.3			

* LIHUE KAUAI, HAWAII 1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	36	22.5	18.1	07	3.6
1000	31	164	21.0	16.4	07	4.9
950	31	607	17.3	15.4	08	5.8
900	31	1,066	14.0	12.6	08	4.9
850	31	1,546	10.8	9.3	08	3.8
800	31	2,050	8.2	.6	10	3.5
750	31	2,583	7.1	-5.6	12	2.5
700	31	3,148	4.8	-10.7	15	1.1
650	31	3,750	2.1	-12.9	21	1.3
600	31	4,392	-1.0	-15.8	25	2.0
550	31	5,081	-5.1	-19.5	25	3.2
500	31	5,822	-10.3	-22.7	25	3.6
450	31	6,626	-15.6	-27.5	26	4.2
400	31	7,503	-22.2	-32.9	26	5.4
350	31	8,473	-29.5	-40.6	27	7.2
300	31	9,552	-37.9	-48.5	29	8.6
250	31	10,785	-46.8		30	12.8
200	31	12,235	-55.6		31	14.7
175	31	13,077	-60.5		31	14.2
150	31	14,025	-65.0		31	12.6
125	31	15,122	-70.4		31	10.8
100	30	16,434	-74.8		32	6.9
80	27	17,734	-73.8		32	2.5
70	24	18,524	-71.4		27	.9
60	24	19,444	-67.6		27	1.9
50	23	20,553	-64.1		26	2.2
40	21	21,933	-61.1		29	2.7
30	20	23,732	-57.5		28	2.6
25	20	24,894	-53.9		25	4.6
20	20	26,340	-50.2		26	6.8
15	20	28,235	-46.2		26	8.7
10	17	30,966	-39.1		25	9.4
7	15	33,441	-33.9		23	8.3
5	10	35,754	-32.7			

LITTLE ROCK, ARK. 1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	79	5.5	1.2	29	.9
1000	31	142	5.5	-2.8	30	1.3
950	31	562	5.6	-2.5	28	2.7
900	31	1,004	4.2	-5.3	28	5.3
850	31	1,468	3.0	-7.6	28	7.4
800	31	1,938	1.4	-10.1	29	10.2
750	31	2,476	-.7	-13.6	29	13.5
700	31	3,025	-3.2	-16.9	29	15.9
650	31	3,608	-6.5	-21.2	29	18.4
600	31	4,229	-10.3	-24.3	28	21.0
550	31	4,893	-14.9	-27.2	28	23.4
500	31	5,607	-19.9	-31.4	28	26.2
450	31	6,381	-25.3	-35.7	28	27.7
400	31	7,226	-31.1	-41.9	28	31.6
350	31	8,164	-37.3	-46.6	28	36.2
300	31	9,211	-43.7		27	39.5
250	31	10,416	-51.2		28	41.4
200	31	11,855	-54.5		28	43.8
175	30	12,706	-55.7		27	42.7
150	30	13,683	-58.4		27	40.3
125	30	14,820	-61.8		27	35.7
100	30	16,192	-64.8		27	25.3
80	30	17,553	-65.3		27	17.4
70	29	18,365	-65.0		27	14.0
60	29	19,307	-63.8		27	10.3
50	27	20,429	-61.2		27	6.9
40	27	21,821	-59.6		27	6.4
30	27	23,632	-56.7		27	8.5
25	27	24,792	-55.3		27	9.7
20	27	26,223	-53.5		27	10.6
15	25	28,090	-49.6		27	15.8
10	12	30,791	-43.8			

MCGRATH, ALASKA [illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	15	103	-26.5	-29.1	35	1.8
1000	15	97				
950	15	476	-21.8	-27.9	03	5.1
900	15	874	-21.8	-27.4	04	6.6
850	15	1,296	-21.3	-26.9	04	6.9
800	15	1,743	-22.0	-28.0	03	6.1
750	15	2,217	-22.3	-28.5	02	4.8
700	15	2,722	-24.3	-30.3	35	2.9
650	15	3,259	-27.2	-33.4	33	2.3
600	15	3,832	-30.4	-35.9	33	2.8
550	15	4,446	-33.7	-36.2	33	3.7
500	15	5,110	-37.4	-37.8	32	4.2
450	15	5,832	-41.2	-40.4	31	3.8
400	15	6,624	-45.6		26	4.9
350	15	7,510	-49.0		25	5.3
300	15	8,513	-51.6		26	6.5
250	15	9,697	-50.5		27	6.2
200	15	11,161	-48.0		27	6.8
175	15	12,044	-47.2		27	6.5
150	15	13,065	-46.9		27	6.8
125	15	14,273	-46.5		26	5.8
100	15	15,750	-48.2		27	6.4
80	15	17,217	-49.6		28	5.4
70	15	18,090	-50.0		26	5.2
60	14	19,080	-50.5		28	4.7
50	14	20,267	-51.2		28	3.9
40	14	21,714	-52.3		32	2.4
30	13	23,569	-53.4		32	5.6
25	11	24,735	-54.2			
20	8	26,169	-56.1			
15	5	27,954	-59.9			

* MAJURO, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	3	28.5	23.7	08	5.8
1000	31	95	26.9	19.5	08	7.0
950	31	547	23.3	17.8	09	8.9
900	31	1,017	20.4	14.6	09	9.0
850	31	1,509	17.4	10.7	09	8.3
800	31	2,026	15.3	6.0	09	7.5
750	31	2,572	12.9	1.5	09	6.4
700	31	3,149	10.0	-2.3	09	4.5
650	31	3,762	6.9	-7.3	08	3.9
600	31	4,415	3.3	-11.7	08	3.9
550	31	5,116	-.4	-16.8	08	3.1
500	31	5,872	-4.4	-21.4	08	2.6
450	31	6,695	-9.0	-26.8	06	2.2
400	31	7,598	-14.4	-32.0	36	2.6
350	31	8,600	-20.8	-38.0	35	4.2
300	31	9,718	-29.1	-45.0	31	4.2
250	31	10,994	-39.6	-53.4	28	3.2
200	31	12,480	-52.0		29	4.3
175	31	13,332	-58.9		30	4.8
150	31	14,282	-66.6		34	6.2
125	31	15,364	-74.4		36	7.1
100	30	16,635	-82.0		05	8.9
80	30	17,883	-79.7		07	7.9
70	29	18,654	-73.2		08	8.0
60	29	19,565	-69.4		09	12.7
50	29	20,671	-62.7		09	17.8
40	29	22,068	-55.9		09	8.7
30	29	23,925	-50.7		27	6.0
25	27	25,119	-48.3		27	10.7
20	26	26,599	-45.9		27	12.2
15	22	26,518	-43.3		27	13.8
10	15	31,261	-39.4		28	10.5
7	8	33,750	-35.7			

* MEDFORD, OREG. 972 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	401	3.6	.6	33	.2
1000	31	170				
950	31	588	3.7	-1.2	27	.4
900	31	1,026	2.4	-3.8	19	3.1
850	31	1,486	-.3	-7.0	22	5.3
800	31	1,969	-2.8	-9.6	24	7.9
750	31	2,478	-5.3	-12.0	25	10.0
700	31	3,017	-7.8	-16.0	26	12.2
650	30	3,590	-11.0	-19.5	27	14.3
600	30	4,200	-14.3	-23.2	27	16.8
550	30	4,856	-17.9	-27.5	27	19.5
500	30	5,562	-22.5	-31.6	27	22.4
450	30	6,328	-27.6	-36.2	27	25.5
400	30	7,165	-33.4	-41.0	27	28.2
350	30	8,092	-40.2	-44.3	27	32.0
300	30	9,124	-47.9		27	35.5
250	30	10,307	-55.0		27	38.1
200	30	11,719	-58.4		28	34.0
175	30	12,561	-57.3		27	32.0
150	30	13,538	-57.0		27	29.3
125	30	14,688	-58.6		28	24.7
100	29	16,084	-60.4		27	18.5
80	28	17,470	-61.2		27	12.6
70	28	18,298	-61.9		28	10.7
60	28	19,253	-61.5		28	8.8
50	28	20,384	-61.5		29	5.7
40	28	21,767	-61.6		29	4.1
30	28	23,554	-60.8		30	2.9
25	28	24,690	-60.0		30	3.0
20	25	26,085	-59.0		30	3.2
15	23	27,898	-57.4		28	6.3
10	17	30,496	-51.6		28	15.9
7	13	32,872	-43.7			

MERIDA, MEXICO 1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	11	20.4	18.5	08	1.4
1000	31	126	21.3	18.5	10	4.9
950	31	571	19.9	15.4	12	8.2
900	31	1,037	18.3	11.1	12	6.5
850	31	1,526	16.2	7.2	13	2.9
800	31	2,040	13.6	2.5	16	1.0
750	31	2,582	11.2	-4.9	23	.8
700	31	3,155	8.4	-12.0	29	1.8
650	31	3,763	4.7	-15.6	31	3.2
600	31	4,410	.7	-19.4	31	5.2
550	31	5,103	-3.6	-23.8	30	7.0
500	31	5,849	-8.4	-27.9	28	8.6
450	31	6,659	-13.6	-32.2	28	9.0
400	31	7,543	-20.2	-37.6	27	11.2
350	31	8,522	-27.3	-43.2	27	14.5
300	30	9,610	-35.1	-49.4	26	17.3
250	29	10,860	-44.1		25	19.5
200	28	12,319	-55.4		24	20.4
175	27	13,164	-59.8		24	20.9
150	26	14,115	-64.0		24	16.1
125	26	15,217	-70.1		25	14.4
100	26	16,522	-76.5		25	11.7
80	26	17,797	-78.1		25	5.8
70	25	18,566	-75.0		26	5.1
60	25	19,475	-68.7		25	1.6
50	25	20,581	-63.7		24	.9
40	25	21,965	-59.5		29	1.3
30	25	23,778	-56.4		02	2.9
25	25	24,944	-52.9		03	3.9
20	25	26,400	-48.2		03	1.9
15	19	28,302	-44.9		26	3.4

MIAMI, FLA. 1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	4	17.2	14.1	31	.8
1000	31	152	18.1	12.6	03	.5
950	31	590	15.6	9.5	13	1.2
900	31	1,048	13.7	5.1	24	1.2
850	31	1,528	12.3	-.6	27	4.4
800	31	2,035	10.8	-5.8	27	6.8
750	31	2,571	8.4	-8.8	28	8.3
700	31	3,138	5.7	-14.1	28	9.5
650	31	3,740	2.1	-16.1	28	10.9
600	31	4,380	-2.1	-18.5	28	12.6
550	31	5,067	-6.2	-22.3	28	14.5
500	31	5,805	-11.0	-27.3	28	16.7
450	31	6,607	-16.0	-32.3	28	19.8
400	31	7,483	-22.6	-37.7	28	22.2
350	31	8,453	-29.2	-43.4	27	26.0
300	31	9,535	-36.6	-50.1	27	29.3
250	31	10,779	-43.9		27	34.0
200	30	12,245	-53.9		27	35.9
175	30	13,093	-58.2		26	33.9
150	30	14,055	-62.2		27	31.0
125	30	15,166	-67.9		27	28.0
100	29	16,489	-72.7		27	22.2
80	27	17,788	-73.9		23	13.4
70	27	18,573	-71.5		27	8.8
60	27	19,493	-67.2		27	7.4
50	27	20,610	-61.5		28	4.8
40	26	22,006	-57.9		32	3.6
30	26	23,833	-54.8		36	3.5
25	23	25,005	-52.2		34	3.5
20	21	26,456	-48.5		30	4.7
15	21	28,366	-44.7		27	7.8
10	18	31,103	-38.6		26	15.5
7	5	33,536	-34.1			

MIDLAND, TEXAS 915 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	874	5.0	-7.3	20	.8
1000	31	143				
950	31	567				
900	31	1,012	8.7	-6.2	22	1.9
850	31	1,488	11.2	-8.4	27	6.4
800	31	1,992	9.2	-11.2	27	9.5
750	31	2,523	5.9	-14.3	28	11.3
700	31	3,084	2.3	-18.3	27	13.1
650	31	3,678	-1.4	-20.9	27	15.0
600	31	4,311	-5.6	-24.3	27	16.6
550	31	4,987	-10.1	-28.2	27	18.7
500	31	5,714	-15.6	-32.0	28	20.6
450	31	6,501	-21.0	-37.0	28	23.7
400	31	7,359	-27.7	-42.8	28	25.6
350	31	8,309	-34.6	-47.9	27	29.4
300	31	9,366	-42.3	-52.5	27	32.3
250	31	10,577	-50.7		27	32.2
200	31	12,012	-55.7		28	31.5
175	30	12,860	-58.1		28	30.7
150	27	13,823	-61.1		27	30.8
125	27	14,945	-65.3		28	28.0
100	27	16,291	-69.0		28	23.3
80	23	17,620	-70.0		29	16.8
70	23	18,417	-69.0		29	12.7
60	21	19,343	-67.1		28	9.7
50	21	20,455	-63.1		29	5.8
40	21	21,836	-60.8		27	6.1
30	21	23,644	-56.8		27	8.5
25	20	24,807	-55.4		27	9.2
20	19	26,236	-53.3		26	12.9
15	19	28,102	-49.4		27	16.8
10	10	30,812	-41.4			

MONTERREY, MEXICO 962 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	7	423	18.4	14.4		
1000	7	111				
950	7	593	19.4	13.0		
900	7	1,021	19.0	9.3		
850	7	1,511	17.5	6.4		
800	7	2,029	16.5	2.4		
750	7	2,575	12.7	-1.1		
700	7	3,151	9.1	-6.3		
650	7	3,759	4.2	-9.0		
600	7	4,404	-1.2	-11.5		
550	7	5,091	-6.3	-18.2		
500	7	5,829	-11.7	-25.3		
450	7	6,629	-16.5	-29.1		
400	7	7,504	-22.4	-34.8		
350	7	8,474	-29.8	-40.8		
300	7	9,550	-38.9	-51.8		
250	7	10,775	-48.6			
200	7	12,209	-58.6			
175	7	13,042	-60.1			
150	7	13,998	-62.9			
125	7	15,107	-68.4			
100	7	16,425	-74.1			
80	7	17,713	-75.8			
70	6	18,436	-75.7			
60	5	19,384	-70.5			
50						
40						
30						
25						
20						
15						
10						
7						

MONETT, MO. 964 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	438	2.1	-2.4	17	.6
1000	31	140				
950	31	556	2.2	-5.2	25	.8
900	31	994	2.4	-7.8	27	5.5
850	31	1,455	1.7	-10.6	28	8.9
800	31	1,942	-.3	-13.0	29	9.5
750	31	2,456	-2.7	-16.3	29	12.0
700	31	3,001	-5.4	-19.6	29	14.2
650	31	3,578	-8.9	-23.5	28	16.5
600	31	4,194	-12.8	-26.7	28	19.4
550	31	4,852	-17.2	-29.5	28	22.1
500	31	5,560	-22.0	-34.4	28	24.6
450	31	6,327	-27.2	-39.0	28	26.8
400	31	7,165	-33.4	-44.0	28	30.3
350	31	8,093	-39.5	-47.0	28	32.7
300	31	9,131	-45.6		28	35.7
250	31	10,330	-51.6		28	38.0
200	31	11,760	-55.0		28	41.4
175	31	12,612	-55.9		28	40.1
150	29	13,591	-56.7		28	37.3
125	27	14,741	-59.6		28	32.[illegible]
100	25	16,141	[illegible]		28	[illegible]
80	24	17,572	-62.9		28	13.5
70	23	18,347	-62.5		27	9.9
60	23	19,300	-61.6		27	8.4
50	22	20,437	-60.4		28	5.2
40	21	21,831	-59.2		28	4.7
30	20	23,641	-57.1		28	5.6
25	18	24,806	-55.0		28	6.9
20	18	26,239	-53.0		27	9.7
15	17	28,105	-50.5		27	13.3
10	14	30,772	-43.1			

MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	57	7.2	3.0	30	1.2
1000	31	148	8.2	1.0	32	1.6
950	31	572	7.8	-.8	30	4.5
900	31	1,017	6.6	-2.9	29	7.1
850	31	1,486	5.6	-5.7	29	10.2
800	31	1,980	3.5	-9.0	28	12.8
750	31	2,502	1.1	-11.4	28	14.9
700	31	3,053	-1.5	-14.9	28	17.4
650	31	3,641	-4.2	-19.4	28	20.6
600	31	4,268	-7.7	-24.1	29	22.7
550	31	4,940	-11.8	-26.9	29	25.8
500	30	5,661	-16.8	-31.8	27	28.5
450	30	6,444	-22.0	-35.5	27	31.4
400	30	7,301	-28.0	-41.4	27	33.7
350	30	8,249	-34.7	-46.8	27	36.9
300	30	9,308	-41.8	-51.9	27	39.5
250	30	10,523	-48.9		27	44.4
200	30	11,973	-53.6		27	48.0
175	30	12,823	-56.0		27	45.4
150	30	13,803	-58.9		27	41.9
125	30	14,936	-63.3		27	36.4
100	30	16,294	-66.6		27	28.3
80	30	17,638	-67.9		27	19.9
70	29	18,446	-65.8		27	15.7
60	29	19,389	-63.2		28	10.4
50	28	20,513	-60.1		28	7.4
40	28	21,912	-58.1		27	8.0
30	27	23,735	-55.0		27	7.6
25	26	24,908	-53.2		27	8.1
20	25	26,354	-50.6		28	9.9
15	[illegible]	28,233	-47.6		27	13.4
10	12	30,956	-40.5			
7	[illegible]	33,402	-32.1			

NASHVILLE, TENN. 995 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	180	3.2	-1.9	27	1.0
1000	31	140				
950	31	557	2.9	-3.9	27	4.1
900	31	994	1.1	-5.3	27	6.9
850	31	1,452	-1.0	-9.7	28	8.7
800	31	1,934	-2.4	-12.2	28	10.1
750	31	2,445	-4.2	-14.9	28	12.5
700	31	2,987	-6.7	-19.0	28	14.8
650	31	3,563	-9.4	-22.4	28	18.0
600	31	4,178	-12.8	-25.5	28	21.9
550	31	4,836	-16.9	-29.3	29	24.7
500	31	5,545	-22.0	-34.1	27	26.6
450	31	6,313	-26.7	-38.8	27	29.5
400	31	7,153	-32.4	-43.3	27	33.1
350	31	8,086	-38.5	-46.1	27	37.1
300	31	9,128	-45.2		27	37.5
250	31	10,328	-51.1		27	41.3
200	31	11,770	-53.1		27	43.2
175	31	12,629	-54.0		27	41.2
150	31	13,614	-56.0		27	38.7
125	30	14,760	-59.3		27	33.1
100	30	16,148	-61.8		27	25.1
80	30	17,527	-62.8		27	17.4
70	28	18,348	-62.6		27	12.3
60	28	19,299	-62.3		27	10.2
50	28	20,431	-60.5		27	7.0
40	27	21,829	-59.0		27	6.7
30	26	23,646	-56.6		28	7.2
25	24	24,805	-55.3		29	7.1
20	22	26,229	-53.7		28	10.7
15	[illegible]	[illegible]	-50.3		27	14.4
10	17	30,785	-43.2		27	22.7
7	[illegible]	[illegible]	-38.5			

* NOME, ALASKA 1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	5	-21.4	-22.6	07	3.6
1000	31	98			09	2.7
950	31	483	-17.1	-21.6	11	4.3
900	31	889	-17.9	-22.1	10	3.4
850	31	1,315	-19.0	-23.9	09	3.1
800	31	1,765	-20.4	-26.5	08	2.6
750	31	2,242	-22.2	-28.4	05	1.7
700	31	2,746	-24.5	-30.5	04	1.7
650	31	3,283	-27.0	-34.0	03	1.6
600	31	3,857	-30.2	-36.9	02	1.4
550	31	4,471	-34.0	-37.8	34	1.2
500	31	5,133	-38.0	-41.9	32	1.4
450	31	5,853	-42.0	-45.3	29	2.[illegible]
400	31	6,643	-46.2		27	2.9
350	31	7,526	-49.7		27	3.9
300	31	8,529	-51.2		27	4.5
250	31	9,716	-50.3		26	3.6
200	30	11,179	-49.0		25	3.9
175	30	12,056	-48.5		24	3.7
150	29	13,069	-48.5		23	3.7
125	29	14,267	-48.9		21	5.1
100	29	15,733	-49.0		22	[illegible]
80	29	17,194	-50.0		21	5.1
70	29	18,048	-49.9		22	4.6
60	29	19,074	-50.5		2[illegible]	4.9
50	29	20,263	-50.9		21	3.9
40	[illegible]	[illegible]	[illegible]		23	[illegible]
30	[illegible]	23,502	-51.4		23	[illegible]
25	25	24,745	-52.1		32	.8
20	[illegible]	[illegible]	-52.8		02	2.4
15	[illegible]	[illegible]	-53.3		01	3.4
10	[illegible]	30,526	-58.2		36	9.3
7	[illegible]	[illegible]	[illegible]			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NORTH PLATTE, NEBR. 915 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	30	847	-4.1	-7.3	29	.6
1000	30	142				
950	30	552				
900	30	981	-2.2	-6.8	29	1.7
850	30	1,438	-.2	-9.8	29	4.9
800	30	1,922	-2.0	-12.3	29	8.1
750	30	2,433	-4.4	-15.3	30	9.7
700	30	2,973	-8.1	-18.4	30	12.1
650	30	3,544	-11.8	-21.2	29	13.7
600	30	4,153	-15.6	-25.0	29	15.1
550	30	4,805	-19.5	-29.9	29	17.7
500	30	5,506	-24.6	-35.7	30	20.9
450	30	6,265	-29.9	-37.0	29	23.1
400	30	7,093	-36.3	-42.0	29	25.2
350	30	8,010	-42.6	-45.8	29	28.5
300	30	9,034	-48.7		29	31.9
250	30	10,218	-53.9		29	35.7
200	30	11,647	-54.2		28	34.0
175	30	12,504	-54.1		28	32.3
150	30	13,491	-55.1		28	29.7
125	30	14,653	-56.6		29	24.4
100	29	16,056	-58.7		28	19.1
80	29	17,455	-59.4		29	14.4
70	29	18,291	-59.9		28	11.0
60	28	19,252	-60.1		28	8.1
50	27	20,386	-60.5		28	6.3
40	23	21,778	-59.6		28	4.2
30	22	23,581	-58.5		27	4.2
25	21	24,731	-57.8		28	4.4
20	20	26,145	-56.7		28	5.9
15	17	27,972	-54.7		27	8.6
10	8	30,616	-47.4			
7						
5						
4						

OAKLAND, CALIF. 1021 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	6	8.3	5.4	28	.8
1000	31	176	8.8	3.5	30	1.5
950	31	600	7.3	-.9	31	2.5
900	31	1,044	5.8	-5.4	30	2.7
850	31	1,511	4.5	-9.6	27	4.2
800	31	2,003	2.5	-12.7	28	5.3
750	31	2,522	.3	-16.3	28	7.3
700	31	3,073	-2.0	-19.0	29	9.5
650	31	3,659	-5.3	-21.3	29	12.6
600	31	4,283	-8.9	-23.1	29	14.5
550	31	4,951	-13.1	-26.3	28	16.7
500	31	5,670	-18.1	-31.1	28	18.6
450	31	6,449	-23.9	-34.6	28	21.1
400	31	7,298	-30.0	-40.7	28	23.3
350	31	8,238	-37.2	-45.3	28	24.4
300	31	9,283	-45.2		28	26.1
250	31	10,476	-54.0		29	27.4
200	30	11,886	-59.3		28	28.8
175	30	12,723	-59.1		28	29.7
150	30	13,689	-59.2		27	29.8
125	30	14,825	-61.7		28	25.2
100	29	16,197	-64.0		27	19.9
80	29	17,562	-64.8		27	15.0
70	29	18,377	-64.6		27	12.3
60	28	19,320	-63.7		28	10.4
50	26	20,436	-62.6		29	6.9
40	25	21,814	-61.9		29	5.1
30	22	23,601	-60.4		29	5.2
25	21	24,739	-59.0		29	5.4
20	18	26,146	-57.1		28	5.3
15	17	27,984	-54.6		28	9.8
10	11	30,605	-49.3			

OMAHA, NEBR. 967 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	403	-1.8	-4.8	36	1.3
1000	31	130				
950	31	541	-1.0	-6.0	34	2.5
900	31	973	-1.1	-9.0	32	5.1
850	31	1,428	-2.0	-12.7	31	7.1
800	31	1,909	-4.2	-13.7	31	8.8
750	31	2,415	-6.8	-16.2	30	10.2
700	31	2,951	-9.8	-19.8	30	11.9
650	31	3,520	-12.7	-24.1	30	14.4
600	31	4,126	-16.3	-27.0	30	17.8
550	31	4,776	-20.5	-30.8	29	19.1
500	31	5,474	-25.6	-35.1	29	21.5
450	31	6,230	-31.0	-37.7	29	23.9
400	31	7,055	-36.9	-42.6	29	28.0
350	31	7,970	-43.0	-44.2	29	31.6
300	31	8,992	-48.8		29	34.2
250	31	10,177	-53.0		28	37.8
200	29	11,626	-53.1		29	36.8
175	28	12,487	-53.1		29	32.9
150	28	13,479	-53.7		28	29.2
125	24	14,649	-55.4		28	24.5
100	22	16,057	-57.6		28	18.7
80	21	17,460	-59.4		29	14.2
70	19	18,298	-60.4		29	10.6
60	17	19,263	-60.1		28	9.4
50	17	20,401	-60.1		29	6.0
40	16	21,796	-59.5		28	3.7
30	15	23,608	-57.7		26	3.9
25	13	24,767	-57.3		27	4.6
20	11	26,192	-55.4		27	8.8
15	7	28,020	-54.0			
10	6	30,649	-49.2			

+ PAGO PAGO, AMERICAN SAMOA 1011 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	5	28.8	24.2	07	3.6
1000	31	106	27.3	20.6	07	4.5
950	31	559	23.7	17.9	07	6.2
900	31	1,029	20.5	14.5	06	6.4
850	31	1,521	17.3	10.8	06	6.7
800	31	2,037	14.8	6.8	07	6.0
750	31	2,581	12.0	3.0	07	5.6
700	31	3,156	8.9	-.8	07	5.6
650	31	3,767	5.8	-5.8	08	6.0
600	31	4,418	2.2	-10.9	09	6.3
550	31	5,116	-1.5	-15.9	09	6.1
500	31	5,870	-5.8	-21.7	10	5.4
450	31	6,688	-10.8	-27.0	11	5.7
400	31	7,583	-16.8	-32.9	12	6.2
350	31	8,575	-23.8	-39.6	12	6.3
300	31	9,679	-32.4	-47.3	13	8.4
250	31	10,937	-42.7		14	10.5
200	31	12,405	-54.4		14	14.0
175	31	13,249	-60.6		14	14.5
150	30	14,193	-66.8		15	14.2
125	29	15,278	-72.1		15	11.8
100	29	16,576	-76.1		14	9.0
80	27	17,872	-73.4		10	9.1
70	25	18,658	-71.3		10	13.4
60	26	19,577	-68.1		09	17.7
50	23	20,682	-63.9		09	21.4
40	23	22,065	-59.6		09	21.9
30	22	23,895	-53.3		09	19.4
25	22	25,077	-50.4		09	16.8
20	20	26,545	-46.4		08	12.8
15	18	28,471	-42.5		08	9.8
10	11	31,252	-38.3			

* PEORIA, ILL. 991 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	200	-2.0	-6.2	30	.9
1000	31	127				
950	31	535	-2.0	-7.7	29	3.7
900	31	965	-3.0	-10.5	29	5.7
850	31	1,417	-4.4	-13.1	30	7.9
800	31	1,893	-6.0	-15.2	29	9.4
750	31	2,396	-8.4	-17.2	29	11.3
700	31	2,929	-11.2	-19.6	29	13.5
650	31	3,495	-14.4	-22.3	29	14.9
600	31	4,097	-17.8	-26.3	29	17.4
550	31	4,743	-22.0	-29.0	29	20.0
500	31	5,438	-26.7	-34.4	28	22.1
450	31	6,190	-32.0	-38.9	28	24.9
400	31	7,013	-37.9	-42.6	28	28.5
350	31	7,924	-43.7	-45.1	28	31.9
300	31	8,945	-49.0		28	34.6
250	31	10,131	-52.2		28	37.2
200	30	11,573	-52.3		28	34.5
175	30	12,437	-52.6		28	31.7
150	30	13,431	-53.9		28	29.3
125	30	14,597	-55.4		28	24.4
100	30	16,012	-57.8		28	17.5
80	30	17,416	-59.0		28	13.9
70	30	18,252	-59.9		29	11.2
60	30	19,215	-60.2		28	8.7
50	30	20,353	-59.9		28	6.3
40	30	21,748	-59.5		28	5.2
30	30	23,553	-58.6		28	4.4
25	30	24,702	-57.5		28	5.4
20	30	26,117	-55.9		27	6.6
15	29	27,959	-53.8		27	9.6
10	29	30,601	-46.9		27	21.6
7	25	33,026	-37.5		27	33.0
5	19	35,406	-28.4			
4	8	37,106	-23.9			

* PITTSBURGH, PA. 970 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	359	-1.6	-6.0	26	2.4
1000	31	116				
950	31	527	-1.4	-6.8	27	3.7
900	31	956	-3.6	-9.1	27	7.1
850	31	1,405	-5.9	-12.2	28	9.7
800	31	1,879	-8.0	-13.6	28	11.3
750	31	2,379	-10.1	-18.5	28	13.6
700	31	2,908	-12.4	-20.7	28	15.6
650	31	3,472	-15.2	-23.9	28	17.3
600	31	4,073	-17.9	-27.8	28	19.5
550	31	4,720	-21.6	-32.2	28	21.2
500	31	5,416	-26.1	-36.6	28	23.6
450	31	6,170	-31.5	-40.6	28	26.3
400	31	6,995	-36.8	-47.2	28	30.9
350	31	7,910	-42.7		28	33.5
300	31	8,934	-48.2		28	37.6
250	30	10,119	-51.2		28	39.5
200	30	11,572	-50.4		28	33.7
175	30	12,443	-50.9		27	30.6
150	30	13,444	-52.3		27	27.9
125	30	14,618	-54.7		27	24.1
100	29	16,028	-56.4		27	18.0
80	28	17,441	-58.0		27	13.7
70	27	18,281	-58.9		27	11.2
60	26	19,251	-59.1		28	10.3
50	25	20,394	-58.4		27	7.6
40	24	21,797	-58.2		28	5.4
30	23	23,609	-57.2		28	3.5
25	21	24,756	-55.9		28	4.9
20	19	26,170	-55.0		27	5.5
15	19	28,015	-53.1		27	9.1
10	18	30,660	-46.6		27	20.2
7	16	33,069	-37.6		27	35.7
5	12	35,426	-30.9			

+ PONAPE, CAROLINE IS. 1004 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	39	27.8	23.8	08	2.6
1000	31	77	26.6	21.4	08	3.1
950	31	530	23.5	18.9	09	6.5
900	31	1,000	20.4	15.7	10	7.6
850	31	1,492	17.7	12.0	10	7.2
800	31	2,010	15.2	7.6	10	6.3
750	31	2,555	12.8	3.2	10	6.3
700	31	3,132	9.5	-.4	10	7.0
650	31	3,744	6.3	-4.2	09	7.0
600	31	4,396	2.7	-8.4	09	6.9
550	31	5,096	-.8	-12.0	09	6.0
500	31	5,851	-5.0	-18.1	09	6.8
450	31	6,673	-9.4	-23.8	09	7.7
400	31	7,574	-14.7	-30.4	09	7.7
350	31	8,576	-21.2	-37.5	08	7.6
300	31	9,692	-29.5	-45.8	09	6.4
250	31	10,965	-40.0	-54.7	11	6.3
200	31	12,448	-52.6		12	6.7
175	30	13,298	-59.4		12	7.1
150	30	14,245	-67.2		11	6.9
125	30	15,324	-75.3		08	8.9
100	29	16,589	-82.9		08	13.0
80	27	17,829	-81.7		09	11.1
70	27	18,593	-74.2		09	8.7
60	26	19,501	-71.1		09	12.5
50	25	20,596	-65.0		09	17.9
40	21	21,977	-57.9		10	9.0
30	20	23,819	-51.8		27	6.4
25	20	25,006	-50.3		27	11.4
20	19	26,475	-47.8		26	15.2
15	17	28,384	-45.1		27	14.3
10	12	31,120	-40.5			
7	8	33,556	-35.8			

PORTLAND, MAINE 1006 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	20	-3.0	-8.6	30	2.2
1000	31	71			32	2.7
950	31	478	-3.6	-10.9	31	5.4
900	31	903	-5.5	-12.8	31	6.4
850	31	1,351	-7.3	-15.2	30	7.2
800	31	1,822	-8.7	-17.0	29	8.1
750	31	2,321	-10.7	-19.9	27	10.5
700	31	2,849	-13.2	-24.2	27	12.8
650	31	3,410	-15.9	-28.0	27	14.7
600	31	4,010	-19.1	-31.0	27	16.1
550	31	4,653	-23.0	-34.3	27	17.7
500	31	5,344	-27.6	-38.8	27	20.3
450	31	6,095	-32.5	-43.0	27	21.6
400	31	6,916	-38.0	-46.6	27	23.9
350	31	7,826	-43.1	-47.1	26	25.8
300	31	8,854	-47.2		26	28.6
250	30	10,045	-49.2		26	28.5
200	30	11,514	-48.0		26	23.8
175	30	12,394	-48.6		26	21.2
150	30	13,405	-49.5		26	19.4
125	29	14,595	-51.4		26	17.6
100	29	16,036	-54.3		26	13.3
80	29	17,459	-56.4		26	9.3
70	29	18,306	-56.6		26	7.8
60	28	19,285	-56.6		26	6.4
50	28	20,441	-56.9		25	3.7
40	25	21,851	-57.0		26	3.3
30	23	23,670	-56.4		26	2.8
25	23	24,829	-55.9		27	3.3
20	23	26,251	-55.5		27	6.0
15	20	28,095	-53.6		27	10.5
10	13	30,697	-50.1		27	18.9

* QUILLAYUTE, WASH. 1009 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	58	2.6	.6	14	1.9
1000	31	128			15	2.3
950	31	542	1.0	-1.9	18	6.8
900	31	975	-1.8	-5.2	19	8.6
850	31	1,428	-4.5	-10.9	21	9.8
800	31	1,903	-7.0	-12.7	21	11.0
750	31	2,404	-9.4	-16.1	23	11.6
700	31	2,935	-12.1	-20.0	24	12.5
650	31	3,499	-15.4	-22.3	24	13.8
600	31	4,099	-19.0	-25.8	25	14.4
550	31	4,741	-23.1	-30.1	25	15.8
500	31	5,433	-27.8	-34.0	26	17.2
450	31	6,182	-32.9	-37.3	26	19.0
400	31	7,001	-38.6	-41.5	26	21.6
350	31	7,908	-45.1		26	24.0
300	31	8,920	-51.9		26	26.7
250	31	10,089	-55.7		27	28.9
200	31	11,512	-54.8		27	25.3
175	31	12,368	-53.8		27	23.0
150	31	13,358	-53.9		27	20.2
125	29	14,533	-54.6		27	17.3
100	29	15,958	-55.8		27	14.2
80	28	17,369	-57.9		27	9.4
70	27	18,215	-58.2		27	7.3
60	25	19,184	-59.1		27	6.7
50	23	20,324	-59.6		28	5.4
40	20	21,726	-59.9		28	4.1
30	17	23,522	-60.0		31	3.7
25	16	24,660	-60.4		31	1.8
20	14	26,056	-60.4		30	3.0
15	11	27,842	-60.0		29	3.8
10	11	30,386	-57.5		28	9.2
7	8	32,673	-51.9			

RAPID CITY, S. DAK. 902 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	966	-2.8	-7.9	34	1.5
1000	31	135				
950	31	548				
900	31	979			36	2.3
850	31	1,435	-1.1	-10.0	30	4.4
800	31	1,917	-3.7	-12.3	30	6.5
750	31	2,424	-6.8	-15.9	30	8.9
700	31	2,959	-10.3	-18.8	30	10.6
650	31	3,526	-13.8	-22.5	30	12.5
600	31	4,130	-17.6	-26.2	30	14.8
550	31	4,776	-22.0	-30.1	29	16.2
500	31	5,470	-27.0	-34.1	29	18.3
450	31	6,221	-32.4	-37.4	29	19.7
400	31	7,041	-38.5	-41.8	29	22.0
350	31	7,949	-45.3		28	24.7
300	31	8,959	-51.8		29	27.3
250	31	10,132	-54.9		29	31.2
200	30	11,560	-54.2		29	28.3
175	29	12,416	-53.2		29	26.6
150	29	13,409	-53.7		28	24.3
125	27	14,573	-55.5		28	21.5
100	27	15,991	-56.7		29	15.2
80	26	17,397	-59.2		28	12.3
70	26	18,233	-59.3		29	10.1
60	26	19,197	-59.9		28	8.6
50	24	20,336	-59.9		28	5.6
40	20	21,730	-60.6		29	4.2
30	15	23,531	-59.2		28	2.7
25	13	24,670	-59.2		29	3.0
20	[illegible]	26,072	-58.1			
15	6	27,908	-58.3			

ST CLOUD, MINN. 977 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	316	-7.1	-10.3	29	.5
1000	31	133				
950	31	535	-5.8	-8.8	33	1.6
900	31	958	-6.4	-9.8	31	3.5
850	31	1,404	-7.6	-14.7	31	5.7
800	31	1,876	-8.8	-17.1	31	7.3
750	31	2,374	-11.0	-19.3	31	8.6
700	31	2,901	-14.0	-23.0	31	10.1
650	31	3,460	-17.4	-26.1	31	11.3
600	31	4,056	-21.2	-29.8	30	12.4
550	31	4,692	-25.5	-34.2	30	14.2
500	31	5,377	-30.1	-38.8	30	16.3
450	31	6,120	-35.1	-42.2	30	19.2
400	31	6,931	-40.8	-45.4	30	22.2
350	31	7,831	-46.8		29	24.2
300	31	8,838	-51.7		29	27.7
250	31	10,015	-52.8		29	27.4
200	31	11,465	-50.4		29	23.7
175	31	12,336	-50.5		29	20.6
150	31	13,339	-51.6		29	20.0
125	31	14,520	-52.4		29	17.3
100	31	15,955	-54.9		29	13.7
80	31	17,377	-56.3		29	10.3
70	31	18,223	-57.5		29	8.6
60	31	19,197	-57.6		29	7.3
50	31	20,347	-58.1		29	5.3
40	31	21,780	-58.7		29	3.9
30	29	23,564	-58.3		28	2.3
25	29	24,712	-58.1		28	2.1
20	28	26,120	-57.6		27	3.2
15	28	27,939	-56.9		27	6.8
10	27	30,527	-53.4		27	13.6
7	[illegible]	32,854	-48.3			

* ST PAUL IS., ALASKA 1007 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	30	10	-10.5	-12.3	06	5.2
1000	30	63			05	5.9
950	30	458	-11.2	-14.1	10	4.9
900	30	873	-10.9	-16.2	11	3.2
850	30	1,312	-11.7	-18.3	13	1.8
800	30	1,775	-13.2	-20.6	21	1.0
750	30	2,265	-15.4	-22.5	24	2.4
700	30	2,783	-18.2	-25.3	25	3.5
650	30	3,333	-21.2	-27.9	26	5.1
600	30	3,920	-24.7	-30.6	26	6.1
550	30	4,549	-28.6	-33.6	26	7.7
500	30	5,225	-32.8	-37.0	26	9.2
450	30	5,959	-37.8	-41.2	26	10.7
400	30	6,762	-43.1	-43.6	26	12.4
350	30	7,654	-48.5		26	13.7
300	30	8,655	-52.8		26	12.8
250	30	9,827	-53.7		25	12.4
200	30	11,275	-50.0		25	9.7
175	30	12,150	-49.1		25	8.6
150	30	13,162	-49.0		25	8.0
125	30	14,358	-49.5		25	7.4
100	30	15,818	-50.1		24	7.2
80	30	17,275	-50.3		24	6.4
70	30	18,146	-50.9		23	6.4
60	30	19,149	-51.1		23	4.9
50	30	20,334	-51.3		23	4.1
40	30	21,784	-51.5		26	2.0
30	29	23,649	-52.2		33	.7
25	28	24,83[illegible]	-52.9		02	2.5
20	26	26,269	-53.6		02	5.4
15	25	28,111	-54.6		02	7.0
10	19	30,688	-57.4		02	9.6
7	6	33,009	-57.4			

SALEM, ILL. 994 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	174	1.0	-2.5	29	1.8
1000	31	128				
950	31	541	.5	-5.5	28	4.0
900	31	974	-.5	-10.1	28	5.9
850	31	1,430	-2.1	-14.0	29	8.3
800	31	1,910	-4.0	-17.1	29	10.2
750	31	2,417	-6.1	-20.5	29	12.1
700	31	2,954	-9.1	-22.8	29	14.2
650	31	3,524	-12.0	-24.4	29	16.5
600	31	4,133	-15.3	-28.2	28	18.8
550	31	4,785	-19.4	-32.0	28	21.3
500	31	5,487	-24.2	-35.0	28	23.5
450	31	6,248	-29.3	-40.2	28	26.2
400	31	7,079	-35.0	-44.9	27	30.4
350	31	8,001	-41.0	-48.3	28	35.0
300	31	9,032	-47.2		28	36.2
250	31	10,226	-52.0		27	40.5
200	31	11,666	-52.6		28	37.9
175	31	12,529	-52.9		28	34.5
150	29	13,516	-54.9		27	33.6
125	29	14,676	-56.7		27	27.4
100	29	16,082	-59.8		27	20.6
80	27	17,476	-60.0		27	15.0
70	27	18,308	-61.3		28	12.4
60	26	19,268	-61.0		27	7.6
50	26	20,404	-60.4		27	7.2
40	24	21,797	-59.5		28	5.6
30	22	23,604	-57.7		27	6.3
25	21	24,754	-56.7		28	7.9
20	15	26,168	-55.4		28	7.5
15	14	28,008	-53.2		27	12.9
10	11	30,649	-45.8			
7	5	32,974	-42.7			

SALEM, OREG. 1011 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	61	3.1	.1	19	2.7
1000	31	151	4.3	.5	19	2.7
950	31	569	3.2	-1.7	20	6.3
900	31	1,005	.6	-4.6	22	8.7
850	31	1,462	-2.3	-7.5	22	10.8
800	31	1,942	-4.5	-12.1	23	11.9
750	31	2,448	-6.8	-15.7	24	12.5
700	31	2,984	-9.5	-19.7	25	13.4
650	31	3,553	-13.1	-21.7	26	14.8
600	31	4,158	-16.6	-23.7	26	16.4
550	31	4,807	-20.5	-27.9	26	18.5
500	31	5,507	-24.7	-32.1	26	21.6
450	31	6,265	-30.1	-37.0	26	22.7
400	31	7,093	-36.0	-41.5	27	25.7
350	31	8,011	-42.3	-44.0	27	30.4
300	31	9,035	-49.1		27	33.2
250	30	10,206	-55.2		27	34.7
200	30	11,623	-56.3		27	30.9
175	28	12,467	-54.0		27	28.5
150	26	13,457	-54.1		27	25.6
125	25	14,621	-56.7		27	21.5
100	23	16,032	-57.7		28	17.0
80	20	17,439	-58.8		27	11.3
70	19	18,271	-59.8		27	8.1
60	17	19,241	-60.9		27	8.7
50	17	20,377	-60.2		28	5.2
40	16	21,765	-60.8		30	3.7
30	12	23,577	-60.8		28	3.6
25	11	24,716	-59.8		27	4.4
20	9	26,105	-59.9			
15	6	27,912	-59.1			

SALT LAKE CITY, UTAH 872 MB

Standard pressure surface mb	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	1,288	1.6	-4.5	20	1.0
1000	31	166				
950	31	588				
900	31	1,029				
850	31	1,492	2.3	-7.4	23	1.3
800	31	1,980	-.5	-10.9	27	3.0
750	31	2,493	-4.2	-12.4	28	5.2
700	31	3,033	-8.0	-15.2	28	8.1
650	31	3,605	-11.6	-18.7	28	10.8
600	31	4,214	-15.3	-23.2	28	14.1
550	31	4,866	-19.1	-27.6	28	16.6
500	31	5,570	-23.2	-31.6	28	19.7
450	31	6,333	-28.6	-36.5	29	22.7
400	31	7,166	-34.7	-41.7	28	24.6
350	31	8,089	-41.1	-45.3	29	27.1
300	31	9,119	-47.9		29	29.9
250	31	10,305	-53.9		29	33.8
200	31	11,727	-55.8		29	34.4
175	31	12,577	-55.8		29	31.4
150	31	13,559	-56.2		28	29.0
125	30	14,708	-59.2		28	25.5
100	30	16,098	-61.2		28	20.9
80	27	17,476	-61.3		28	13.6
70	27	18,306	-61.3		28	10.3
60	26	19,260	-62.0		28	8.3
50	26	20,389	-61.1		29	5.2
40	25	21,773	-61.2		28	4.3
30	23	23,557	-59.7		29	3.0
25	23	24,708	-59.2		28	3.6
20	20	26,115	-57.7		29	4.0
15	17	27,952	-55.9		27	7.0
10	11	30,567	-50.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SAN DIEGO, CALIF. 10[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	124	9.6	5.9	02	.3
1000	31	148			02	.7
950	31	576	10.4	.6	32	1.0
900	31	1,027	11.0	-5.9	32	3.2
850	31	1,5[illegible]3	10.2	-9.9	30	4.9
800	31	2,005	8.5	-12.2	30	6.9
750	31	2,536	6.2	-16.4	30	8.4
700	31	3,096	2.9	-16.3	29	9.3
650	31	3,693	-1.0	-19.5	28	10.3
600	31	4,327	-5.1	-23.5	28	11.1
550	31	5,005	-9.7	-27.6	28	12.4
500	31	5,733	-15.2	-31.1	28	13.7
450	31	6,519	-21.1	-36.1	28	15.5
400	31	7,377	-27.7	-41.9	28	17.2
350	31	8,325	-35.1	-48.3	28	18.2
300	31	9,380	-42.8	-52.9	27	21.5
250	31	10,587	-51.0		27	26.4
200	31	12,017	-57.2		27	29.4
175	31	12,857	-59.5		27	29.4
150	31	13,817	-61.9		27	31.0
125	31	14,936	-64.8		27	27.3
100	31	16,290	-67.7		27	21.2
80	31	17,627	-68.6		27	16.0
70	31	18,430	-67.7		28	13.1
60	31	19,362	-66.3		29	9.6
50	31	20,472	-64.3		29	6.5
40	30	21,843	-62.5		28	5.4
30	29	23,640	-57.8		28	5.4
25	28	24,796	-55.7		26	7.1
20	25	26,212	-53.8		27	11.2
15	25	28,078	-49.5		27	16.5
10	17	30,791	-41.0		27	20.1
7						
5						

SAN JUAN, P. R. 1016 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	6	23.5	19.0	13	1.6
1000	29	142	22.7	18.3	09	4.2
950	29	588	19.7	15.6	09	6.7
900	29	1,052	16.6	11.6	09	6.5
850	29	1,537	13.[illegible]	8.6	09	5.[illegible]
800	29	2,045	10.6	3.1	09	4.9
750	29	2,581	8.6	-7.2	08	3.9
700	29	3,150	6.7	-12.6	08	2.4
650	28	3,755	3.9	-19.3	06	1.3
600	28	4,402	1.4	-22.7	06	1.1
550	28	5,097	-2.5	-26.0	30	.5
500	28	5,846	-7.7	-30.1	28	1.9
450	28	6,657	-13.1	-34.2	30	4.1
400	28	7,543	-19.2	-38.8	29	7.9
350	28	8,526	-26.0	-44.3	29	11.2
300	28	9,622	-33.7	-50.2	29	14.9
250	28	10,876	-43.0		28	17.4
200	28	12,344	-54.4		28	20.9
175	28	13,187	-60.6		28	18.8
150	26	14,129	-67.0		28	15.4
125	26	15,216	-72.5		29	10.3
100	25	16,506	-78.1		31	5.1
80	25	17,776	-78.4		03	2.4
70	25	18,545	-74.3		04	2.4
60	24	19,455	-69.0		05	2.6
50	24	20,562	-63.0		08	2.7
40	23	21,945	-60.2		07	5.1
30	23	23,759	-55.3		09	4.9
25	19	24,933	-51.1		09	2.1
20	14	26,393	-47.9		15	2.7
15	12	28,305	-43.2		22	7.5
10	9	31,051	-39.7			
7						
5						

* SAULT STE [illegible], MICH. 985 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	221	-9.1	-11.8	02	1.7
1000	31	110				
950	31	509	-7.6	-12.4	36	2.5
900	31	929	-9.1	-13.8	34	3.9
850	31	1,370	-10.9	-15.5	32	4.8
800	31	1,835	-12.2	-19.0	31	5.7
750	31	2,327	-13.9	-21.7	31	6.6
700	31	2,849	-16.4	-24.5	31	8.0
650	31	3,403	-19.2	-27.2	31	9.0
600	31	3,995	-22.5	-30.4	30	9.4
550	31	4,629	-26.6	-33.4	30	10.1
500	31	5,311	-31.0	-37.4	30	10.5
450	31	6,050	-36.1	-40.8	29	11.3
400	31	6,858	-42.2	-46.3	30	11.7
350	31	7,753	-47.6		29	14.2
300	31	8,758	-51.6		29	18.1
250	31	9,941	-51.2		28	19.2
200	31	11,403	-48.6		27	18.0
175	31	12,280	-49.3		28	18.7
150	31	13,289	-49.8		28	16.5
125	31	14,479	-51.1		28	13.7
100	31	15,925	-52.9		28	12.4
80	31	17,358	-54.7		27	9.0
70	31	18,211	-55.6		27	7.2
60	31	19,192	-56.2		27	5.7
50	29	20,347	-56.8		28	4.3
40	28	21,758	-57.4		26	2.6
30	28	23,575	-57.5		28	1.9
25	28	24,728	-57.3		30	1.9
20	27	26,141	-57.4		28	3.0
15	27	27,961	-56.6		28	5.3
10	27	30,548	-53.7		27	13.2
7	24	32,867	-48.1		27	22.8
5	9	35,087	-42.5			

* SH[illegible], ALASKA 99[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	38	-1.1	-6.7	26	.8
1000	31	3			14	2.2
950	31	41[illegible]	-3.3	-6.7	19	.7
900	31	836	-6.4	-8.6	22	2.1
850	31	1,280	-9.5	-12.1	23	2.3
800	31	1,747	-12.0	-16.0	23	4.2
750	31	2,238	-14.8	-20.5	23	5.0
700	31	2,757	-18.2	-24.3	23	6.1
650	31	3,307	-21.5	-28.6	23	7.2
600	31	3,893	-25.3	-32.6	23	8.0
550	31	4,519	-29.4	-36.8	23	9.5
500	31	5,193	-33.8	-40.1	23	10.5
450	31	5,923	-39.1	-38.8	23	10.9
400	31	6,721	-44.6	-42.7	23	11.9
350	31	7,608	-49.3		23	12.8
300	31	8,609	-52.0		23	14.3
250	31	9,789	-51.7		24	14.3
200	31	11,245	-49.3		24	16.4
175	31	12,121	-49.5		25	14.7
150	31	13,131	-49.8		24	15.6
125	30	14,314	-50.3		24	15.5
100	28	15,765	-50.7		24	13.8
80	29	17,216	-51.0		24	12.9
70	28	18,086	-51.1		24	11.0
60	28	19,087	-51.2		23	10.6
50	27	20,282	-50.8		23	8.5
40	26	21,732	-50.9		22	6.6
30	25	23,604	-50.6		20	4.0
25	24	24,790	-50.4		17	3.2
20	24	26,248	-49.9		11	2.3
15	24	28,124	-51.1		04	3.5
10	17	30,727	-53.8		04	4.5
7	9	33,031	-53.7			
5	6	35,203	-53.3			

* [illegible] [illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	[illegible]9	7.9	4.[illegible]	[illegible]	[illegible]
1000	31	[illegible]	7.0	[illegible]	[illegible]	[illegible]
950	31	55[illegible]	[illegible]	.6	[illegible]	[illegible]
900	31	[illegible]3	[illegible]	-3.4	[illegible]	[illegible]
850	31	[illegible]	[illegible].3	-7.[illegible]	[illegible]	[illegible]
800	31	1,979	4.5	-9.9	[illegible]	[illegible]
750	31	2,5[illegible]	[illegible]	-13.5	[illegible]	[illegible]
700	31	3,[illegible]8	-.4	-[illegible]7.6	2[illegible]	[illegible]
650	31	3,647	-3.9	[illegible]	28	[illegible]
600	31	4,274	[illegible]	-24.3	[illegible]	[illegible]
550	31	4,944	-1[illegible]	-27.[illegible]	[illegible]	2[illegible]
500	31	5,6[illegible]4	-1[illegible].3	[illegible]	27	2[illegible]
450	31	6,445	-22.6	-30.5	27	27.[illegible]
400	31	7,3[illegible]0	-2[illegible].8	-43.4	27	31.[illegible]
350	3[illegible]	8,244	-[illegible].2	-48.3	27	3[illegible]
300	3[illegible]	9,2[illegible]9	-4[illegible].6	-52.[illegible]	27	3[illegible]
250	3[illegible]	[illegible],5[illegible]9	[illegible]		27	[illegible]
200	3[illegible]	[illegible],95[illegible]	[illegible]		2[illegible]	[illegible]
175	29	12,[illegible]03	[illegible]		2[illegible]	[illegible]
150	2[illegible]	13,7[illegible]	[illegible].8		2[illegible]	3[illegible]
125	2[illegible]	14,833	[illegible].9		2[illegible]	3[illegible]
100	29	16,240	[illegible].7		28	24.2
80	2[illegible]	17,573	[illegible]		2[illegible]	[illegible]
70	2[illegible]	18,373	[illegible].3		2[illegible]	[illegible]
60	26	19,374	-65.3		28	[illegible]
50	2[illegible]	20,422	-62.6		2[illegible]	[illegible]
40	23	2[illegible],612	-59.6		27	[illegible]
30	21	23,626	-56.7		27	[illegible]
25	21	24,735	-55.6		27	[illegible]
20	2[illegible]	26,218	-53.[illegible]		26	[illegible]
15	19	28,[illegible]57	-49.3		27	[illegible]
10	18	30,838	-38.6		27	17.[illegible]
7	12	33,335	[illegible]		27	24.[illegible]
5	7	35,727	-26.3			

SPOKANE, WASH. 931 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	720	-.9	-4.8	20	3.7
1000	31	144				
950	31	558				
900	31	991	-1.0	-5.4	22	6.1
850	31	1,446	-3.1	-8.9	24	7.3
800	31	1,924	-6.0	-12.0	24	7.9
750	31	2,426	-9.2	-14.7	25	9.4
700	31	2,956	-12.6	-19.0	26	10.5
650	31	3,519	-16.0	-23.5	26	11.8
600	31	4,118	-19.7	-27.9	27	13.8
550	31	4,759	-23.4	-32.6	27	15.8
500	31	5,450	-27.8	-36.5	27	16.8
450	31	6,200	-32.8	-40.4	28	18.8
400	31	7,020	-38.5	-44.2	28	21.8
350	31	7,928	-44.5		28	25.1
300	31	8,943	-50.8		28	29.5
250	31	10,117	-55.2		28	30.0
200	31	11,541	-54.6		28	26.9
175	31	12,399	-52.9		28	23.3
150	31	13,394	-52.8		28	20.0
125	31	14,567	-53.9		28	18.0
100	31	15,996	-55.4		27	13.7
80	31	17,413	-56.8		28	11.0
70	31	18,259	-57.1		28	9.2
60	31	19,232	-58.4		27	7.4
50	31	20,375	-59.4		28	5.5
40	31	21,771	-60.0		28	3.9
30	27	23,559	-59.2		30	2.1
25	26	24,711	-59.4		29	2.2
20	25	26,109	-59.6		27	2.7
15	21	27,919	-59.2		29	4.9
10	15	30,470	-57.3			
7						
5						

* SWAN ISLAND, W. I. 1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	10	24.8	21.5	08	4.9
1000	30	122	24.3	19.9	08	5.6
950	30	570	20.5	17.7	09	6.6
900	30	1,036	17.7	12.3	10	6.8
850	30	1,523	14.7	7.9	11	6.0
800	30	2,034	11.9	3.2	10	5.1
750	30	2,571	9.1	-5.6	10	5.2
700	30	3,142	7.8	-13.2	09	4.0
650	30	3,750	5.0	-16.0	07	3.1
600	30	4,379	1.9	-19.9	04	2.3
550	30	5,095	-2.4	-24.3	36	1.8
500	30	5,845	-7.1	-28.0	34	2.4
450	30	6,658	-12.6	-32.0	31	3.8
400	30	7,545	-19.1	-36.7	30	5.4
350	30	8,529	-25.6	-41.6	29	8.6
300	30	9,625	-34.2	-47.9	27	11.9
250	30	10,875	-44.0		26	16.0
200	30	12,335	-55.3		24	17.2
175	30	13,176	-61.2		25	15.9
150	30	14,121	-66.2		26	12.3
125	30	15,210	-72.4		26	8.4
100	30	16,504	-77.2		25	3.4
80	30	17,773	-78.8		11	1.0
70	30	18,640	-75.3		11	1.9
60	30	19,445	-69.5		09	1.5
50	30	20,549	-64.0		07	2.3
40	30	21,924	-61.3		08	3.8
30	30	23,733	-55.4		07	4.3
25	27	24,904	-52.6		07	3.2
20	27	26,340	-48.3		03	1.3
15	25	28,281	-43.5		27	2.0
10	24	31,032	-39.8		23	4.8
7	14	33,489	-36.7		32	2.8
5	9	35,851	-31.3			

TAMPA, FLA. 1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	8	13.1	9.7	08	.7
1000	31	151	14.5	8.1	09	.3
950	31	585	13.0	5.3	25	2.9
900	31	1,039	11.2	1.0	27	5.5
850	31	1,515	10.2	-4.9	27	7.9
800	31	2,018	8.7	-8.7	27	9.6
750	31	2,550	6.5	-11.8	28	11.6
700	31	3,113	3.4	-15.3	27	13.0
650	31	3,711	.2	-17.9	27	14.9
600	31	4,347	-3.7	-20.5	27	16.3
550	31	5,028	-8.1	-24.8	28	18.5
500	31	5,762	-13.1	-29.3	28	20.9
450	31	6,556	-18.2	-34.2	28	23.4
400	31	7,425	-24.4	-39.7	28	26.7
350	31	8,388	-31.2	-45.9	27	29.3
300	31	9,460	-38.7	-52.1	28	32.4
250	31	10,693	-45.4		27	38.2
200	31	12,152	-54.5		27	39.0
175	31	13,000	-58.1		27	37.0
150	31	13,952	-62.2		27	34.5
125	31	15,076	-67.1		27	29.2
100	29	16,403	-71.9		27	23.7
80	28	17,714	-73.0		27	16.7
70	27	18,502	-70.3		27	11.2
60	26	19,423	-66.8		27	8.6
50	26	20,537	-62.2		28	6.2
40	25	21,930	-58.6		27	5.6
30	23	23,752	-55.4		33	4.2
25	23	24,920	-53.3		32	3.4
20	23	26,369	-49.5		30	5.6
15	21	28,273	-45.9		27	9.4
10	12	31,003	-39.4			
7						
5						

TOPEKA, KANS. 984 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	268	1.0	-2.9	26	.7
1000	31	134				
950	31	548	2.0	-5.4	27	2.3
900	31	983	.8	-7.8	27	5.1
850	31	1,442	.2	-11.3	29	7.8
800	31	1,927	-2.1	-14.0	30	9.8
750	31	2,437	-4.6	-16.8	30	11.2
700	31	2,978	-7.2	-19.6	29	13.2
650	31	3,552	-10.7	-22.4	29	15.0
600	31	4,163	-14.6	-25.8	29	16.9
550	31	4,816	-19.0	-29.6	28	19.9
500	31	5,518	-24.1	-34.1	29	21.9
450	31	6,279	-29.5	-37.9	29	25.0
400	31	7,110	-35.1	-41.5	28	28.0
350	31	8,032	-41.3	-43.8	29	32.1
300	31	9,062	-47.5		29	34.8
250	31	10,252	-52.8		28	39.0
200	31	11,685	-54.2		28	37.2
175	31	12,542	-54.1		28	36.1
150	31	13,529	-55.2		28	31.9
125	29	14,674	-57.4		29	26.9
100	29	16,078	-59.0		28	21.2
80	29	17,471	-60.7		28	14.4
70	29	18,301	-60.8		28	10.8
60	29	19,260	-61.0		28	8.6
50	27	20,392	-60.6		28	6.7
40	24	21,788	-59.6		27	5.0
30	22	23,589	-57.9		27	5.6
25	22	24,742	-56.9		26	6.9
20	20	26,156	-55.9		27	7.7
15	17	27,990	-53.6		27	12.3
10	11	30,660	-44.8			
7						
5						

* TRUK, CAROLINE IS. 10[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	3	28.2	23.9	08	3.1
1000	31	37	27.2	21.8	09	3.7
950	31	540	23.7	19.0	10	5.7
900	31	1,011	20.8	14.8	10	6.0
850	31	1,504	18.1	11.2	09	[illegible]
800	31	2,022	15.6	8.1	10	5.8
750	31	2,568	12.8	5.1	09	6.3
700	31	3,145	[illegible]	-.2	09	6.6
650	31	3,758	6.6	-3.9	09	6.4
600	31	4,411	2.9	-7.4	09	6.2
550	31	5,111	-.5	-12.3	09	6.[illegible]
500	31	5,868	-4.7	-18.6	09	7.9
450	31	6,691	-9.2	-23.7	09	8.0
400	31	7,592	-14.7	-30.2	09	8.6
350	31	8,593	-21.4	-37.3	09	8.4
300	31	9,709	-29.6	-45.4	09	8.5
250	31	10,982	-40.0	-53.4	10	9.7
200	30	12,465	-52.4		11	8.5
175	30	13,315	-59.6		12	9.4
150	30	14,261	-67.4		11	10.3
125	30	15,338	-75.4		10	11.5
100	29	16,603	-83.0		09	15.3
80	29	17,844	-80.1		09	10.9
70	29	18,609	-74.3		09	9.2
60	28	19,516	-70.4		09	12.9
50	27	20,615	-63.7		09	19.7
40	23	22,006	-57.2		09	11.1
30	21	23,652	-51.3		27	6.8
25	20	25,043	-49.7		27	10.6
20	20	26,508	-47.6		26	14.4
15	18	28,429	-44.3		27	15.2
10	16	31,173	-39.2		26	11.0
7	6	33,615	-35.1			
5						

* TUCSON, ARIZ. 925 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	789	8.3	-9.0	14	3.7
1000	31	138				
950	31	567				
900	31	1,018	13.6	-7.1	16	1.9
850	31	1,497	11.7	-9.1	27	1.3
800	31	2,011	8.5	-11.8	27	3.6
750	31	2,531	5.1	-14.2	27	6.4
700	31	3,090	1.6	-17.1	27	8.2
650	31	3,683	-1.7	-19.4	27	9.9
600	31	4,315	-5.5	-22.9	28	12.3
550	31	4,992	-10.2	-26.1	28	14.1
500	31	5,718	-15.5	-30.8	28	15.9
450	31	6,505	-21.2	-35.4	28	18.2
400	31	7,363	-27.6	-40.7	27	21.0
350	31	8,312	-34.8	-46.7	27	23.1
300	31	9,368	-42.6	-50.3	27	26.4
250	30	10,580	-50.8		27	30.2
200	30	12,012	-56.2		27	33.5
175	28	12,854	-58.7		27	32.6
150	28	13,817	-61.1		27	31.5
125	27	14,939	-65.1		27	28.9
100	25	16,279	-68.7		27	24.2
80	24	17,616	-70.1		28	17.8
70	24	18,412	-69.0		28	13.8
60	24	19,337	-67.6		29	9.1
50	23	20,443	-64.6		29	6.9
40	23	21,813	-62.1		29	6.5
30	22	23,608	-58.3		27	6.5
25	22	24,761	-56.4		26	8.5
20	21	26,187	-54.0		27	11.4
15	20	28,046	-50.4		26	15.3
10	17	30,744	-42.2		27	20.5
7	6	33,305	-31.8			
5						

* VANDENBERG AFB, CALIF. 1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	100	7.8	5.4	35	1.4
1000	31	164	9.1	4.9	35	2.3
950	31	590	10.3	.0	36	5.3
900	31	1,040	9.4	-3.4	35	5.5
850	31	1,512	7.7	-9.1	34	6.1
800	31	2,011	6.1	-14.0	32	7.2
750	31	2,536	3.5	-15.4	31	9.0
700	31	3,093	.9	-17.2	30	11.3
650	31	3,685	-2.7	-20.1	30	12.4
600	31	4,315	-6.6	-23.5	29	13.6
550	31	4,988	-11.3	-27.0	29	14.6
500	31	5,712	-16.2	-31.6	28	15.6
450	31	6,496	-22.1	-35.8	28	17.0
400	31	7,352	-28.4	-41.6	29	18.2
350	31	8,278	-35.6	-47.2	28	20.3
300	31	9,349	-43.6		28	22.8
250	31	10,551	-52.2		28	25.4
200	31	11,976	-57.6		28	28.1
175	31	12,816	-59.0		27	30.2
150	31	13,778	-60.7		27	29.0
125	31	14,907	-63.6		27	24.5
100	31	16,266	-66.4		28	21.6
80	31	17,615	-67.0		28	15.9
70	31	18,422	-66.5		28	12.5
60	31	19,359	-65.1		28	8.8
50	31	20,473	-64.0		28	7.6
40	29	21,849	-62.0		30	6.5
30	28	23,637	-59.4		29	5.1
25	28	24,794	-57.6		28	4.5
20	26	26,2[illegible]	-55.0		27	[illegible]
15	24	28,053	-51.1		27	15.2
10	22	30,742	-42.5		27	26.[illegible]
7	12	33,1[illegible]7	-35.2			
5						

VICTORIA, TEXAS 1012 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	33	13.2	9.6	13	.6
1000	31	132	15.2	8.[illegible]	14	1.6
950	31	566	13.8	6.4	18	4.1
900	31	1,021	12.2	2.1	20	3.2
850	31	1,500	11.7	-4.4	25	4.5
800	31	2,007	10.5	-9.6	27	6.[illegible]
750	31	2,542	8.0	-12.6	28	8.4
700	31	3,107	4.5	-16.0	28	10.7
650	31	3,706	.5	-19.5	28	13.1
600	31	4,343	-3.7	-21.8	27	15.3
550	31	5,024	-8.5	-25.2	27	17.3
500	31	5,756	-13.7	-30.0	27	20.5
450	31	6,548	-19.2	-34.4	27	23.6
400	31	7,414	-25.2	-39.8	27	26.5
350	31	8,373	-32.1	-44.8	27	31.1
300	31	9,441	-40.0	-50.5	27	36.0
250	31	10,663	-48.5		27	40.5
200	31	12,110	-54.9		27	40.1
175	31	12,957	-58.3		27	38.7
150	31	13,918	-62.1		27	34.7
125	31	15,031	-67.6		27	30.6
100	31	16,361	-71.9		27	24.5
80	30	17,671	-73.2		27	17.[illegible]
70	3[illegible]	18,456	-71.7		27	13.1
60	29	19,373	-68.4		27	8.9
50	28	20,478	-63.1		27	6.5
40	27	21,865	-59.5		27	5.3
30	26	23,682	-55.8		27	6.3
25	26	24,846	-54.5		28	5.4
20	26	26,284	-52.1		27	8.1
15	25	28,169	-47.6		27	10.3
10	22	30,884	-39.0		27	17.9
7	12	33,353	-31.9			
5						

* WAKE IS., PACIFIC AREA 1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	5	25.2	21.9	08	6.2
1000	31	126	24.0	20.2	08	7.4
950	31	574	20.4	18.4	09	7.7
900	31	1,039	17.6	13.9	1[illegible]	6.6
850	31	1,527	15.0	10.4	10	5.6
800	31	2,040	13.0	4.[illegible]	09	5.[illegible]
750	31	2,591	11.2	-2.5	0[illegible]	4.4
700	31	3,155	8.4	-6.4	06	3.0
650	31	3,763	4.7	-8.7	07	2.8
600	31	4,412	1.9	-13.9	05	2.8
550	31	5,110	-1.4	-18.1	03	1.7
500	31	5,863	-5.9	-22.0	01	1.2
450	31	6,680	-10.9	-28.4	34	2.4
400	31	7,575	-17.1	-33.3	32	5.3
350	31	8,567	-23.9	-39.1	31	8.0
300	31	9,671	-32.0	-47.[illegible]	3[illegible]	10.5
250	31	10,933	-41.6	-54.7	3[illegible]	11.8
200	31	12,408	-53.5		3[illegible]	11.3
175	30	13,259	-59.8		3[illegible]	10.3
150	30	14,206	-67.0		3[illegible]	8.3
125	30	15,287	-74.6		31	6.2
100	29	16,558	-81.7		33	4.2
80	27	17,833	-81.3		07	2.9
70	24	18,562	-76.7		0[illegible]	3.8
60	23	19,457	-69.9		08	4.[illegible]
50	23	20,558	-64.5		09	4.3
40	23	21,94[illegible]	-61.8		[illegible]	2.9
30	21	23,739	-57.[illegible]		08	.1
25	20	24,9[illegible]	-53.6		31	.3
20	19	26,35[illegible]	-49.4		2[illegible]	4.[illegible]
15	17	28,25[illegible]	-45.3		2[illegible]	6.4
10	14	30,970	-40.1		27	[illegible].3
7	5	33,448	-36.9			
5						

* WALLOPS IS., VA. NASA 1013 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	4	3.6	-.5	28	2.7
1000	31	110	3.9	-4.8	30	3.3
950	31	526	2.9	-6.2	29	6.3
900	31	963	.8	-9.0	29	7.8
850	31	1,420	-1.7	-10.6	28	8.2
800	31	1,900	-4.1	-12.7	28	9.6
750	31	2,407	-6.1	-14.6	27	12.2
700	31	2,945	-8.3	-17.6	27	14.9
650	31	3,518	-11.2	-21.1	27	18.4
600	31	4,129	-14.4	-25.8	27	21.3
550	31	4,784	-18.3	-30.3	27	23.6
500	31	5,489	-22.7	-34.4	27	27.0
450	31	6,254	-27.6	-39.3	27	29.9
400	31	7,091	-33.3	-43.8	27	32.2
350	31	8,020	-39.5	-45.5	27	33.5
300	31	9,058	-45.3		26	37.9
250	31	10,260	-50.3		27	39.0
200	31	11,712	-51.2		27	41.4
175	31	12,580	-51.7		27	39.[illegible]
150	31	13,574	-54.3		27	33.6
125	30	14,774	-57.3		27	28.5
100	30	16,133	-60.4		27	21.6
80	3[illegible]	17,521	-61.2		27	16.9
70	30	18,350	-60.9		27	13.1
60	30	19,3[illegible]	-60.4		27	8.6
50	30	20,447	-59.9		26	[illegible]
40	3[illegible]	21,845	-56.8		27	4.0
30	29	23,659	-57.5		27	5.[illegible]
25	29	24,814	-56.4		28	6.3
20	29	26,244	-54.2		29	7.5
15	27	28,099	-51.4		27	10.0
10	25	30,772	-44.2		26	19.9
7	14	33,191	-33.5			
5	[illegible]	35,6[illegible]	-16.4			

See reference note at end of table.

RAWINSONDE DATA

Average monthly values

MARCH 1971

Standard pressure surface (mb)	WASHINGTON DULLES INT. AP 1085 MB						MAYCREEK, AZ. 1012 MB						WINNEMUCCA, NEV. 871 MB						WINSLOW, ARIZ. 852 MB						YAKUTAT, ALASKA 1003 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	85	.0	-5.8	28	2.7	31	44	7.5	4.3	25	1.5	31	1,312	-1.3	-8.0	23	1.5	31	1,487	.8	-12.9	22	2.1	31	12	-5.8	-8.6	09	1.9
1000	31	121			31	2.5	31	139	9.6	2.0	28	1.7	31	198					31	174					31	33			11	2.8
950	31	535	1.3	-7.7	29	5.5	31	566	9.3	.2	27	5.5	31	615					31	596					31	440	-3.1	-9.1	11	4.7
900	30	966	-.9	-10.1	28	8.1	31	1,013	7.8	-4.7	27	8.8	31	1,051					31	1,037					31	866	-6.1	-10.5	13	4.6
850	31	1,422	-3.5	-12.8	30	9.6	31	1,483	6.9	-8.0	27	11.2	31	1,510	1.2	-8.6	23	3.0	31	1,500			24	.6	31	1,311	-9.2	-12.9	19	4.6
800	30	1,900	-5.5	-13.0	29	10.5	31	1,980	5.0	-9.2	27	13.3	31	1,996	-1.5	-10.9	25	5.4	31	1,994	4.8	-11.0	26	5.5	31	1,777	-12.3	-15.8	16	3.9
750	30	2,404	-7.4	-15.9	28	12.0	31	2,505	2.8	-12.3	27	15.7	31	2,507	-5.3	-13.5	26	8.0	31	2,518	2.0	-13.3	26	6.6	31	2,268	-15.4	-19.6	17	4.2
700	30	2,944	-9.3	-20.8	26	14.5	31	3,060	.1	-15.2	27	18.1	31	3,045	-8.6	-17.0	27	9.6	31	3,071	-.9	-16.6	27	8.8	31	2,785	-18.9	-23.9	17	5.6
650	30	3,510	-12.2	-24.0	27	16.4	31	3,651	-2.7	-19.4	27	20.3	31	3,617	-11.4	-20.7	28	11.6	31	3,659	-4.0	-19.6	28	11.5	31	3,334	-22.3	-27.4	18	7.2
600	30	4,118	-15.7	-27.8	27	18.8	31	4,261	-6.3	-22.5	27	22.4	31	4,227	-14.8	-24.0	28	14.6	31	4,286	-8.1	-22.5	28	13.8	31	3,918	-25.9	-30.8	19	7.6
550	30	4,769	-19.5	-32.4	27	21.2	31	4,956	-10.5	-25.6	27	24.8	31	4,881	-18.3	-27.9	28	17.9	31	4,955	-13.0	-25.3	29	15.8	31	4,543	-29.7	-34.9	19	9.0
500	30	5,471	-24.2	-36.5	27	24.1	31	5,682	-15.7	-29.7	27	27.1	31	5,586	-23.0	-32.0	28	20.1	31	5,675	-18.1	-29.2	29	19.6	31	5,216	-34.0	-39.4	20	10.0
450	30	6,233	-28.7	-40.5	27	26.2	31	6,469	-21.0	-33.9	27	29.0	31	6,352	-27.7	-36.2	29	21.4	31	6,454	-23.6	-34.6	28	21.0	31	5,947	-38.9	-41.4	20	10.8
400	30	7,066	-34.6	-44.6	27	28.0	31	7,329	-26.9	-40.4	27	32.2	31	7,189	-33.5	-41.5	29	23.8	31	7,304	-30.0	-40.7	29	23.3	31	6,746	-44.1		20	11.7
350	29	7,983	-41.2	-48.0	27	32.0	31	8,292	-33.7	-45.4	27	34.8	31	8,116	-40.1	-43.7	29	26.4	31	8,244	-36.9	-45.8	29	26.3	31	7,634	-49.5		20	12.5
300	29	9,014	-46.9		27	36.5	31	9,344	-41.0	-51.3	27	36.3	31	9,149	-47.2		29	29.2	31	9,291	-44.3	-49.4	28	31.0	31	8,630	-53.6		21	10.8
250	28	10,210	-51.1		27	38.9	31	10,564	-47.8		27	40.2	30	10,331	-54.7		29	30.6	31	10,492	-52.0		28	32.0	31	9,806	-51.5		23	6.8
200	28	11,262	-51.0		27	36.1	31	12,020	-53.6		27	45.5	29	11,744	-57.8		29	29.3	31	11,922	-56.5		28	34.1	31	11,264	-49.3		23	7.8
175	27	12,530	-50.9		27	34.6	30	12,873	-56.0		27	42.9	29	12,588	-56.6		28	27.9	31	12,766	-58.4		28	34.0	31	12,141	-48.7		24	8.2
150	29	13,531	-52.5		27	30.2	30	13,846	-59.6		27	39.3	29	13,565	-57.3		29	24.7	31	13,731	-60.0		28	31.5	31	13,152	-48.2		24	8.2
125	28	14,704	-55.5		27	26.2	30	14,974	-63.8		27	33.9	29	14,712	-59.9		28	22.7	31	14,861	-63.3		28	28.3	31	14,356	-48.6		25	8.6
100	28	16,114	-58.7		27	22.0	30	16,331	-68.1		27	25.9	29	16,098	-61.9		28	18.6	30	16,217	-66.4		28	22.9	30	15,821	-49.8		25	6.2
80	28	17,513	-59.5		27	15.9	30	17,668	-68.3		27	18.4	29	17,479	-62.5		28	12.2	29	17,564	-67.1		28	16.8	30	17,278	-50.7		26	5.4
70	27	18,345	-59.5		26	12.8	29	18,470	-65.7		27	13.5	29	18,302	-62.8		29	9.0	29	18,371	-66.5		28	14.1	30	18,146	-51.5		26	4.7
60	27	19,310	-59.4		26	8.5	28	19,413	-63.2		28	9.1	28	19,256	-61.8		29	6.9	28	19,308	-65.4		29	10.0	30	19,146	-52.4		27	3.6
50	26	20,453	-58.5		27	7.0	25	20,540	-61.3		27	7.1	28	20,384	-61.9		29	4.0	28	20,422	-63.5		29	7.7	30	20,321	-53.5		29	3.0
40	25	21,861	-57.9		27	4.0	24	21,938	-57.3		28	6.6	28	21,765	-61.6		29	3.8	26	21,794	-62.6		29	6.4	30	21,753	-54.7		33	2.5
30	25	23,680	-56.6		27	4.1	20	23,775	-54.9		30	4.0	26	23,551	-60.4		28	3.6	25	23,582	-59.5		28	5.8	30	23,588	-55.8		02	3.7
25	25	24,839	-55.9		28	4.7	20	24,944	-53.5		30	7.1	26	24,690	-59.4		29	3.9	25	24,728	-57.7		29	6.9	29	24,751	-56.4		04	5.6
20	24	26,265	-54.2		26	6.5	17	26,386	-50.2		29	9.4	26	26,093	-58.0		29	3.9	23	26,145	-55.4		27	10.1	28	26,169	-57.4		05	8.0
15	24	28,118	-52.2		27	9.0	15	28,286	-46.3		27	14.1	23	27,909	-56.7		27	6.7	20	27,984	-52.0		26	14.4	24	27,981	-58.8		05	10.6
10	19	30,785	-43.9		27	21.9	14	31,009	-40.0		26	26.3	12	30,504	-52.4				10	30,624	-45.8										
7	8	33,169	-38.1				6	33,439	-32.5																					
5																														

Standard pressure surface (mb)	YAP, CAROLINE IS. 1007 MB +						YUCCA FLAT, NEV. 881 MB						YUMA, ARIZ. 999 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	14	28.0	24.5	09	2.5	31	1,198	.1	-10.2	31	.9	23	131	11.2	-9.7	33	.5
1000	31	76	26.8	21.8	09	3.1	31	1,71					23	120				
950	31	529	23.5	19.1	09	4.5	31	590					23	555	16.5	-5.0	31	4.0
900	31	1,000	20.5	15.8	10	4.4	31	1,028					23	1,013	14.4	-6.6	33	4.1
850	31	1,492	17.6	11.9	10	3.7	31	1,492	6.6	-11.1	32	1.9	23	1,492	11.3	-9.0	29	4.9
800	31	2,009	15.3	7.9	11	3.8	31	1,987	4.0	-13.1	28	2.4	23	1,996	8.6	-11.1	29	5.1
750	31	2,555	12.9	4.2	10	4.4	31	2,509	1.4	-15.6	28	4.7	23	2,526	5.8	-13.9	29	6.1
700	31	3,132	10.0	.5	10	4.7	31	3,052	-1.4	-18.5	28	7.2	23	3,087	3.1	-17.1	29	7.9
650	31	3,745	6.6	-3.2	11	5.2	31	3,649	-4.8	-20.2	28	9.5	23	3,684	-.4	-20.5	29	9.5
600	31	4,398	3.1	-7.5	10	6.0	31	4,274	-8.6	-23.2	29	13.4	23	4,318	-5.0	-22.6	27	11.1
550	31	5,098	-.8	-12.7	10	5.7	31	4,942	-13.0	-27.3	28	17.1	23	4,995	-10.1	-26.5	28	12.4
500	31	5,854	-5.1	-18.8	10	6.6	31	5,662	-18.1	-30.7	28	20.3	23	5,722	-15.6	-30.4	28	13.7
450	31	6,675	-9.6	-25.2	10	7.5	31	6,440	-23.9	-35.2	28	22.2	23	6,508	-21.4	-35.3	28	15.2
400	31	7,575	-15.3	-30.6	09	7.7	31	7,289	-30.3	-41.1	28	24.6	23	7,365	-27.9	-41.2	28	17.3
350	31	8,574	-21.9	-38.2	10	7.8	31	8,229	-37.0	-45.4	28	27.3	23	8,313	-35.2	-45.8	28	20.0
300	31	9,687	-30.2	-45.6	09	8.4	31	9,275	-44.9		28	31.0	23	9,367	-42.9		28	23.3
250	31	10,958	-40.2	-54.1	09	9.0	31	10,472	-52.9		28	33.3	23	10,572	-51.7		28	27.3
200	31	12,439	-52.8		09	9.5	31	11,893	-57.6		28	35.1	20	12,009	-56.4			
175	31	13,288	-59.7		10	10.0	31	12,735	-58.2		28	35.8						
150	31	14,233	-67.7		10	11.4	30	13,704	-59.7		28	33.0						
125	31	15,309	-75.9		09	12.5	30	14,837	-62.5		28	27.1						
100	30	16,570	-83.4		10	17.1	28	16,208	-64.5		28	21.5						
80	30	17,814	-80.6		10	10.9	26	17,567	-65.4		28	16.6						
70	30	18,578	-75.9		09	7.1	25	18,387	-64.5		28	12.3						
60	30	19,480	-70.8		08	10.6	23	19,334	-64.4		29	9.2						
50	29	20,579	-63.8		09	17.6	22	20,458	-63.2		29	6.2						
40	27	21,964	-59.0		09	14.4	21	21,830	-61.7		30	5.2						
30	25	23,793	-53.3		30	1.1	19	23,631	-59.9		29	4.9						
25	23	24,973	-50.8		27	7.7	18	24,776	-58.3		29	5.5						
20	23	26,439	-47.1		26	13.3	14	26,184	-55.9		28	8.5						
15	21	28,351	-45.1		27	17.1	12	28,027	-52.6		27	12.5						
10	20	31,085	-40.0		26	16.8	8	30,709	-44.4									
7	16	33,539	-34.8		26	7.5												
5	8	35,910	-33.0															

[illegible] Greenwich. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun. MARCH 1971

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Mar.									
1	----	----	----	----	(1.24)	----	----	----	----
2	----	----	----	----	----	----	----	1.02	----
3	1.64	1.13	1.24	1.39	1.47	1.35	1.22	1.11	1.01
4	----	1.14	1.23	1.35	1.44	1.34	1.19	1.11	1.00
5	.93	1.04	1.14	D(1.30)	D(1.27)	D(1.07)	----	----	----
6	1.02	1.11	1.23	1.36	1.47	1.34	1.19	1.06	.96
7	1.00	1.10	1.21	1.36	1.44	1.31	1.16	1.05	.95
8	1.02	1.12	1.25	1.35	(1.47)	----	----	----	----
9	.97	1.07	1.19	1.34	----	----	----	----	----
10	.92	1.01	1.14	1.28	----	----	1.08	.96	.87
11	.89	.99	1.13	1.28	(1.42)	----	----	----	----
12	.98	1.06	1.19	1.32	1.46	1.34	1.20	1.07	.97
13	.98	1.06	1.20	1.31	1.41	----	----	----	----
14	.95	1.06	1.18	----	1.38	1.28	1.12	.99	.87
15	.96	1.05	1.17	1.33	1.47	1.30	1.16	1.02	.90
16	.92	1.04	1.15	1.30	1.45	1.33	1.18	1.05	.94
17	----	----	----	(1.28)	----	----	----	----	----
18	.93	1.06	1.20	1.36	1.49	1.37	1.23	1.13	1.02
19	1.01	(1.14)	(1.18)	(1.36)	(1.43)	----	----	----	----
21	----	----	1.22	1.33	1.49	1.31	1.16	1.05	----
22	(.85)	(1.01)	(1.20)	(1.28)	(1.46)	----	----	----	----
23	(.98)	(1.03)	(1.16)	(1.31)	----	----	----	----	----
25	.81	.91	1.06	1.24	1.40	(1.17)	----	----	----
26	----	----	----	(1.26)	1.39	----	(1.06)	(.95)	(.85)
27	.90	1.01	1.12	1.27	1.40	(1.22)	(1.12)	(1.00)	----
28	----	----	----	----	(1.38)	1.24	1.10	.97	.87
29	.84	.96	1.07	1.24	1.41	1.28	1.12	1.01	.90
30	.85	.96	1.06	1.23	----	----	----	----	----
Averages	0.94	1.05	1.17	1.31	1.44	1.32	1.16	1.04	0.94

OMAHA, NEBR.

	Air mass: 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Mar.									
2	0.88	0.95	1.10	----	1.37	HS1.28	HS1.10	HS0.96	HS0.88
3	----	----	----	----	----	HS1.33	HS1.05	----	----
7	HS .80	HS .91	HS1.08	H 1.27	HS1.42	HS .98	----	HS .50	HS .28
10	HS .85	HS .96	HS1.10	HS1.21	----	----	----	----	----
13	HM .67	HM .71	HM .86	HM1.06	----	----	----	----	----
16	----	----	----	----	----	----	HS1.04	HS .90	----
19	----	.95	1.07	1.21	----	----	----	----	----
21	HS .82	HS .91	----	----	----	----	----	----	----
23	HM .71	----	----	----	----	----	----	----	----
27	----	----	HM .54	HM .72	HM1.06	HM .88	----	----	----
29	----	.83	----	1.23	----	----	----	----	----
Averages	0.79	0.89	0.96	1.12	1.28	1.12	1.06	0.79	0.58

MADISON, WIS.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Mar.									
2	----	----	----	S 1.23	----	----	----	----	----
3	----	----	----	S 1.21	----	----	S 1.10	S 0.98	----
4	S 0.85	S 0.93	S 1.06	S 1.24	----	----	----	----	----
8	----	----	S 1.12	S 1.26	S 1.39	S 1.31	S 1.18	S 1.06	----
17	S .90	S 1.01	S 1.11	S 1.26	S 1.31	----	----	----	----
20	S .91	S .99	S 1.13	S 1.29	S 1.41	----	----	----	----
23	S .85	S .94	S 1.07	S 1.25	----	----	----	----	----
26	M .67	M .82	M .95	----	M 1.29	----	----	----	----
29	----	----	----	----	S 1.30	S 1.23	S 1.08	S .96	S 0.87
Averages	0.84	0.94	1.08	1.25	1.34	1.27	1.12	1.00	0.87

TUCSON, ARIZ.

	Air mass: 4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Mar.									
1	0.74	----	----	1.14	----	----	----	----	----
2	.91	0.98	1.07	1.24	1.34	1.13	.92	0.80	0.71
3	.87	.95	1.08	1.17	1.34	1.12	----	----	----
4	.85	.94	1.00	1.21	1.31	1.13	.99	.87	.77
5	----	----	1.01	1.15	1.29	1.02	.86	.70	.56
6	.77	.87	.99	1.17	1.34	1.11	.94	.82	.73
7	.81	.89	1.03	1.19	1.31	1.09	.87	.73	.60
8	.75	.84	.95	1.11	1.24	1.10	.92	.79	.71
9	.70	.79	.92	1.10	1.27	----	----	----	----
10	.71	.79	.94	1.13	1.20	1.06	.89	.77	.70
11	.73	.84	.95	1.10	1.18	.99	----	----	----
12	.62	.74	.88	1.07	1.23	.97	.81	.71	.58
13	.78	.87	.99	1.12	1.27	----	.81	----	----
14	.70	.79	.91	10.9	1.29	1.04	.87	.71	.63
15	.82	.89	1.02	1.20	1.28	1.06	.87	.72	.62
16	.80	.88	1.01	1.19	1.33	1.03	.82	.68	.60
17	----	----	----	----	----	1.07	.87	.74	.65
18	.72	.82	.94	1.10	1.28	1.03	.78	----	.55
20	.70	.82	----	1.13	1.27	1.04	.92	.82	.69
21	.88	.98	1.10	1.22	1.35	1.11	.93	.79	.68
22	.89	.98	1.08	1.21	1.35	1.05	.90	.77	.67
23	.78	.89	1.05	----	1.33	1.03	.87	.73	.59
25	----	.82	.94	----	----	----	----	----	----
26	.77	.87	----	1.11	1.20	.95	.75	.61	.49
27	.78	.88	.97	1.12	1.22	.94	.78	.62	.52
28	.74	.84	.93	1.08	1.23	.92	.78	.64	.53
29	.83	.90	1.00	1.13	1.30	1.03	.81	.66	.56
30	.58	.71	.87	1.08	1.33	1.01	.86	----	----
Averages	0.77	0.86	0.98	1.14	1.28	1.04	0.86	0.74	0.63

( ) Clouds present
D Dust
HS Slight haze
HM Moderate haze
S Slight haze - indeterminable
M Moderate haze - indeterminable
* Values corresponding to true solar noon
H Haze

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1967 issue, Vol. 8, No. 2, page 64 of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

March 1961

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	323	355	533	523	513	562	555	529	559	498	484	558	536	590	583	587	524	617	558	472	609	586	479	439	599	596	611	566	638	557	464	536
AMES IOWA	339	354	398	406	75	384	501	534	284	450	152	352	321	90	157	332	503	40	441	516	217	429	500	489	309	---	498	397	593	572	545	373
ANNETTE ALASKA	25	68	201	138	119	28	238	140	46	96	162	87	---	---	---	---	---	---	---	222	392	301	278	152	99	406	244	88	325	421	117	183
APALACHICOLA FLORIDA	291	159	131	556	531	264	496	561	556	472	327	130	180	316	363	559	589	589	395	595	601	550	468	486	376	443	605	479	209	640	632	437
ARGONNE NAT. LAB.	317	382	307	425	121	79	213	479	282	138	142	290	304	78	85	235	499	68	91	525	415	277	448	450	425	487	136	371	439	475	440	304
ASTORIA OREGON	367	89	151	242	278	15	150	183	120	43	31	166	406	231	375	457	454	461	460	397	360	127	120	448	188	106	249	88	145	281	492	248
ATLANTA GEORGIA	297	98	44	528	516	153	520	553	529	134	536	156	126	223	301	568	597	567	521	579	448	156	542	576	37	94	597	362	354	637	610	386
BARROW ALASKA	114	98	88	100	109	109	104	80	133	104	131	140	100	112	199	142	175	195	197	223	265	183	259	240	248	242	275	302	282	288	291	178
BETHEL ALASKA	235	256	226	247	261	---	278	242	277	300	313	326	336	331	154	281	302	283	334	354	365	382	410	390	316	242	273	401	429	437	426	314
BISMARCK N.DAK.	349	441	323	282	133	390	465	302	326	331	231	391	283	170	493	418	396	366	400	460	295	398	559	190	420	203	286	559	547	510	148	357
BLUE HILL MASS.	302	297	19	89	281	250	11	267	385	380	22	374	232	74	49	358	227	414	189	133	197	431	369	466	460	376	353	461	233	332	428	273
BOISE IDAHO	488	315	174	290	485	430	225	460	349	372	204	79	175	240	327	228	503	545	541	509	421	141	151	388	179	298	402	484	454	337	574	347
BROWNSVILLE TEXAS	414	451	626	602	392	548	482	---	431	372	311	390	553	579	592	589	596	567	---	---	483	533	590	568	592	140	391	582	129	658	639	493
BURLINGTON VERMONT	367	436	150	96	347	516	114	297	542	461	160	522	437	326	503	93	532	577	352	155	402	595	536	548	559	635	615	525	163	224	649	401
CAPE HATTERAS N.C.	---	80	160	483	530	517	372	544	544	415	510	521	444	485	473	512	299	501	159	526	586	531	212	579	386	---	285	565	116	420	559	425
CARIBOU MAINE	---	336	368	79	258	352	310	255	330	442	264	271	426	412	189	---	452	460	450	142	296	280	372	318	461	509	511	219	505	331	483	348
CHARLESTON S.C.	129	188	136	534	530	475	514	541	534	191	498	384	358	487	270	549	578	567	147	479	572	471	477	573	167	59	604	560	134	585	618	416
CLEVELAND OHIO	330	330	135	389	353	77	128	189	455	91	193	214	196	426	118	104	288	225	137	---	---	---	305	541	338	542	461	312	218	321	506	283
COLUMBIA MISSOURI	420	222	473	491	340	245	274	523	198	331	449	454	469	403	419	430	472	138	350	556	507	273	520	370	140	436	339	228	609	591	545	394
DAVIS CALIFORNIA	488	477	227	468	495	485	314	471	386	311	217	96	491	121	440	412	567	563	558	544	531	330	276	434	81	482	600	577	592	594	614	427
DODGE CITY KANSAS	264	460	506	504	244	437	527	505	447	485	487	490	521	229	514	437	338	326	489	520	493	139	511	175	483	575	533	375	599	566	546	443
EL CENTRO CALIF. NPF	442	491	470	463	465	493	494	480	490	477	478	501	501	511	511	513	526	510	356	542	531	531	486	414	522	525	510	551	563	558	543	498
EL PASO TEXAS	484	483*	546	556	436	590	591	583	571	---	547	561	526	581	583	592	529	586	623	496	605	612	605	496	599	575*	609	601	609	609	565	565
ELY NEVADA	477	551	364	369	387	515	446	468	492	381	280	501	379	426	532	484	556	571	578	574	558	379	275	453	447*	---	438	531	572	425	532	465
FAIRBANKS ALASKA	88	114	149	212	177	109	322	138	249	186	133	199	170	335	332	117	181	285	303	281	301	308	302	327	339	337	321	323	362	373	352	247
FLAMING GORGE UTAH	---	---	434	166	364	496	525	268	517	340	341	---	---	291	364	211	419	267	490	---	483	590	385	278	---	364	538	576	579	466	495	410
FORT WORTH TEXAS	302	39	535	485	475	513	545	528	338	441	508	304	526	426	538	541	554	445	596	554	495	327	475	229	239	540	394	521	597	602	526	456
FRESNO CALIFORNIA	490	441	423	361	496	477	460	491	463	455	458	275	512	412	526	467	424	522	534	534	534	514	228	452	185	217	582	573	565	596	587	460
GAINESVILLE FLORIDA	363	423	172	568	516	348	464	568	576	327	503	112	271	404	447	463	606	593	456	327	460	335	383	456	396	271	645	576	318	645	662	441
GENEVA NEW YORK	278	222	94	169	345	176	166	251	299	181	194	339	176	352	170	140	297	390	57	151	420	336	373	278	298	455	459	154	203	215	460	261
GLASGOW MONTANA	313	364	353	395	192	402	392	261	401	409	320	301	119	232	395	443	415	377	481	415	422	460	492	404	389	296	486	532	501	294	248	371
GRAND JUNCTION COLO.	298	484	476	374	183	526	519	243	499	---	373	454	267	525	363	528	479	524	579	583	505	480	276	460	408	---	391	563	600	583	436	448
GREAT FALLS MONTANA	402	350	322	378	286	407	275	278	387	331	425	352	105	489	448	394	235	486	423	372	450	252	518	492	167	424	389	516	367	497	303	372
GREENSBORO N.C.	368	66	30	510	510	368	515	401	476	139	529	352	402	492	98	543	486	555	120	393	577	418	504	609	301	207	604	509	161	609	600	402
INDIANAPOLIS INDIANA	388	301	195	453	332	45	275	454	---	---	---	---	---	123	220	196	---	186	48	---	---	---	392	363	365	534	223	338	---	526	494	---
LAKE CHARLES LA.	104	171	434	575	213	409	571	566	383	394	242	182	331	258	570	530	562	75	601	609	207	490	121	158	458	517	394	187	568	640	564	390
LAKELAND FLORIDA	368	432	362	569	534	384	402	582	565	427	534	---	332	400	492	319	597	596	380	614	609	472	499	362	418	372	599	556	498	624	630	484
LANDER WYOMING	263	443	426	473	280	563	558	435	588	452	413	448	490	438	402	500	237	544	548	519	434	442	466	427	422	343	538	551	555	535	157	448
LARAMIE WYOMING	353	405	304	175	334	382	442	194	387	374	313	324	363	346	447	469	192	502	512	564	368	198	172	301	445	559	543	367	604	582	238	379
LAS VEGAS NEVADA	400	506	483	481	516	516	513	412	460	439	454	517	377	475	530	536	558	576	492	574	568	512	381	535	454	542	470	596	597	533	579	503
LEXINGTON KENTUCKY	336	328	135	412	446	126	207	329	474	---	414	317	174	389	388	205	344	464	92	321	505	---	---	---	---	---	---	---	---	---	552	---
LITTLE ROCK ARKANSAS	192	61	571	512	326	153	540	523	225	414	155	255	285	357	491	499	556	99	569	587	226	161	442	522	79	515	549	81	565	605	567	377
LOS ANGELES CALIF.	507	496	493	463	524	506	524	468	415	304	472	276	546	537	546	468	517	511*	453	506	497	472	309	365	115	453	---	517	548	391	573	459
MADISON WISCONSIN	397	395	458	444	139	277	362	492	372	397	222	158	233	104	85	449	509	99	307	555	424	469	---	575	542	544	219	294	559	522	386	366
MANHATTAN KANSAS	52	410	475	445	238	233	453	447	162	422	452	471	465	202	434	483	295	194	326	524	411	281	191	120	230	255	467	368	430	538	486	354
MATANUSKA ALASKA	59	84	249	218	251	266	178	258	280	105	149	200	139	338	290	154	32	321	349	343	351	356	374	273	378	280	229	354	400	401	331	258
MEDFORD OREGON	406	137	150	237	399	200	249	366	184	110	132	160	339	314	365	147	375	481	494	469	354	87	195	239	68	193	233	437	395	270	548	282
MIAMI FLORIDA	414	467	403	518	434	444	297	478	490	433	387	428	416	446	481	403	536	501*	508	476	559	496	498	443	467	426	558	545	398	371	498	459
MIDLAND TEXAS	521	338	546	547	512	523	552	549	529	492	503	558	570	564	570	582	557	428	543	---	---	596	549	520	582	589	602	578	619	632	550	545
NASHVILLE TENNESSEE	366	283	106	487	486	82	309	515	443	77	479	255	76	259	509	517	543	446	135	440	505	220	457	534	41	118	510	232	581	594	574	361
NEW YORK CENTRAL PRK	362	183	36	153	453	351	71	253	360	369	118	442	96	254	260	441	217	516	50	244	430	395	516	402	557	207	560	496	185	484	574	324
NORTH OMAHA NEBRASKA	309	477	484	435	105	476	517	455	395	448	417	380	450	245	163	475	334	141	517	515	287	431	365	228	295	179	520	378	556	549	504	388
OAK RIDGE TENNESSEE	385	94	40	474	501	37	306	488	474	31	485	191	127	280	404	504	523	511	152	300	516	194	546	543	102	94	549	180	449	567	549	342
OKLAHOMA CITY OKLA.	252	---	509	473	435	499	516	503	328	507	478	421	475	449	525	534	445	418	548	532	509	437	466	107	434	542	523	234	587	579	482	458
PAGE ARIZONA	---	311	501	492	442	440	542	357	---	26	24	24	24	---	24	24	259	470	470	471	461	451	461	461	471	451	471	461	471	471	471	357

Note. --Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

U Indicates Urban sites.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. MARCH 1971

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PALMER AAES ALASKA	52	84	199	196	229	227	153	222	242	137	148	167	207	192	169	102	249	305	309	320	324	335	332	228	338	282	218	344	357	353	275	235
PHOENIX ARIZONA	296	484	480	480	488	511	510	---	499	489	479	496	415	525	527	528	524	547	469	553	565	557	544	470	491	541	541	564	575	554	516	507
PORTLAND MAINE	364	374	121	80	268	328	61	309	425	426	73	362	446	351	132	418	157	470	319	333	345	494	412	383	509	511	428	618	400	366	503	348
PROSSER WASHINGTON	371	113	291	121	416	134	137	266	162	74	95	181	354	336	422	362	445	465	466	313	430	218	238	423	268	435	323	310	405	290	501	302
RAPID CITY S.DAK.	263	449	355	285	213	367	429	286	290	218	260	343	173	433	421	395	166	463	507	490	151	414	334	323	355	297	514	340	476	428	217	344
RENO NEVADA	451	410	350	437	437	439	222	447	287	279	265	89	371	339	406	475	504	515	495	496	473	333	240	407	231	323	522	510	495	427	554	395
RICHLAND 25 NW WASH.	396	150	305	174	428	134	147	302	140	82	100	207	392	281	426	442	485	486	493	444	487	205	224	435	314	478	364	350	368	336	514	326
RIVERSIDE CALIFORNIA	491	570	550	515	529	572	568	485	448	166	422	327	376	588	573	533	580	598	518	598	580	569	469	272	340	492	539	585	635	545	602	504
RUSTON LOUISIANA	192	99	372	501	277	406	519	505	204	437	233	253	245	430	534	519	543	93	570	570	77	379	223	504	41	439	537	208	571	---	565	368
SALT LAKE CITY	435	488	372	242	300	496	478	318	488	391	305	271	265	447	369	480	211	576	558	554	431	266	168	336	385	368	470	571	603	442	369	402
SAN ANTONIO TEXAS	312	243	571	555	517	529	569	539	416	237	371	421	549	546	585	568	565	478	591	610	557	595	546	121	480	554	231	549	583	646	514	489
SAULT STE MARIE MICH	---	371	417	---	401	253	115	319	458	441	474	462	377	85	75	497	---	368	180	421	506	504	536	507	550	481	296	122	222	529	333	368
SAINT CLOUD MINN.	420	441	455	332	340	396	440	470	278	246	141	344	383	147	247	504	482*	117	452	401	418	488	555	551	443	159	169	408	548	501	348	375
SANTA MARIA CALIF.	488	485	481	486	507	501	505	468	125	465	443	200	512	503	535	406	541	534	499	560	407	532	282	497	499	315	572	598	596	566	609	475
SEATTLE TACOMA WASH.	---	---	---	---	223	99	49	231	78	58	61	286	383	200	392	397	324	432	453	373	330	76	108	422	310	100	206	80	151	208	439	240
SPOKANE WASHINGTON	348	187	217	378	327	225	112	280	125	79	172	289	303	160	368	444	446	436	444	425	455	115	163	298	382	367	280	214	305	333	428	294
STERLING VIRGINA	384	66	49	471	455	450	487	295	524	307	365*	395	370	116	122	509	365	522	32	216	574	220	---	487	596	147	612	534	142	513	633	365
SWAN ISLAND W.I.	436	393	528	325	403	481	491	511	484	528	528	563	555	468	537	477	545	492	448	498	468	538	523	545	575	584	582	399	588	583	507	503
TALLAHASSEE FLORIDA	214	199	113	501	494	392	505	515	491	321	377	165	120	274	220	506	537	541	282	544	540	481	325	430	356	215	548	453	135	584	573	385
TAMPA FLORIDA	421	430	370	556	527	337	404	573	558	364	535	137	265	522	501	---	585	559	229	612	606	482	565	416	478	386	624	572	557	652	641	482
TUCSON ARIZONA	339	509	502	502	501	519	518	517	489	516	509	512	490	540	543	546	521	547	491	548	570	567	563	481	516	562	563	563	576	571	524	523
WAKE ISLAND,PACIFIC	600	607	452	516	562	610	608	621	561	564	550	581	608	572	633	649	630	558	651	660	566	535	649	658	627	585	636	660	468	583	650	594

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

The solar radiation data in this table form the basis for the analyses in Parts VII, A, and B, of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (0.3 - 3.0 μ) AT PALMER, ALASKA.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-.7	-37	-47	-1	-83	-104	-28	-26	-41	-5	-21	-41	-54	-67	-41	-24	-13	-2	-29	-11	-1	-9	-41	-39	-2	-44	-	-	-	-66	-1	-.4

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature that are published as received from the Palmer [illegible] Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (.3900 A) at Ames, Iowa.

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg
Langleys. . .	12.53	13.02	13.81	12.38	3.94	15.71	16.77	16.97	10.95	14.01	6.11	11.09	10.16	3.81	6.21	11.25	14.11	1.38	17.56	16.48	7.89	12.83	14.21	11.91	10.20	4.81	13.71	18.16	11.[illegible]	13.84	12.[illegible]	

These data are from an E - V Ippley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

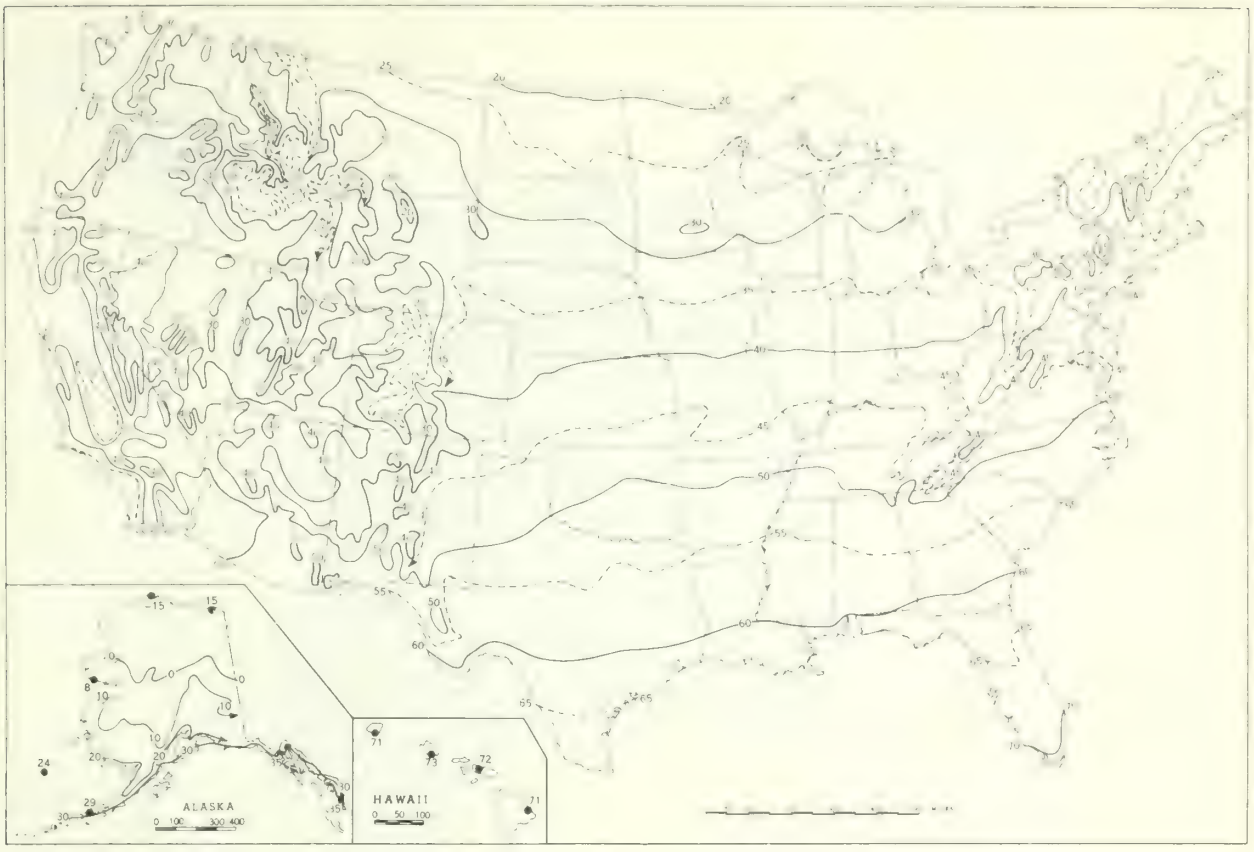
These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units Milli-atmo-cms.

Station	Day of month																															Mean O3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
BISMARCK, N. DAK.	00444	00515	00411	00482	00511	00504	00459	00404	00419	00413	00435	00389	00376	-	00424	00393	00421	00433	00388	00427	-	00412	00417	00409	01108	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BOULDER, COLORADO	00454	00517	00379	00393	00436	-	-	00363	00380	00395	00359	00[illegible]	-	-	00359	00[illegible]	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]
FAIRBANKS, ALASKA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	-	-	-	431
HUANCAYO, PERU	00279	05273	00269	00274	00277	00276	00276	00268	00266	00268	00263	00267	00264	-	00263	-	00264	00267	00268	00266	00270	00271	03261	00270	00270	00269	00272	-	03262	00272	00275	269
GREEN BAY, WIS.	03442	00480	00509	00466	04446	04475	03534	00511	00423	00435	05465	04455	00411	07415	05442	00411	00438	04466	-	-	-	00478	04470	03454	00438	00434	05383	05401	00425	00431	00448	447
MAUNA LOA, HAWAII	00271	-	00268	-	-	-	-	00270	-	00279	-	00287	-	-	00293	-	[illegible]	-	-	-	-	00261	-	00263	-	-	-	-	00262	-	-	271
NASHVILLE, TENN.	04281	00278	-	00356	00334	05358	00412	00378	00353	-	00376	00376	-	-	00322	-	-	00331	04449	00448	06357	05415	00365	00354	-	35415	00306	05310	-	00366	-	381

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e. the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column is usually expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g. 45 milli-atmo-cms ozone implies an ozone layer 0.3 centimeter thick. The code [illegible] is designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), March



B. Temperature Departure from 30 - Year Mean (°F 1931-60), March 1971.

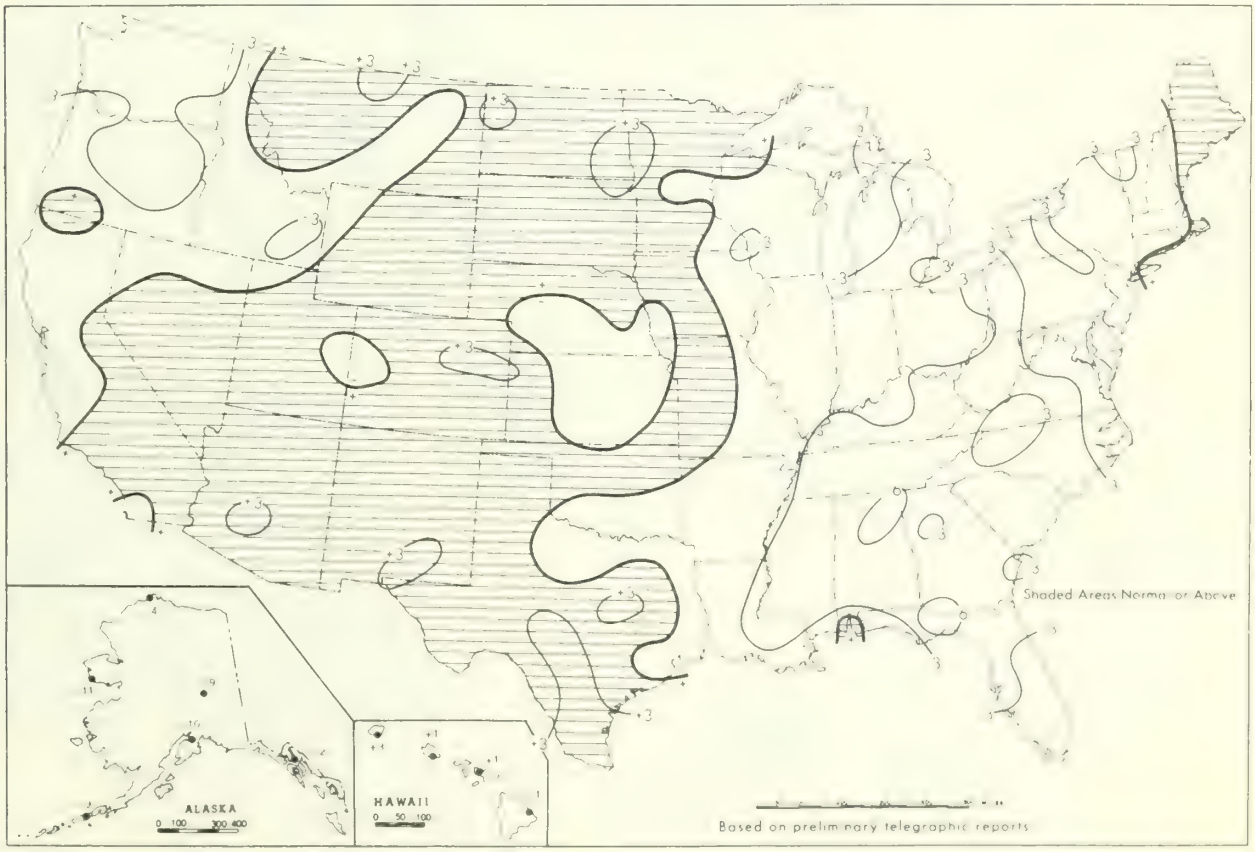


Chart II Total Precipitation (Inches), March 1971.

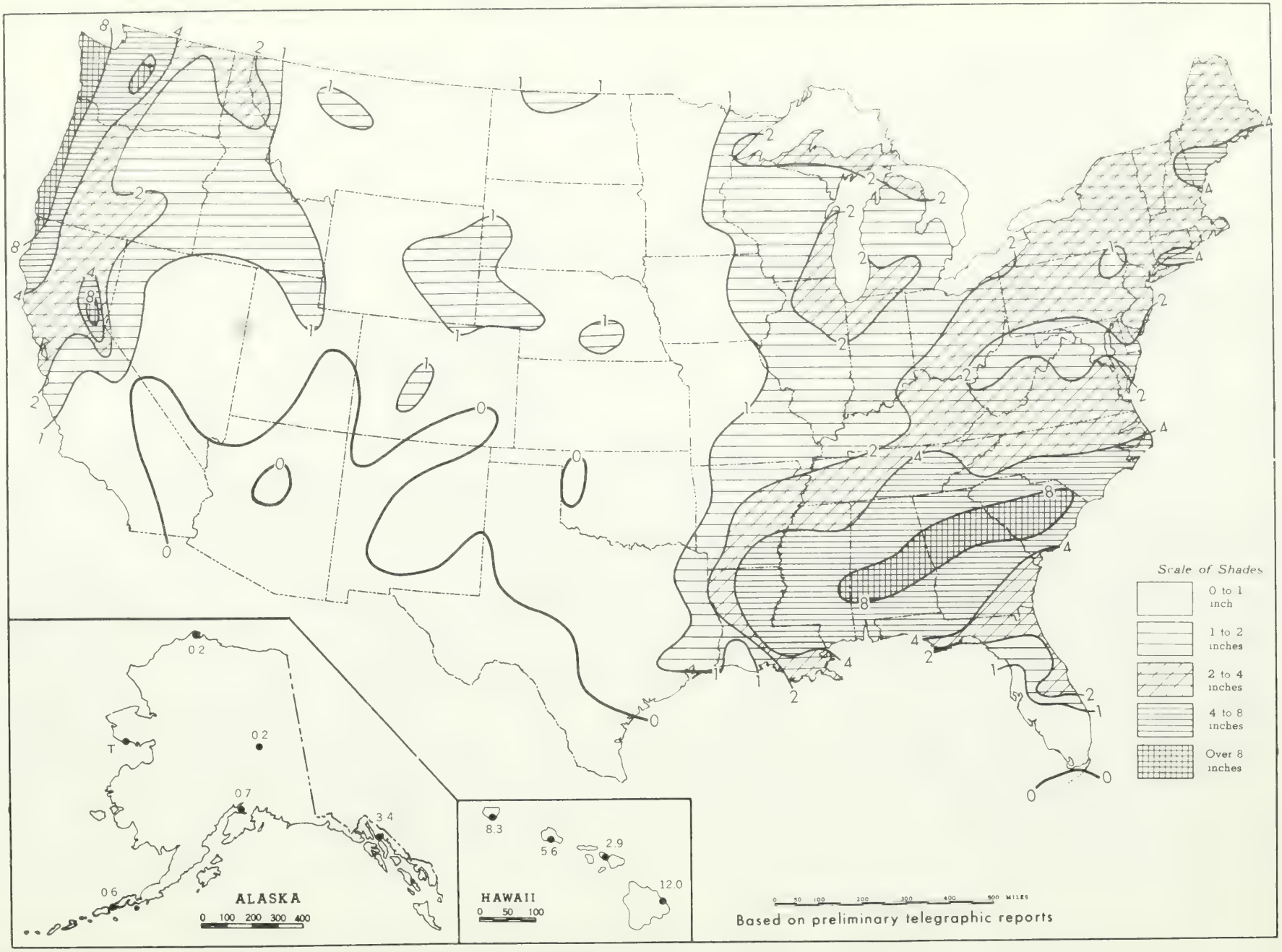


Chart III. Percentage of Normal Precipitation, March 1971.

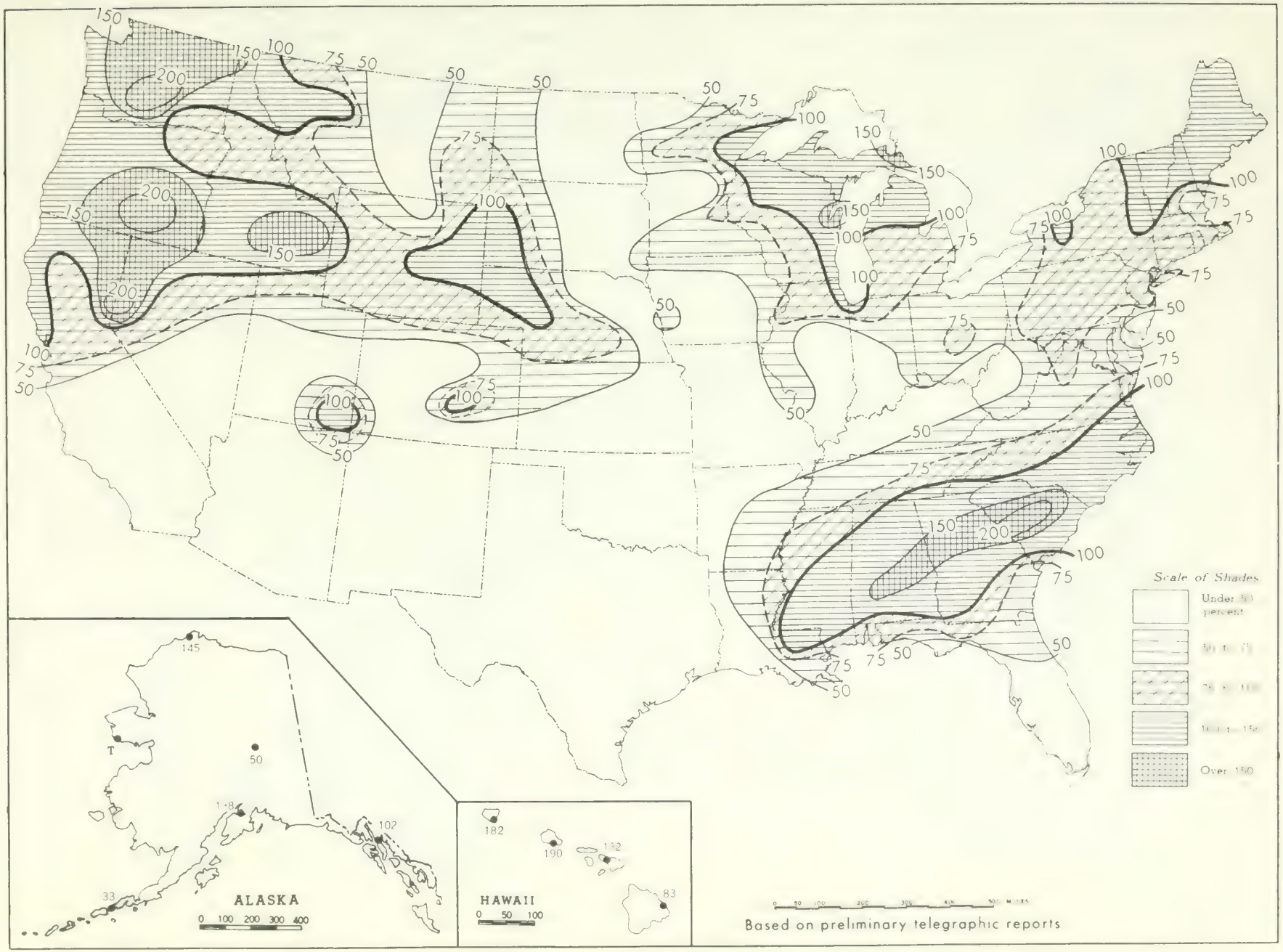
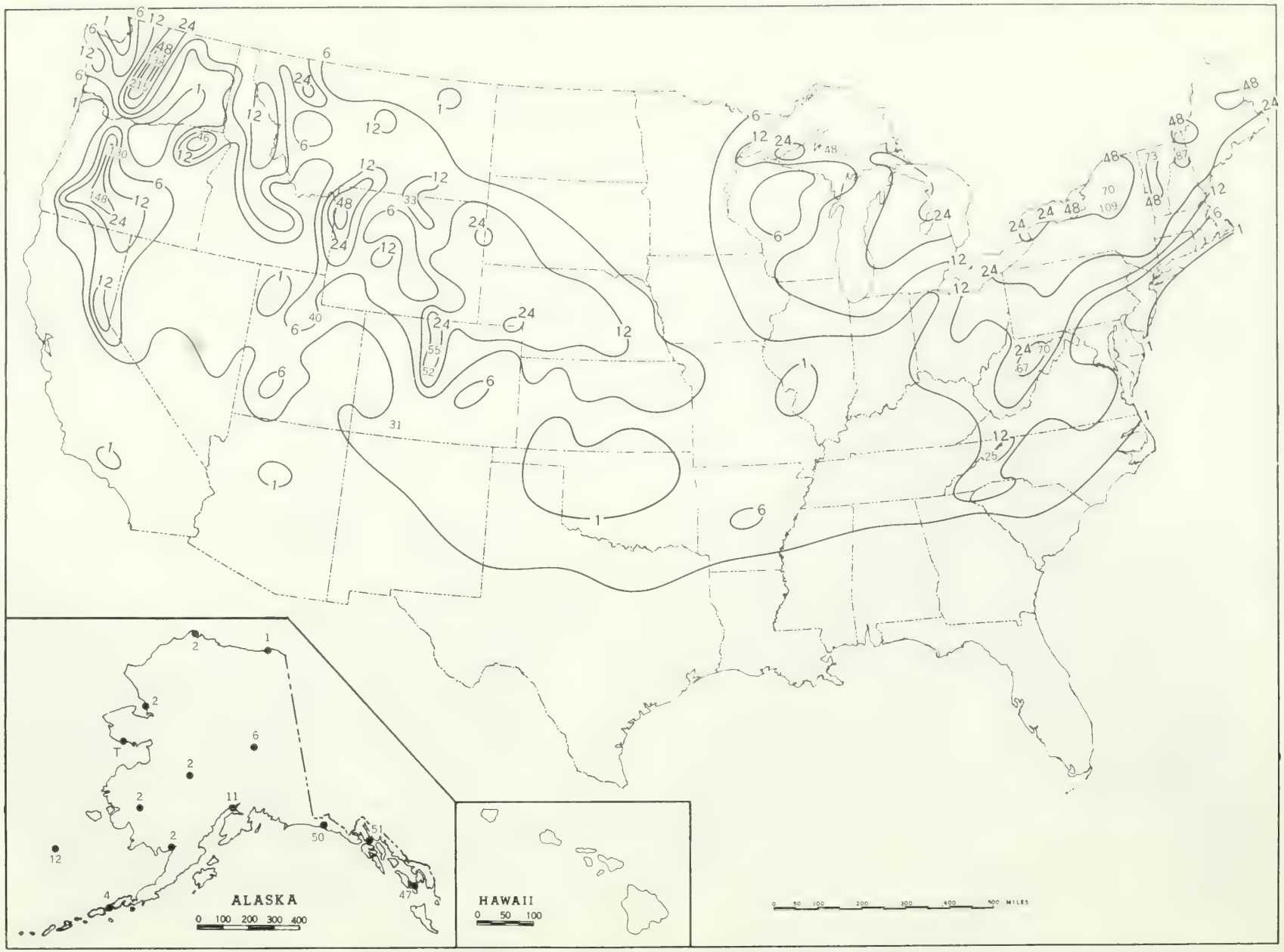
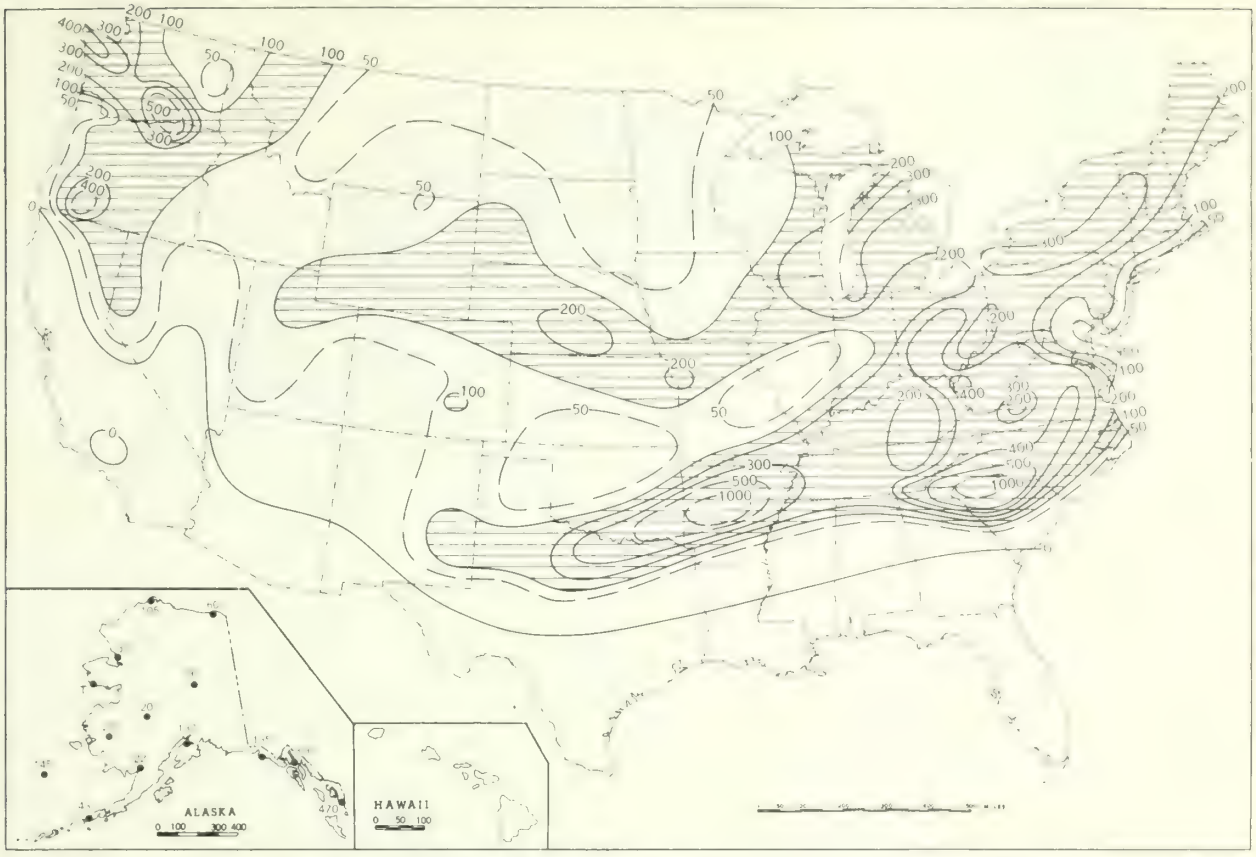


Chart IV Total Snowfall (Inches), March 1971.

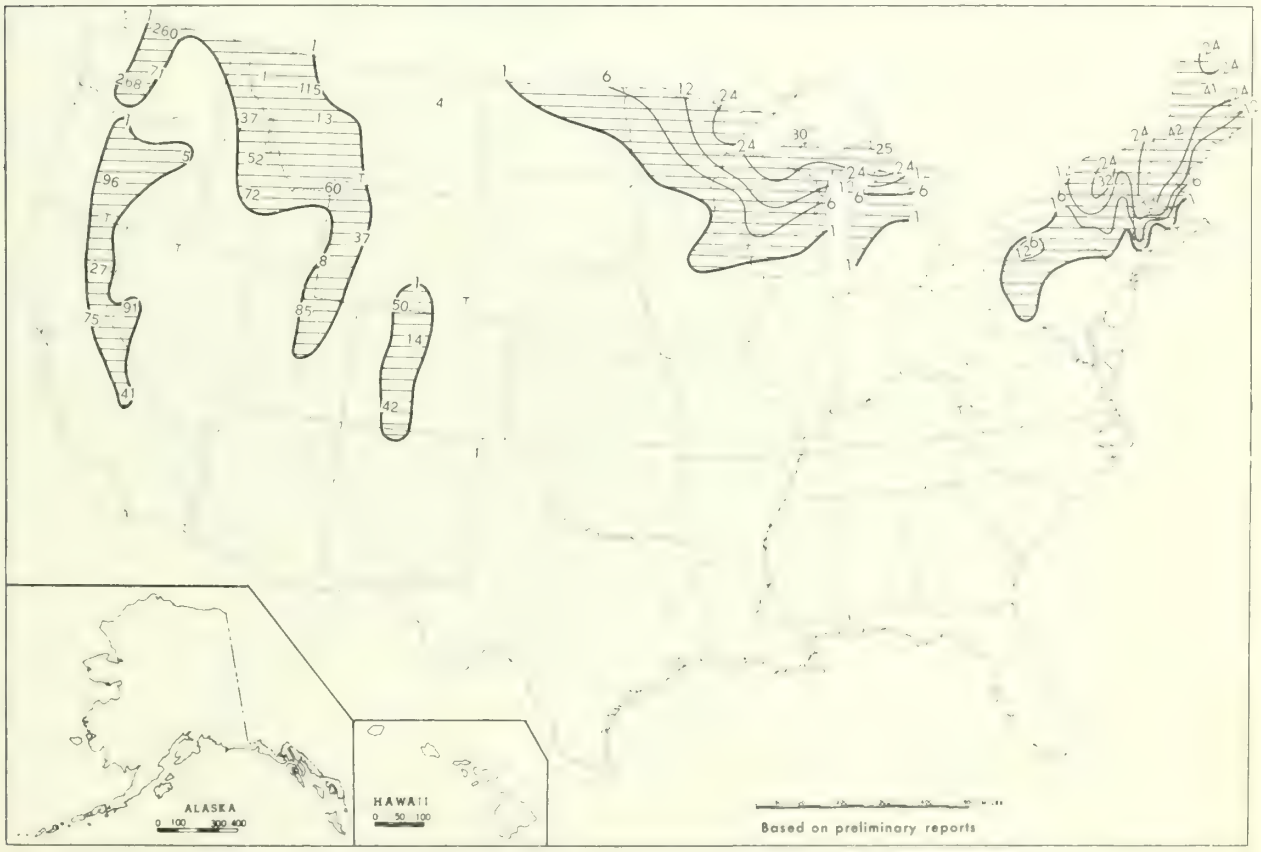


This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, March 1971.

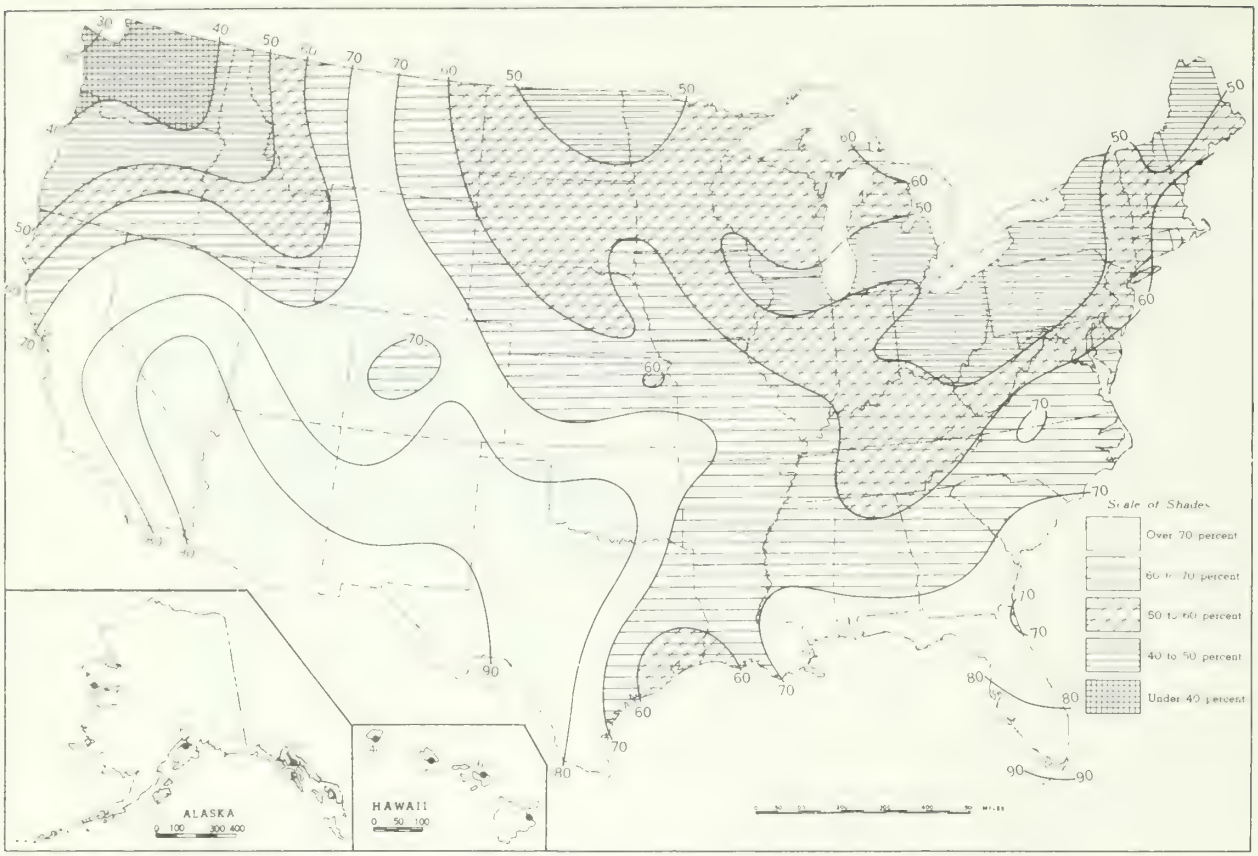


B. Depth of Snow on Ground (Inches), 7:00 a.m. e. s. t., March 29, 1971.

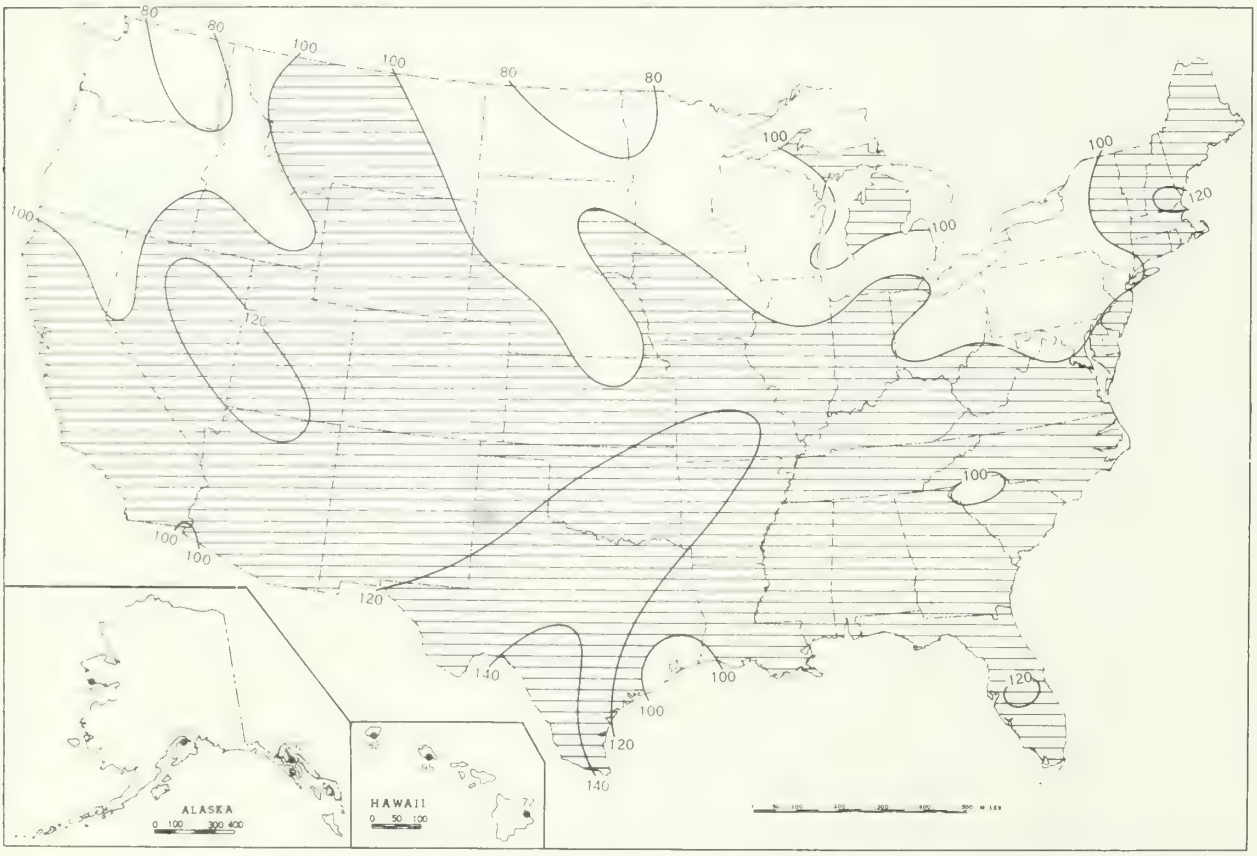


A. Amount of mean monthly snowfall is computed for Weather Bureau stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. E.S.T., of the Monday nearest the end of the month.
It is based on reports from Weather Bureau and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, March 1971.

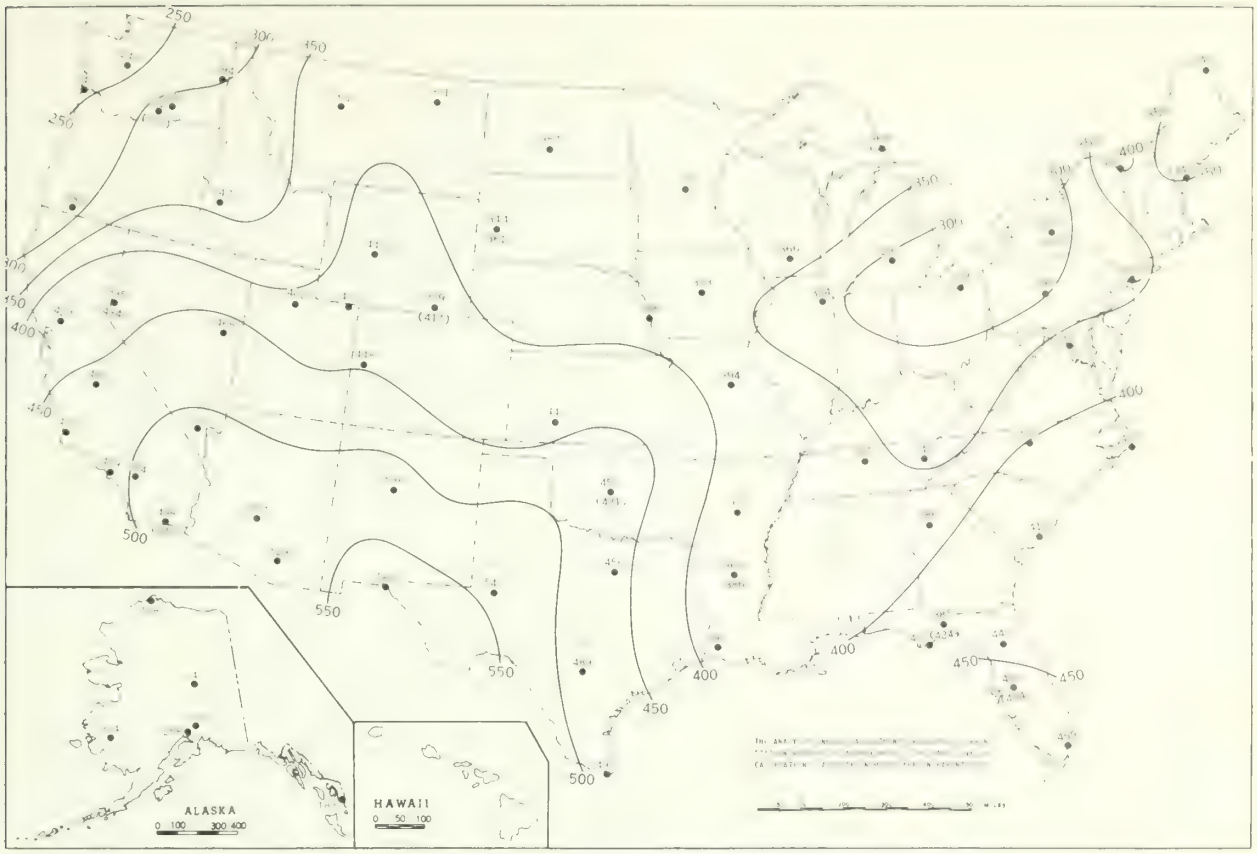


B. Percentage of Mean Monthly Sunshine, March 1971.

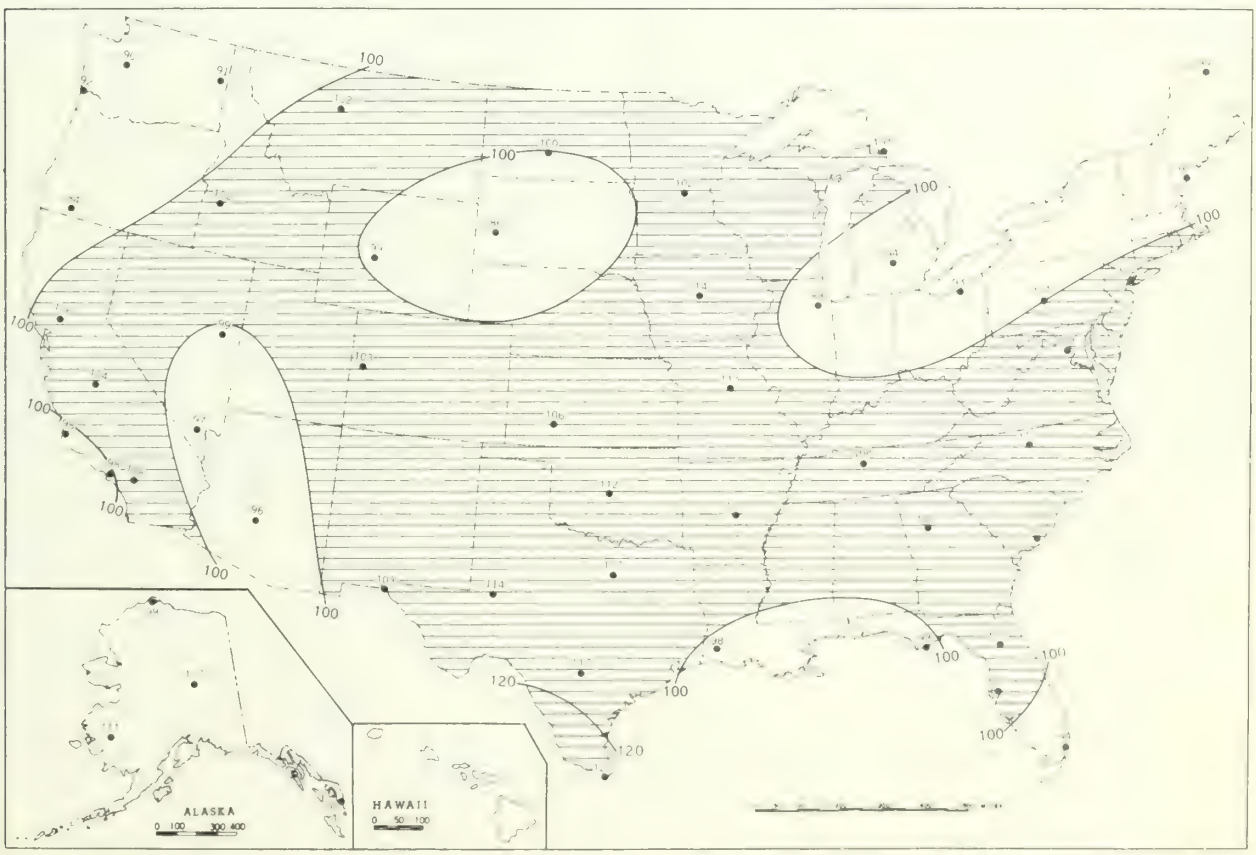


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, March 1971.

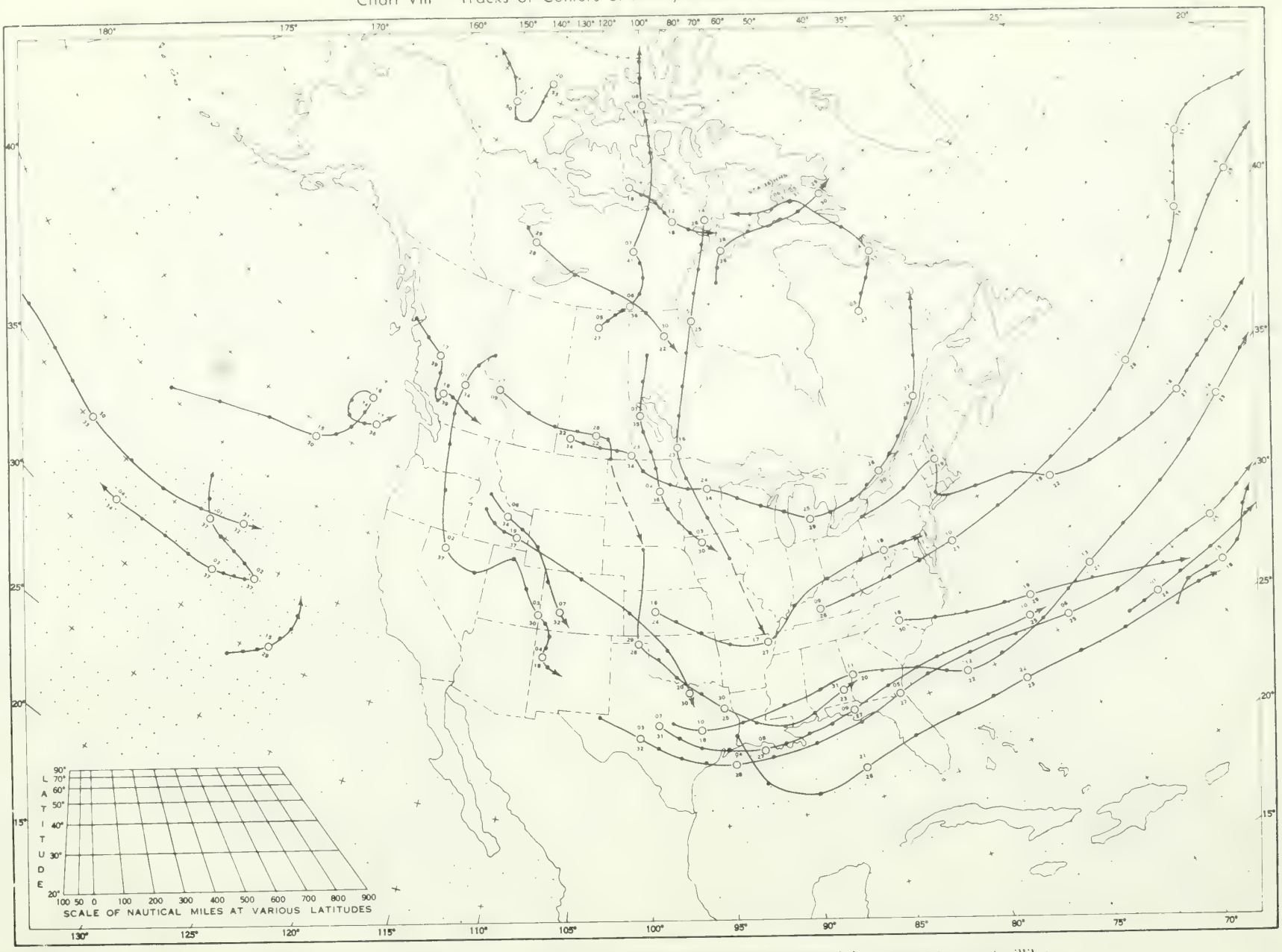


B. Percentage of Mean Daily Solar Radiation, March 1971.



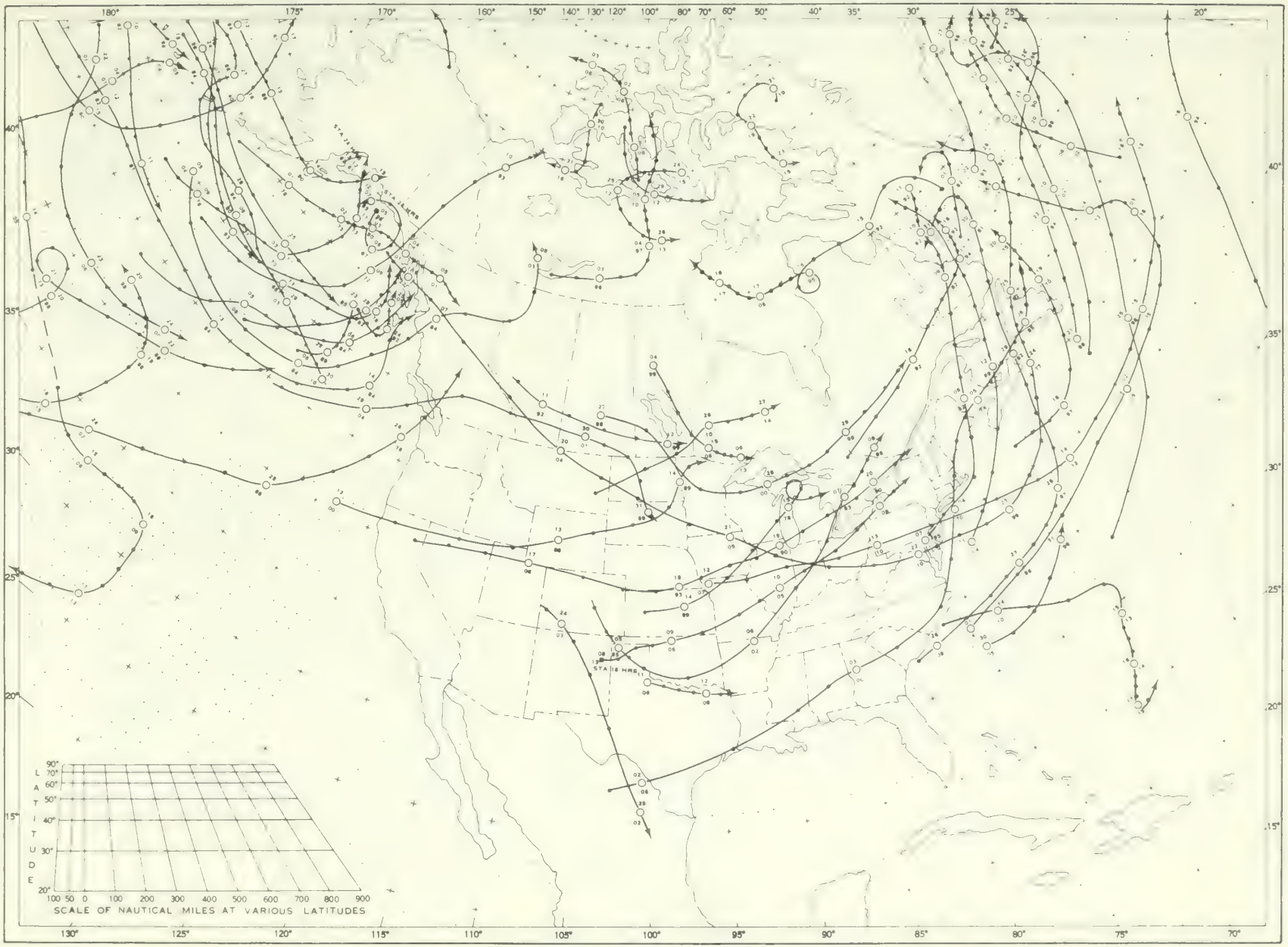
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, March 1971.



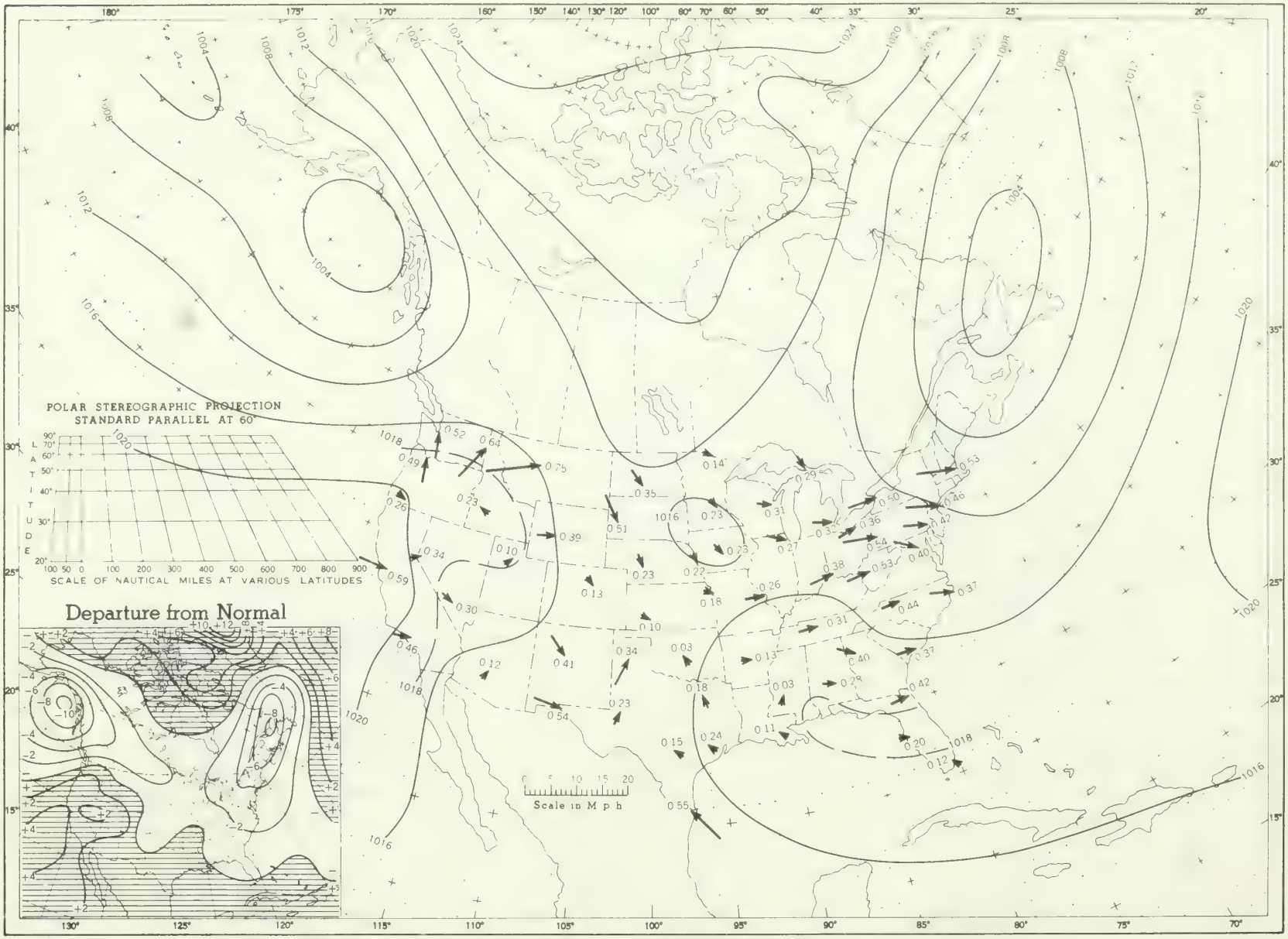
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, March 1971.



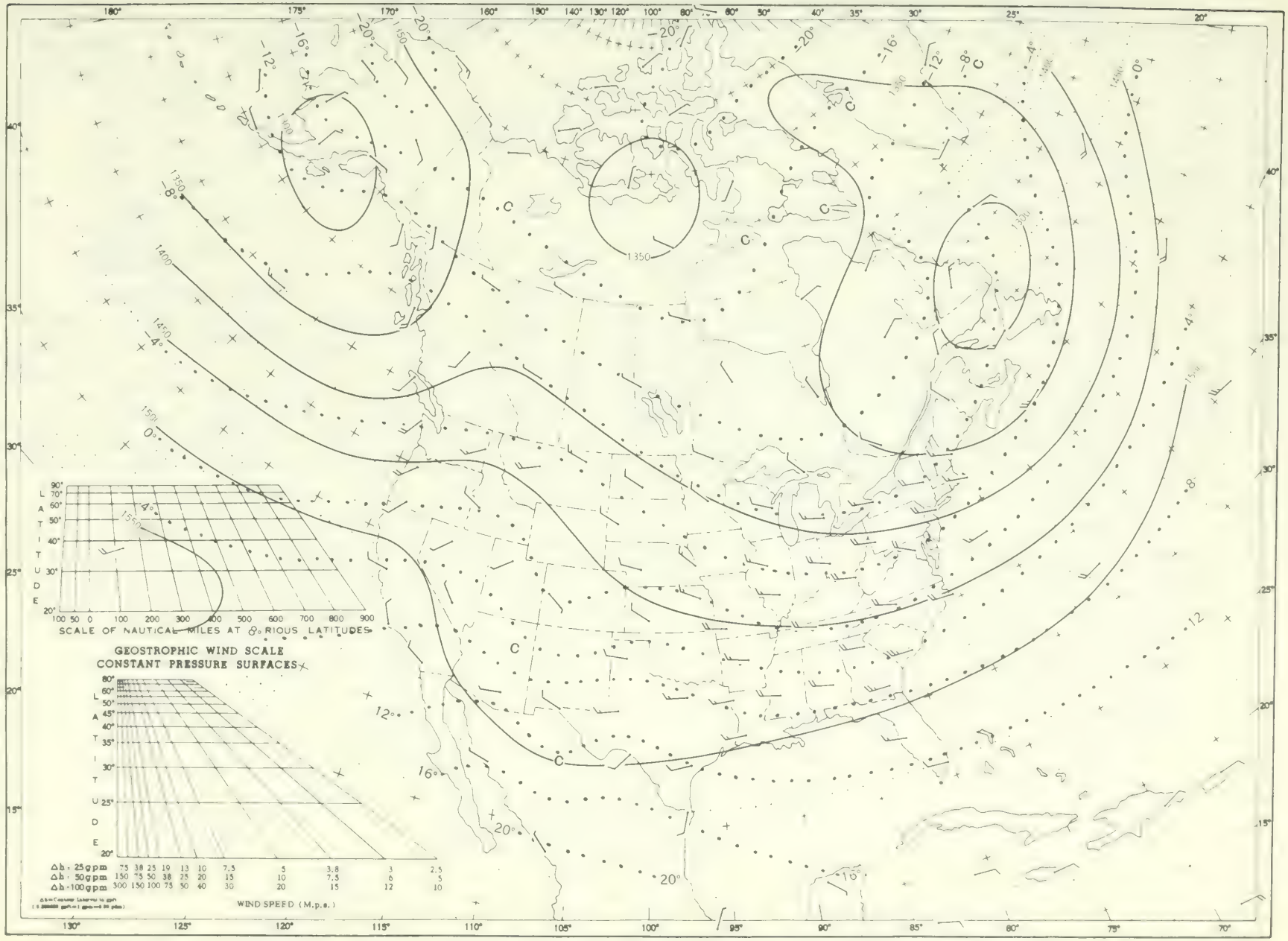
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, **March 1971**. Inset Departure of Average Pressure (mb) from Normal, **March 1971**.



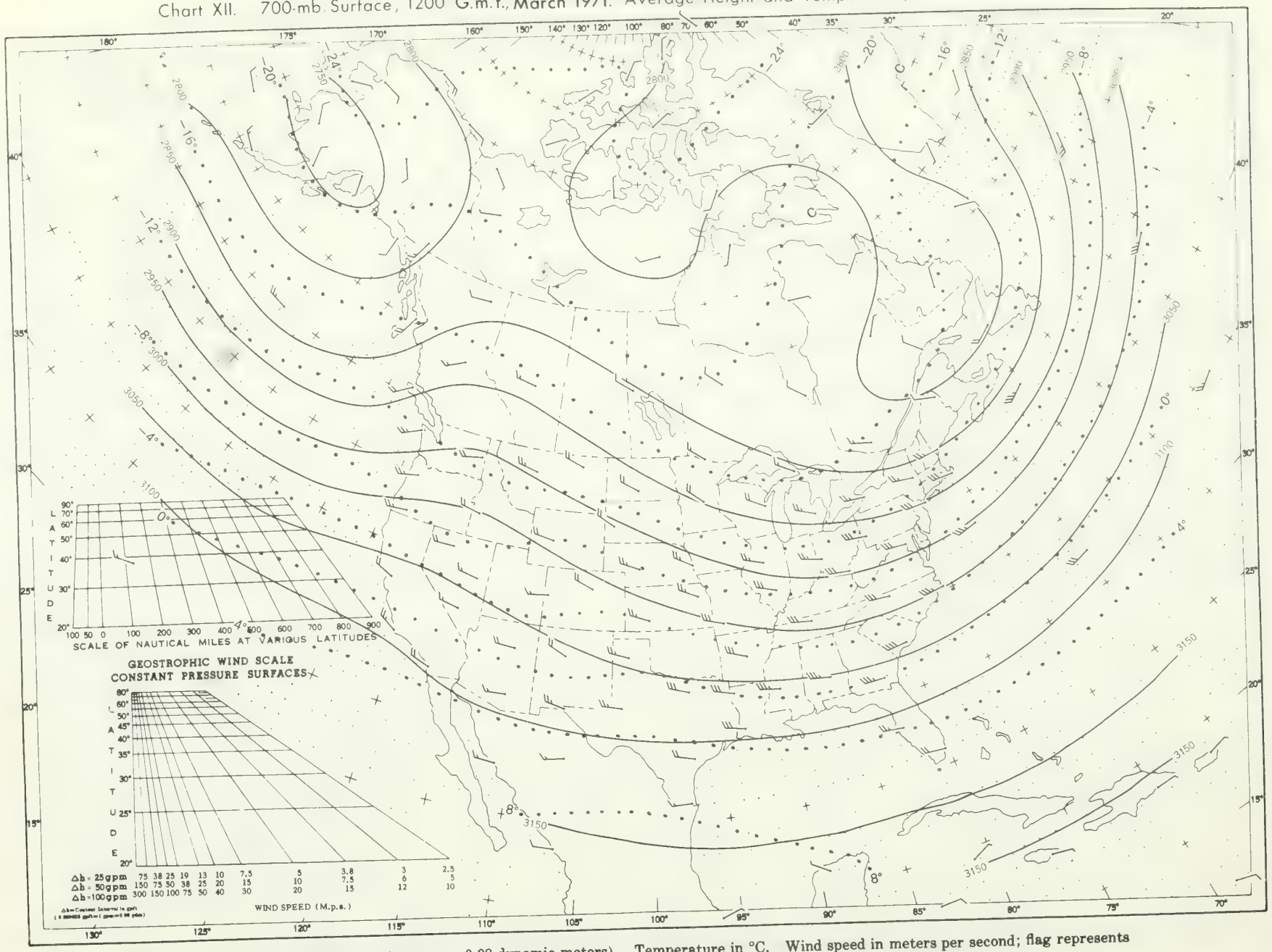
Average sea level pressures are obtained from eight daily 3-hourly observations Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10 intersections in a diamond grid over the oceans.

Chart XI. 850-mb Surface, 1200 G.m.t., March 1971. Average Height and Temperature, and Resultant Winds



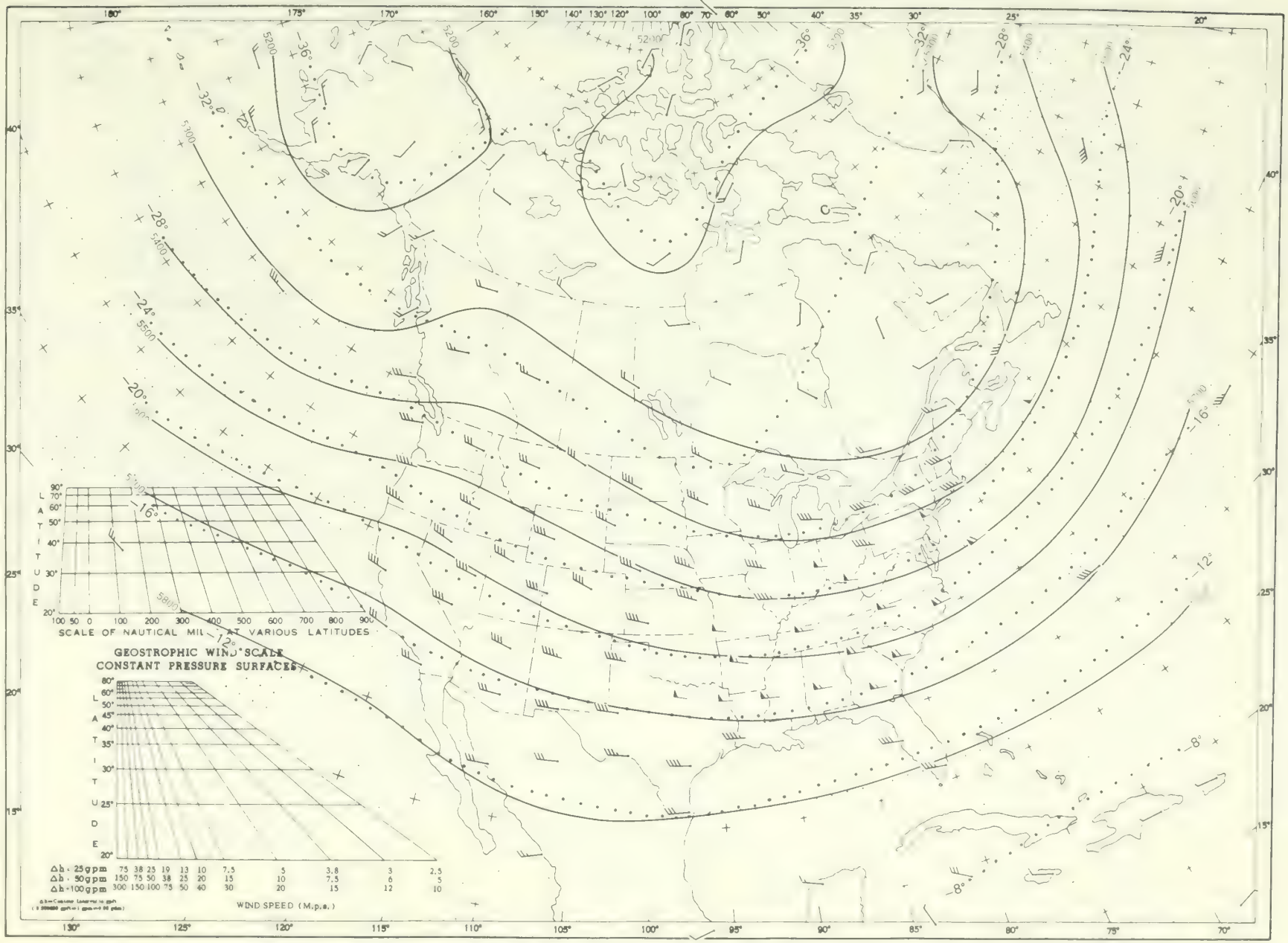
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 G.m.t., March 1971. Average Height and Temperature, and Resultant Winds



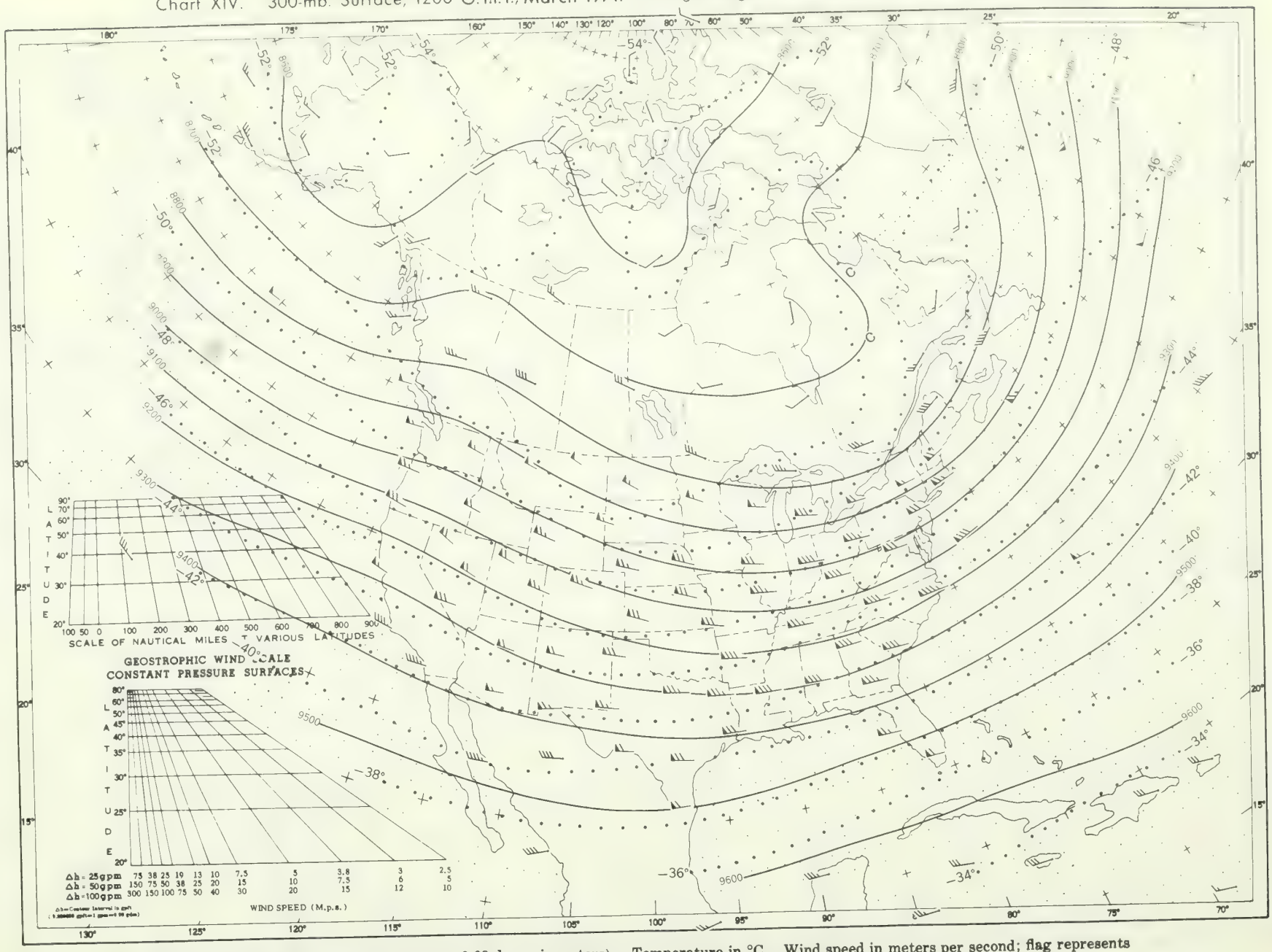
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 G.m.t., March 1971. Average Height and Temperature, and Resultant Winds



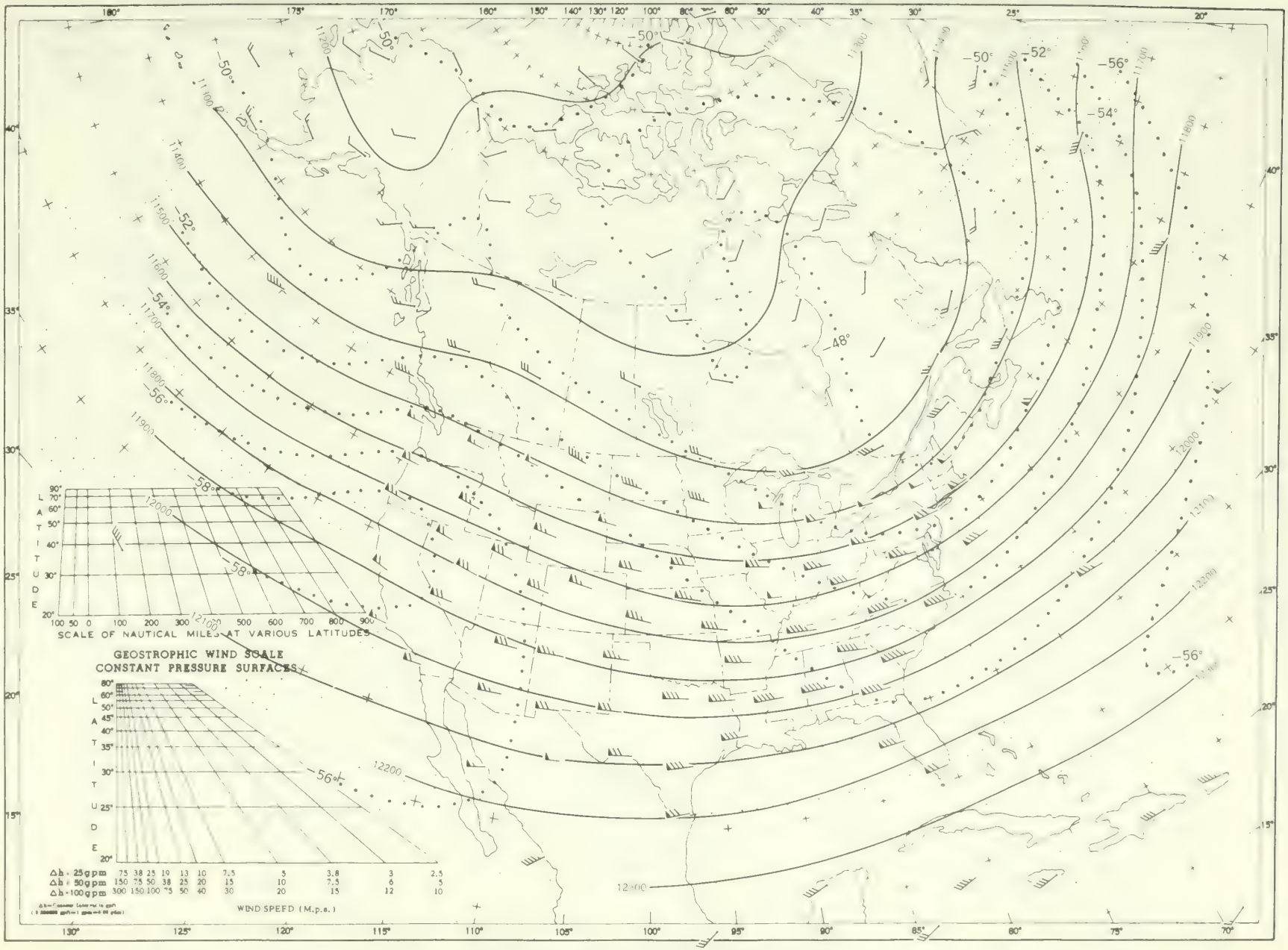
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 G.m.t., March 1971. Average Height and Temperature, and Resultant Winds.



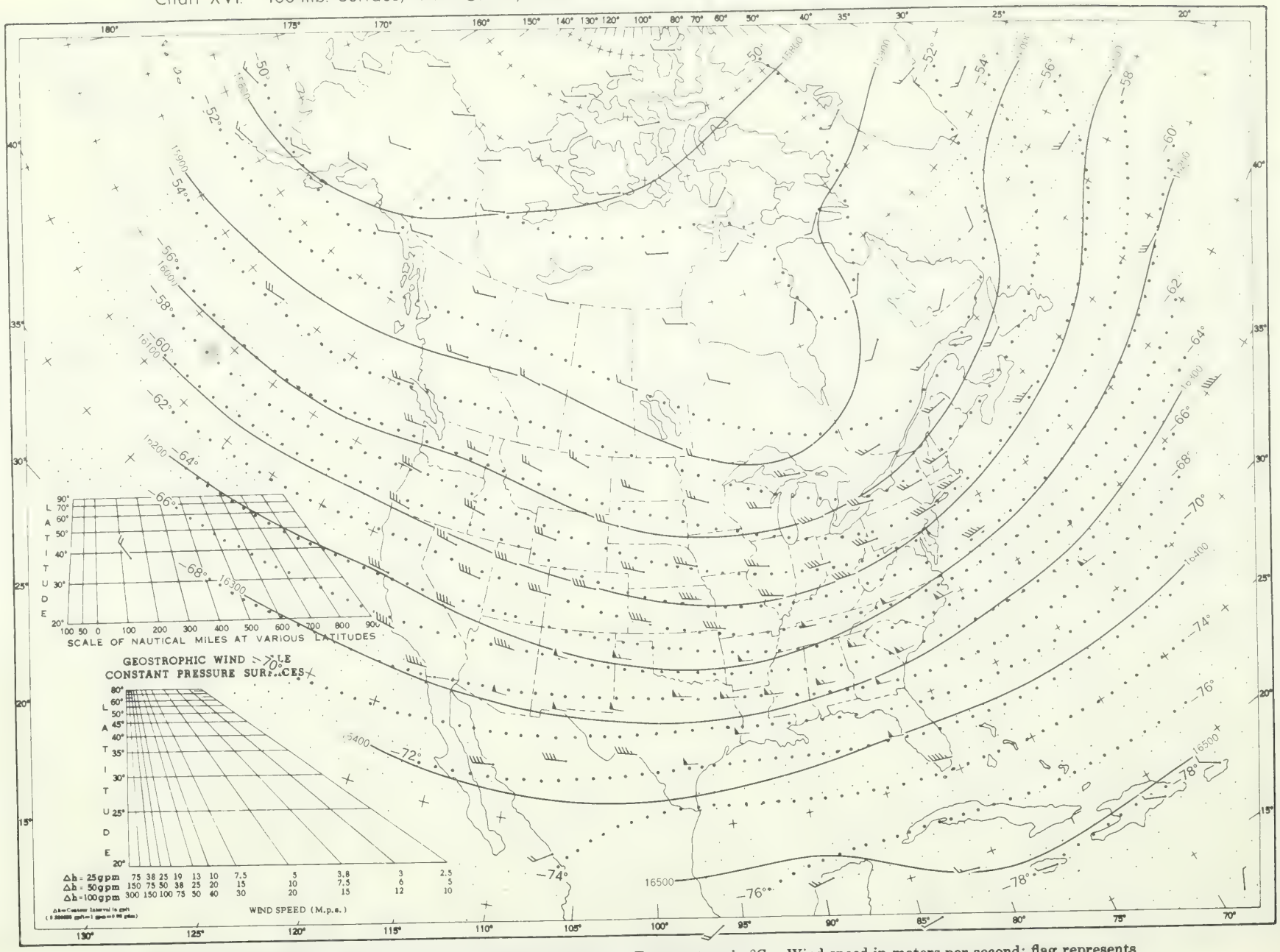
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 G. m.t., March 1971. Average Height and Temperature, and Resultant Winds



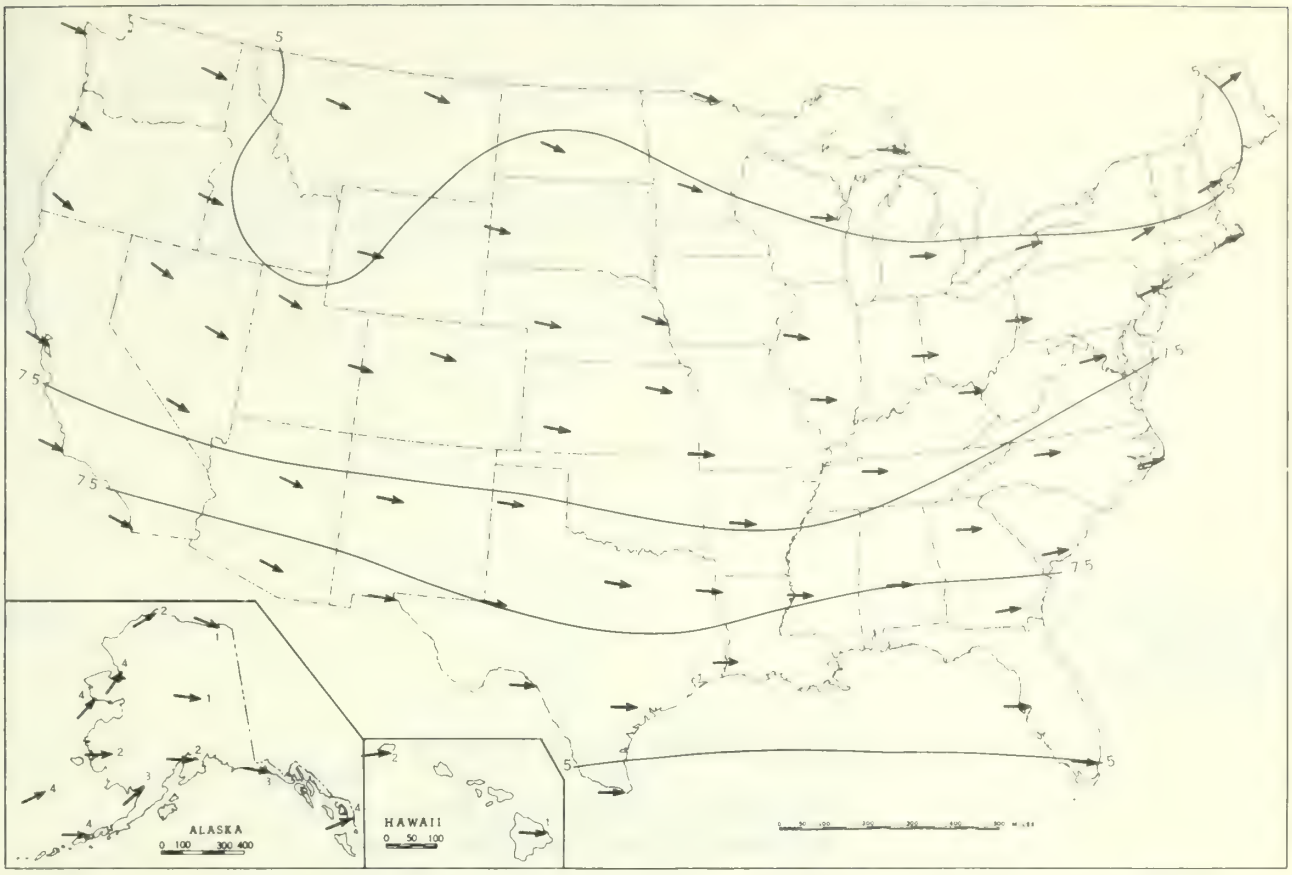
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 G.m.t., March 1971. Average Height and Temperature, and Resultant Winds.

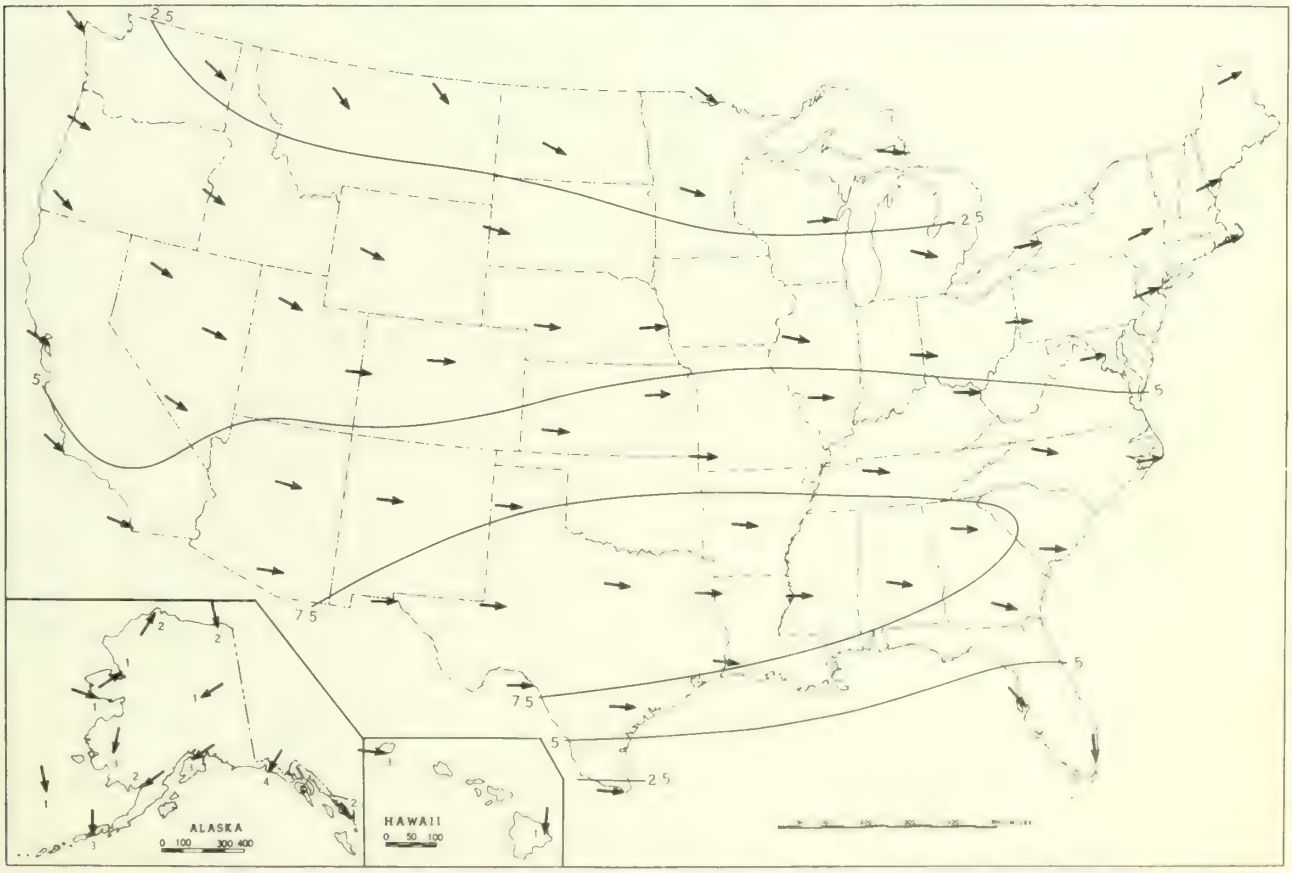


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., March 1971. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., March 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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Climatological Data

NATIONAL SUMMARY

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National Oceanic and Atmospheric Administration
ENVIRONMENTAL DATA SERVICE



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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 4 APRIL 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Mild weather predominated over the Missouri River Basin and the Upper and Middle Mississippi River Basin. The rest of the Nation averaged cooler than normal.
2. Sunny, cloudless skies prevailed over most of the Nation early in the month. Storminess increased becoming severe in some areas in the last 10 days of April.
3. The drought in southern Florida intensified.

TEMPERATURE--April temperatures averaged above normal over the northern and central Great Plains, in a small area in central Texas and along the east coast of the southern half of the Florida peninsula, and below normal over most of the rest of the Nation.

The Far West experienced relatively cool weather throughout the entire month of April. The Great Basin, the Rocky Mountains, and the western edge of the central Great Plains averaged warmer than normal through the first half of April but cooled quickly shortly after midmonth. Ely, Nev., registered 18° and Bryce Canyon, Utah, 15° on the morning of the 19th, and Truckee, Calif., recorded 13° on the 21st. Many stations in the Great Basin averaged several degrees cooler in the fourth week of April than in the two previous weeks. The Northeast also cooled in the last 10 days of April. In contrast, spots in southern Texas and the Florida peninsula recorded record high temperatures in the last 10 days of April. The mercury at Galveston, Tex., reached 86° on the 23d. This is the highest temperature of record for so early in the season at Galveston. Similar temperature records were equaled or exceeded in the Florida peninsula.

PRECIPITATION--Sunny, cloudless skies prevailed over much of the Nation in the first 10 days of April. Most of the southwest quarter of the Nation received no rain and only light scattered sprinkles fell in the Great Plains. Strong winds filled the air with sand and dust in the Great Basin and in the western portions of the Great Plains.

A low pressure system crossed the Florida peninsula and moved northward along the Atlantic coast, bringing 1.00 inch or more of rain to coastal areas from central Florida to southern New England. The drought in southern Florida intensified. Rain fell from the Lower Ohio River Valley to the southern Atlantic Coastal States and heavy snow blanketed portions of Missouri and Illinois before spreading eastward to Tennessee, then northeastward to New England.

About midmonth, a Low off the California coast moved southeastward to northern Mexico. It produced some light to moderate showers in the thirsty area from southern California to western Texas and moderate to heavy showers over central and eastern Texas. The showers brought some relief to areas that had received little rain in several months and caused flash flooding along some of the streams.

The last 10 days of the month were especially stormy in parts of the Nation. A storm centered in the central Rocky Mountains dumped heavy snow in the mountains and heavy rains in the nearby Great Plains. Some streams in Nebraska and Oklahoma overflowed their banks. Large hail and a few tornadoes occurred in spots in the Deep South in the last week of April and another western storm dumped heavy snow in the Rocky Mountains in Wyoming and nearby parts of neighboring States.

Monthly precipitation totals were generally less than 1.00 inch from California to western Oklahoma and extreme western Texas. Southern Florida received from about 0.05 inch to 0.75 inch. Totals exceeded 4.00 inches along the Washington and Oregon coast and from central Mississippi to northern Georgia. Elsewhere, April totals ranged, in general, from 1.00 to 4.00 inches, being greatest east of the Mississippi River and south of the Ohio River.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature: Monthly extremes: Station	Highest	Date	Station	Lowest	Date	Precipitation: Monthly extremes: Station	Greatest	Station	Least
		°F			°F			In.		In.
[illegible]	2 Stations	93	19+	Heflin	24	3	Geneva	7.42	Coden	0.05
[illegible]	Annette WSO	64	25	Happy Valley Camp	-46	1	Thompson Pass	16.49	2 Stations	T
[illegible]	Quartzsite	104	6	Fort Valley	6	1	Hawley Lake	2.05	14 Stations	.00
Arkansas	Brinkley	91	12	Gilbert	20	7	Rohwer 2 NNE	5.05	Carpenter Dam	.61
[illegible]	5 Stations	97	11+	White Mountain 2	-5	18	Casquet Ranger Station	9.14	3 Stations	.00
Colorado	[illegible]	88	9	Fraser	-9	5	Waterdale	6.31	Center 4 SSW	.16
Connecticut	Falls Village	76	13	2 Stations	18	1	Bulls Bridge Dam	3.38	Round Pond	1.72
Delaware	2 Stations	80	21-	Georgetown 5 SW	25	1	Milford 2 WSW	3.37	Wilmington Porter Resvr	1.72
Florida	Pompano Beach	100	30	4 Stations	29	8+	Crescent City	4.59	Tamiami Trl 40 Mi Bend	.00
Georgia	Newington 2 NE	93	18	2 Stations	22	3+	Dallas 2 SSE	7.86	Patterson	1.09
[illegible]	Keawakapu Beach 260.2,Maui	91	17+	Mauna Loa Slope Obs,Hawaii	28	19+	Mount Waialeale 1047,Kauai	90.07	Puako 95.1, Hawaii	.10
Idaho	3 Stations	80	30-	3 Stations	-1	1	Headquarters	4.46	Kuna 2 NNE	.19
Illinois	3 Stations	89	20-	Wheaton 3 SE	15	4	Harrisburg	4.30	Charleston	.22
Indiana	Evansville	89	20	Lagrange Sewage Plant	17	5+	Tell City Power Plant	3.95	Logansport Radio WSAL	.25
Iowa	2 Stations	87	20	Decorah	13	2	Decorah	2.67	Woodward 7 N	.32
[illegible]	3 Stations	93	1	Syracuse 2 W	10	6	Atwood	6.45	Ulysses	.23
Kentucky	Gilbertsville Ky Dam	91	19	Cumberland	18	3	Somerset 2 N	5.19	Covington WSO	1.04
Louisiana	2 Stations	93	28	Ashland 2 S	24	7	Kentwood	4.20	Opelousas	.19
Maine	Bar Harbor	67	21	Clayton Lake 2	-5	9	Rockland	2.94	Harris Station	1.08
Maryland	2 Stations	87	14+	Oakland 1 SE	19	15	Waldorf Police Brks	3.27	Unionville	.67
Massachusetts	Chester 2	77	13	Lanesboro	11	1	Pembroke	4.35	Adams	1.19
[illegible]	Bloomingdale	85	13	3 Stations	-7	5	Gaylord Con Dep	2.82	Three Rivers	.30
Minnesota	2 Stations	83	20+	Crane Lake Ranger Sta	-8	4	Caribou 2 S	2.86	Thief River Falls AP	.10
Mississippi	5 Stations	91	29+	Tupelo 2 WNW	26	8	Winona 5 E	7.29	Standard	.52
Missouri	6 Stations	90	21+	Bunker	16	2	Billings 1 N	3.86	Bowling Green 2 NE	.56
Montana	2 Stations	83	10	Cooke City	-9	4	Mystic Lake	7.78	Conrad 9 ESE MSR	.20
Nebraska	Ellsmere 9 ENE	89	15	Arthur	10	5	Imperial FAA AP	6.76	Weeping Water	.34
Nevada	Sunrise Manor Las Vegas	93	13	Jiggs 3 N	9	1	Austin	3.28	4 Stations	.00
New Hampshire	Nashua 2 NNW	76	13	First Conn Lake	-9	9	Mount Washington	7.57	North Stratford	.80
New Jersey	4 Stations	79	22+	2 Stations	21	15+	Pottersville 2 NNW	4.31	Belleplain St Forest	1.24
[illegible]	Carlsbad FAA AP	95	11	Adobe Ranch	3	2	Grenville	2.87	9 Stations	.00
New York	Elmira	81	14	2 Stations	3	6+	Baker Mills	5.20	Prattsburg 2 NW	.54
North Carolina	Wilmington 7 N	91	14	Celo 2 S	19	11	Clinton 2 NE	5.56	Casar	1.79
North Dakota	Washburn	86	10	2 Stations	-8	3	Breien	4.10	2 Stations	.47
Ohio	Ironton	87	13	Toledo Express WSO	14	4	Chardon	2.29	Philo 3 SW	.14
[illegible]	2 Stations	96	26+	Hooker 1 N	17	6	Billings	8.35	Altus Dam	.13
Oregon	Roseburg KQEN	81	6	Crater Lake NP HQ	8	1	Valsetz	10.72	Pelton Dam	.09
Pennsylvania	Lewisburg St Village	88	14	2 Stations	12	4	Palm 3 SE	3.18	Lewistown	.33
Puerto Rico	3 Stations, P.R.	94	26+	Adjuntas Substation, P.R.	51	15	Jayuya 1 SE, P.R.	19.08	Magueyes Island, P.R.	.47
Rhode Island	North Scituate 4 W	70	13	North Scituate 4 W	22	1	North Scituate 4 W	3.81	Newport	2.14
South Carolina	4 Stations	91	18	Clemson University	24	3	Givhans Ferry State Pk	5.26	Mc Coll	1.61
South Dakota	2 Stations	93	15+	Deerfield 4 NW	-2	5	Pactola Dam	6.96	Flandreau	1.01
Tennessee	10 Stations	90	21+	Mountain City No 2	20	11+	Jefferson City Evap	5.43	Parsons Water Plant	1.34
Texas	Zapata	104	29	Perryton 5 NNE	17	6	Armstrong	6.90	10 Stations	.00
Utah	Saint George	87	14	Soldier Creek	-1	5	Silver Lake Brighton	4.38	3 Stations	.00
Vermont	Dorset 1 S	73	13	Mount Mansfield	1	22	Mount Mansfield	7.63	South Newbury	.83
Virginia	4 Stations	89	14+	Burkes Garden	14	3	Grundy	5.07	Dale Enterprise	.64
Washington	4 Stations	79	27+	2 Stations	12	12	Quinault Ranger Sta	8.28	Kennewick 10 SW	.06
West Virginia	Williamson	89	20+	2 Stations	12	15+	Princeton	4.30	Wellsburg 3 NE	.21
Wisconsin	La Crosse FAA AP	84	20	Port Wing 5 SW	-4	4	Muscoda	3.66	Minocqua Dam	.31
[illegible]	Torrington Exp Farm	83	12+	Lake Yellowstone	-17	1	Double Four Ranch	5.55	Kendall	.25
Alaska Feb. 1971	Eklutna Project	51	8	Arctic Village	-66	27+	Little Port Walter	22.17	Barter Island WSO	.01
Hawaii Feb. 1971	Keawakapu Beach 260.2, Maui	88	20	Mauna Loa Slope Obs,Hawaii	26	25+	Hilo Country Club 86.6, Hawaii	11.09	2 Stations	.00

\+ And also on an earlier date or dates.

Note: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation						Wind				No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
											No. of days							No of days		Snow, Ice pellets				Fastest mile						
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy 8-10		
ALABAMA																														
BIRMINGHAM	620	994.6	1017.1	75	45	60.2	- 2.9	87	20	30	3	0	2	43	59	4.25	- 0.22	1.15	9	6	T	0	1.9	30	26	SW	23+	14	7	9	4.4	77
HUNTSVILLE	624	993.9	1017.1	75	48	61.1	- 0.5	90	20	34	8	1	0	43	56	3.29	- 0.70	1.02	8	5	T	0	1.8	31	32	31	13	16	6	8	4.3	
MOBILE	211	1009.1	1017.2	80	56	67.9	0.3	91	28	38	7	1	0	54	67	0.99	- 5.37	0.77	5	4	0.0	0	2.1	16	28	32	2	11	7	12	5.2	
MONTGOMERY	183	1009.8	1017.0	76	49	62.6	- 1.5	87	28+	34	3	0	0	48	64	3.81	- 1.08	2.48	6	4	0.0	0	2.2	25	34	NW	23	16	4	10	4.4	67
ALASKA												8																		
ANCHORAGE	114	997.6	1002.5	39	27	33.4	- 3.5	48	25	14	2	0	25	24	70	0.63	0.21	0.38	8	0	8.3	7	0.5	24	25	2	3	1	5	24	8.5	48
ANNETTE	110	1007.8	1011.8	48	35	41.6	- 1.8	64	25	29	17	0	4	32	72	9.96	0.84	2.46	22	0	22.2	3	6.8	13	40	12	6	3	4	23	8.4	
BARROW	31	1019.6	1020.1	1	-10	- 4.5	- 4.7	18	27	-24	1	0	30	- 9	80	0.02	- 0.09	0.02	1	0	0.2	10	6.1	5	30	6	13	11	8	11	5.0	
BARTER ISLAND	32	1016.3	1018.2	0	-13	- 6.3	- 7.2	19	27	-38	1	0	30	-12	74	0.06	- 0.11	0.04	2	0	0.6	18	0.3	3	41	26	27	8	13	9	5.4	
BETHEL	125	993.7	1005.6	25	9	17.0	- 8.9	47	26	- 9	5	0	28	13	84	0.14	- 0.44	0.08	6	0	6.2	8	7.6	36	37	6	24	9	7	14	6.0	
BETTLES	644	984.1	1010.3	30	8	19.1		50	25+	-17	9+	0	30	7	59	0.13		0.13	2	0	3.0	29	5.2	2	25	1	28	5	16	9	5.7	
BIG DELTA	1268			46	17	26.4		53	25	-12	2	0	26			0.34		0.20	3	0	6.0	15			32	20	14	3	7	20	7.6	
COLD BAY	96	1000.7	1004.3	45	22	28.0	- 5.3	44	16	13	9	0	30	23	82	0.43	- 1.03	0.22	9	0	6.1	2	7.6	30	42	17	15	0	4	26	9.1	
FAIRBANKS	436	988.5	1005.8	36	18	26.7	- 2.7	55	25	-11	10	0	28	11	50	0.11	- 0.14	0.07	2	0	0.9	36	2.9	36	22	25	26+	4	9	17	7.2	
GULKANA	1572	946.2	1004.7	39	19	29.3		47	26	- 8	2	0	29	19	65	0.09		0.05	4	0	1.5		5.2	18	30	18	12+	4	8	18	7.6	
HOMER	67	998.6	1021.2	39	27	32.9		48	27	14	9	0	26	26	78	1.02	- 0.28	0.32	13	0	10.8	21	0.6	30	29	7	24	2	7	21	8.2	
JUNEAU	12	1009.1	1009.8	46	34	38.6	0.6	55	24	22	10	0	17	32	81	2.44	- 0.43	0.77	15	0	1.1	5	7.4	12	35	13	3	1	2	27	9.2	33
KING SALMON	49	1000.3	1002.2	36	18	26.8	- 6.0	50	28+	- 3	6	0	27	18	68	0.84	0.20	0.44	5	0	8.9	6	1.4	1	40	9	24	1	12	17	7.6	
KOTZEBUE	10	1010.8	1011.2	19	2	9.6	- 3.6	38	17	-18	8	0	30	3	74	0.16	- 0.15	0.05	6	0	4.3	15	2.8	36	36	35	28	12	9	9	5.0	
MC GRATH	344	992.2	1005.0	33	13	22.6	- 5.1	53	26	-18	2	0	30	13	65	0.32	- 0.15	0.15	5	0	5.6	26	3.0	35	21	11	24	4	9	17	7.4	
NOME	13	1008.5	1009.2	31	5	12.9	- 8.3	39	25	-12	4	0	30	5	66	0.03	- 0.77	0.03	2	0	0.8	15	6.6	3	30	5	11+	15	4	11	4.9	73
ST. PAUL ISLAND	22	1006.1	1007.1	27	16	21.5	- 6.9	35	27+	0	8	0	30	19	87	0.83	- 0.13	0.21	15	0	13.6	19	11.3	36	46	34	20+	2	8	20	8.2	
SHEMYA	122	1005.8	1009.4	37	31	34.2	- 1.3	40	27+	26	13+	0	18	25	71	2.16	0.10	0.98	12	0	2.4	1	2.4	30	46	3	15	0	4	26	9.0	
SUMMIT	2401	916.0	1005.0	30	13	21.7		42	17	-10	2	0	30	14	73	0.33		0.11	7	0	9.8	35	7.1	5	33	8	13	3	4	23	8.1	
TALKEETNA	345			41	21	31.1	- 2.7	50	25	3	10	0	30			0.81	0.06	0.27	7	0	12.2	32			22	2	8					
UNALAKLEET	15			22	4	13.2		41	25	-12	6	0	30			0.06		0.03	4	0	0.6	22			45	7	11	13	3	8	4.8	
YAKUTAT	28	1006.1	1007.3	38	27	32.1	- 4.9	42	24	9	20	0	25	30	90	10.90	3.67	1.94	22	0	47.5	37	6.3	12	37	14	13	2	1	27	9.0	
ARIZONA																														
FLAGSTAFF	7006	785.0	1013.4	59	25	41.9	- 1.4	73	13	15	3	0	27	16	41	0.55	- 0.63	0.38	5	0	5.0	3	3.9	20	24	21	25	16	8	6	3.5	
PHOENIX	1117	972.6	1011.2	81	52	66.5	- 0.7	94	13	44	19	6	0	26	24	0.13	- 0.19	0.13	1	0	0.0	0	1.0	22	39Y	WSW	17	21	6	3	2.1	89
TUCSON	2584	925.5	1010.9	78	47	62.8	- 3.1	92	11	39	20+	2	0	22	26	0.56	0.29	0.50	2	0	0.0	0	4.0	20	29	SW	25+	21	7	2	2.1	93
WINSLOW	4895	844.0	1012.6	70	34	52.2	- 3.4	86	11	21	1	0	13			0.52	0.07	0.31	3	0	0.8	T	6.3	21	49	20	25	17	9	4	3.0	
YUMA	194	1000.4	1011.7	82	53	67.4	- 3.2	95	13	46	22	8	0	36	36	0.17	0.08	0.17	2	0	0.0	0	3.1	26	42	W	17	25	4	1	1.4	93
ARKANSAS																														
FORT SMITH	447	999.7	1016.2	74	45	59.7	- 2.0	85	19+	30	7	0	2	43	59	2.88	- 1.36	0.76	11	4	T	0	1.0	10	28	W	20	7	12	11	5.8	66
LITTLE ROCK	257	1007.1	1016.6	73	46	59.4	- 3.0	83	19	28	7	0	3	46	65	1.70	- 3.23	1.01	9	6	T	T	0.7	21	33	NW	1	9	6	15	5.8	76
CALIFORNIA																														
BAKERSFIELD	475	998.3	1015.9	74	50	61.9	- 1.1	95	5	42	22+	2	0	39	47	0.56	- 0.25	0.44	3	0	0.0	0	4.4	35	29	32	6	17	7	6	3.6	
BISHOP	4108	870.6		71	35	52.9	- 2.2	81	16+	24	23	0	9			0.06	- 0.40	0.03	3		0.1	0						14	10	6	4.2	
BLUE CANYON	5281			49	33	40.8	- 4.8	64	4	20	21	0	15			3.64	- 1.18	1.06	11		22.1	25			24	19	16+	9	7	14	6.1	
EUREKA	43			53	43	48.1	- 2.3	60	8	35	21	0	0			2.92	0.25	0.85	11		0.0	0			42	N	24	5	3	22	7.9	52
FRESNO	328	1000.4	1016.2	73	45	59.1	- 2.2	92	5	37	22	1	0	43	60	1.04	- 0.09	0.93	3	0	0.0	0	4.6	31	29	NW	17	19	6	5	3.2	87
LONG BEACH	29	1014.6	1015.8	72	49	60.3	0.3	92	4	42	22	2	0	47	65	0.62	- 0.15	0.57	2	0	0.0	0	3.7	24	29	27	17+	16	8	6	3.9	
LOS ANGELES	97	1011.5	1015.2	67	51	58.8	- 0.6	91	4	45	22+	1	0	48	71	0.68	- 0.37	0.67	2	0	0.0	0	5.6	25	43Y	W	17	17	8	5	3.7	
LOS ANGELES AP	27			71	53	62.0	0.2	93	4	47	22+	2	0			0.50	- 0.67	0.50	1		0.0	0			29	SW	18+	19	9	2	2.7	80
MT SHASTA AP	3544	891.3	1016.0	57	32	44.5	- 3.4	70	5+	22	10	0	17	31	63	1.67	- 1.10	1.11	9		3.7	1	0.8	4								
OAKLAND	6	1018.0	1018.2	61	48	54.5	- 2.6	74	4	41	21	0	0	44	72	0.63	- 0.75	0.26	7	0	0.0	0	8.0	28	25	28	23+	14	11	5	4.2	
RED BLUFF	342	1000.1	1015.9	70	44	57.0	- 3.4	79	14+	33	21	0	0	38	53	0.42	- 1.41	0.21	4	0	0.0	0	1.3	29	46	SE	9	14	7	9	4.7	87
SACRAMENTO	17	1015.6	1015.4	69	43	56.4	- 2.2	81	4	35	21	0	0	41	62	0.44	- 0.96	0.16	8	0	0.0	0	4.5	23	31	W	16	14	11	6	4.1	89
SANDBERG R	4517	861.8		55	36	45.4	- 5.4	71	5	32	21	0	11			0.66	- 0.31	0.26	5		3.7	2			44	35	23	14	10	6	3.9	
SAN DIEGO	13	1014.9	1015.9	68	54	60.7	- 0.9	91	4	50	26+	1	0	47	64	0.93	0.14	0.68	5	0	0.0	0	5.1	27	26	NW	17	13	8	9	4.9	71
SAN FRANCISCO	8	1017.6	1018.4	61	48	54.5	- 2.7	76	4	40	21+	0	0	43	72	0.77	- 0.53	0.33	6	0	0.0	0	10.0	28	30	29	23	12	11	7	4.5	
SAN FRANCISCO AP	52			59	48	53.1	- 2.8	75	4	43	21	0	0			0.72	- 0.72	0.31	6		0.0	0			27	W	17					53
SANTA MARIA	236			63	39	50.8	- 5.0	84	4	31	24+	0	3			1.01	- 0.18	0.80	3		0.0	0						14	11	5	4.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
CALIFORNIA	Ft.	Mb.	Mb	F.	F.	F.	F.	F		F.				F.	%	In.	In.	In			In	In.	M.p.h		M.p.h.							%
STOCKTON	22	1016.3	1017.4	71	44	57.5	- 2.2	82	5+	36	21+	0	0	40	57	0.98	- 0.16	0.45	7	1	0.0	0	6.5	29	31	26	16	14	9	7	3.9	
COLORADO																																
ALAMOSA	7536	769.1		58	22	40.1	- 1.7	73	11	6	2	0	29			0.33	- 0.36	0.14	4		4.1	T						13	10	7	4.3	
COLORADO SPRINGS	6145	808.7	1013.8	58	33	45.3	- 0.3	74	12	18	6	0	12	25	51	1.36	0.05	0.45	13	8	2.8	1	2.7	10	35	17	18	9	7	14	6.0	
DENVER	5283	833.4	1011.5	62	35	47.8	1.4	78	10	21	6+	0	12	28	55	1.98	- 0.13	1.39	10	1	6.0	3	2.5	14	47	SE	18	6	14	10	6.1	76
GRAND JUNCTION	4843	849.0	1011.1	67	37	52.2	- 0.1	80	11	16	1	0	7	22	38	0.42	- 0.33	0.16	5	0	1.1	T	2.9	15	38	SW	25+	11	8	11	5.1	68
PUEBLO	4684	853.0	1012.0	66	34	49.9	- 0.8	80	14+	15	2	0	10	27	48	0.88	- 0.30	0.50	8	1	5.9	2	1.9	9	45	SW	14	9	13	8	5.5	82
CONNECTICUT																																
BRIDGEPORT	7	1012.2	1012.8	56	38	47.0	- 1.0	68	19	30	9	0	4	26	47	2.11	- 1.69	1.06	10	1	1.2	1	6.3	30	40	3	6	7	13	10	5.8	
HARTFORD	169	1005.1	1011.8	57	35	46.3	- 2.2	72	21	24	1	0	11	28	59	2.85	- 0.88	0.95	12	1	4.0	3	5.2	31	33	N	7	7	11	12	6.4	58
DELAWARE																																
WILMINGTON	74	1010.8	1013.9	64	39	51.1	- 1.0	76	21+	31	15	0	3	31	50	2.15	- 1.18	1.81	6	1	0.6	T	5.8	31	33	6	6	6	14	10	5.6	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	290	1003.1	1014.8	67	36	51.4		86	13	25	11	0	9	32	52	2.56		1.75	7	1	0.3	T	4.0	30	30	33	24	11	14	5	5.0	
WASHINGTON NATIONAL	10	1012.2	1014.5	68	42	55.0	- 0.7	81	21+	35	7	0	0	33	47	2.10	- 1.05	1.50	5	1	T	0	4.9	31	34	NW	14+	11	13	6	4.6	74
FLORIDA																																
APALACHICOLA U	13			75	59	66.7	- 0.8	86	24	42	7	0	0			1.23	- 3.07	0.52	6	0	0.0	0			25	NE	3	15	6	9	4.2	85
DAYTONA BEACH	31	1016.3	1017.7	79	57	68.0	- 0.9	91	29+	39	8	2	0	55	67	2.57	- 0.40	2.36	3	2	0.0	0	1.3	22	23	26	30+	14	8	8	4.5	
FORT MYERS	15	1017.3	1017.8	82	59	70.4	- 2.4	87	29+	44	8	0	0	59	70	0.70	- 1.94	0.40	2	1	0.0	0	2.7	23	25	23	24	20	6	4	3.3	
JACKSONVILLE	26	1015.9	1017.0	80	53	66.3	- 2.4	90	24	37	8	1	0	54	70	4.07	0.52	1.98	8	4	0.0	0	2.0	26	35	SW	23	15	8	7	4.1	67
KEY WEST	4	1016.3	1017.1	81	71	75.9	- 0.1	88	28+	59	8	0	0	63	68	0.24	- 2.24	0.24	1	1	0.0	0	4.7	10	26	NW	7+	22	6	2	2.2	88
LAKELAND U	214			80	60	70.0	- 1.5	89	29	44	8+	0	0			1.25	- 2.26	0.58	6		0.0	0						14	11	5	4.2	67
MIAMI	7	1016.9	1017.3	83	67	75.0	0.8	96	30	46	8	5	0	62	65	0.07	- 3.81	0.05	2	0	0.0	0	3.8	13	25	21	24	19	9	2	3.2	
ORLANDO	108	1012.9	1017.2	84	60	72.1	0.9	95	30	44	8	8	0	57	63	1.52	- 1.90	1.10	3	1	0.0	0	2.9	26	27	25	30+	13	11	6	4.5	
PENSACOLA	112	1013.2	1017.4	77	56	66.8	- 1.1	85	28+	37	7	0	0	54	68	0.67	- 4.58	0.25	6	1	0.0	0	1.5	22	25	22	23	13	5	12	5.1	
TALLAHASSEE	55	1014.6	1017.0	79	47	62.9	- 4.6	88	22	29	8	0	1	49	67	1.85	- 2.79	0.73	6	3	0.0	0	1.6	25	23	3	29	12	7	11	5.0	
TAMPA	19	1016.9	1017.4	80	59	69.4	- 2.0	87	30+	40	8	0	0	58	70	1.80	- 1.04	1.36	4	0	0.0	0	3.7	27	25	32	7+	13	10	7	4.4	72
WEST PALM BEACH	15	1016.6	1017.3	83	61	71.8	- 2.1	99	30	45	8+	8	0	56	61	1.27	- 3.07	0.49	4	2	0.0	0	2.4	14	28	23	24	15	11	4	3.9	
GEORGIA																																
ATHENS	802	986.8	1015.7	74	47	60.9	- 0.2	88	20	35	3	0	0	43	55	4.17	- 0.22	2.48	7	2	0.0	0	2.8	27	21	25	6	15	6	9	4.2	
ATLANTA	1010	979.3	1015.9	74	48	60.8	0.6	86	20	32	3	0	1	41	52	4.09	- 0.38	1.62	7	2	T	T	3.9	30	23	NW	14+	14	6	10	4.6	78
AUGUSTA	136	1010.5	1015.8	76	44	60.2	- 3.0	88	20+	31	3	0	3	45	64	2.38	- 1.18	1.65	6	2	0.0	0	2.2	26	24	28	6	15	5	10	4.6	
COLUMBUS	385	1002.4		78	48	63.0	- 0.7	88	19	33	3	0	0	48	62	3.27	- 1.32	1.13	8	3	T	0	2.4	27	18	30	7	14	7	9	4.4	
MACON	354	1003.7	1016.6	79	48	63.8	- 1.8	91	20	31	3	1	1	47	60	3.39	- 0.36	1.37	5	3	0.0	0	2.2	27	24	N	23	11	9	10	4.7	70
ROME	637			75	42	58.8	- 1.0	88	20	29	8	0	4			3.70	- 0.89	1.54	9		T	0										
SAVANNAH	46	1014.6	1016.3	79	51	64.6	- 1.1	91	18	34	4	1	0	47	59	3.53	- 0.17	1.36	9	5	0.0	0	2.7	24	36	NW	23	13	8	9	4.9	78
HAWAII																																
HILO	27	1017.3	1018.3	78	64	70.9	- 0.7	83	25	62	23+	0	0	65	87	27.82	15.90	11.07	28	5	0.0	0	1.7	19	20	E	25	0	5	25	8.8	21
HONOLULU	7	1017.3	1017.7	82	70	75.6	1.4	88	25	65	19	0	0	64	69	2.19	0.88	0.79	8	2	0.0	0	12.4	6	33	NE	6	2	10	18	7.5	61
KAHULUI	48	1014.9	1017.1	83	66	74.3	0.9	87	26	58	14	0	0	65	75	1.13	- 0.31	0.46	12	4	0.0	0	10.8	5	29	NE	6	5	9	16	7.2	61
LIHUE	103	1013.9	1019.0	80	72	75.9	3.4	82	26+	68	24	0	0	67	76	6.36	3.02	1.56	16	3	0.0	0	11.4	6	26	NE	5	2	8	20	8.0	
IDAHO																																
BOISE	2838	913.6	1014.0	61	38	49.2	- 1.2	73	30	28	19+	0	6	29	49	0.40	- 0.76	0.14	6	0	T	0	1.4	32	33	W	20+	5	9	16	6.8	71
LEWISTON	1413			62	38	49.6	- 1.2	76	5	29	12+	0	5			0.74	- 0.40	0.32	10		T	T						4	5	21	7.4	
POCATELLO	4454	860.1	1013.8	55	31	42.6	- 3.9	69	30+	17	13	0	16	25	55	2.33	1.27	0.91	10	1	0.3	T	5.4	22	41	SW	10	6	6	18	7.1	48
ILLINOIS																																
CAIRO U	314			71	49	59.6	0.2	87	20+	33	7	0	0			1.48	- 2.59	0.62	9		1.0	1			35	S	27+	18	6	6	4.0	76
CHICAGO O HARE	658	992.2	1016.7	60	37	48.6	1.4	85	12	24	4+	0	10	32	55	0.97	- 1.97	0.42	10	3	0.8	1	1.4	32	39	24	2	11	10	9	5.2	
CHICAGO MIDWAY	607	993.9	1016.7	60	38	48.7	- 0.3	86	12	23	3	0	8	31	54	0.45	- 2.59	0.16	8	3	0.8	1	1.0	34	33	N	23	12	11	7	4.9	68

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

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State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						No. of days		Snow, Ice pellets				Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
ILLINOIS	Ft	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MOLINE	582	994.9	1016.5	65	37	50.9	0.9	87	12	20	4	0	10	31	51	1.86	- 1.31	1.42	6	5	T	T	1.9	26	47	E	27	14	8	8	4.9	76
PEORIA	652	992.2	1016.5	65	39	51.9	1.1	86	12	25	4+	0	7	29	44	0.71	- 3.26	0.45	4	3	0.0	0	0.4	34	34	W	1	10	9	11	5.5	81
ROCKFORD	724	989.2	1016.3	60	36	48.0	0.2	80	20+	20	3	0	9	33	60	1.79	- 1.26	0.62	9	4	0.4	T	1.4	31	32	27	2	14	5	11	4.9	
SPRINGFIELD	588	993.9	1016.3	68	41	54.4	1.0	87	20	25	3	0	7	31	44	0.73	- 2.86	0.30	6	2	3.8	3	0.9	24	33	NW	1	10	12	8	5.2	70
INDIANA																																
EVANSVILLE	381	1003.1	1017.1	70	42	56.1	- 1.6	88	20	34	7	0	2	40	59	2.81	- 1.17	1.02	5	1	8.6	6	1.4	31	26	SW	2+	12	12	6	4.3	75
FORT WAYNE	791	986.8	1017.2	61	34	47.6	- 1.7	82	12	25	7+	0	14	31	57	1.33	- 1.81	0.46	6	1	0.3	T	3.2	28	35	SW	9	11	9	10	5.2	71
INDIANAPOLIS	792	987.5	1016.8	65	37	51.0	0.2	82	20	26	7	0	7	33	53	1.16	- 2.58	0.44	4	1	T	T	1.3	30	32	W	28	12	9	9	5.1	76
SOUTH BEND	773	988.2	1016.4	58	35	46.2	- 1.3	80	12	24	5+	0	14	31	59	0.50	- 3.08	0.11	7	1	2.6	3	2.9	30	26	35	9	9	11	10	5.3	
IOWA																																
BURLINGTON	692			66	40	52.6	1.8	87	20	24	4+	0	7	32	48	0.67	- 2.77	0.64	3	3	T	0	1.3	27	28	29	2	8	16	6	5.4	
DES MOINES	938	981.7	1016.6	65	40	52.1	3.4	83	20	24	6+	0	8	34	54	1.54	- 0.99	0.82	7	5	0.4	T	1.4	31	40	SW	20	8	10	12	5.9	79
DUBUQUE	1056	977.0		60	36	47.7	0.9	79	20	17	3	0	11			1.37	- 1.71	0.36	9		1.4	1						14	7	9	5.2	
SIOUX CITY	1095	976.0	1016.0	65	39	51.9	3.0	84	15	23	6+	0	9	32	52	1.61	- 0.64	0.94	6	2	0.2	T	0.4	34	41	SE	15	9	10	11	5.6	75
WATERLOO	868	984.4	1016.6	60	33	46.5	- 0.8	82	20	21	6+	0	17	31	68	0.95	- 1.75	0.60	7	1	T	T	1.9	32	33	31	2	13	8	9	5.2	
KANSAS																																
CONCORDIA	1470	961.7	1014.9	66	42	53.9	1.1	81	11	22	6	0	6	38	60	1.18	- 0.94	0.51	10	6	T	0	2.0	14	39	NW	1	13	6	11	4.7	75
DODGE CITY	2582	925.1	1013.8	67	40	53.6	0.0	80	10	21	6	0	5	35	57	1.09	- 0.75	0.87	5	2	T	0	1.8	15	43	N	13	9	9	12	5.5	64
GOODLAND	3654	886.6	1013.4	63	36	49.4	1.3	83	15	17	6	0	7	32	59	1.93	0.34	1.08	7	4	T	T	1.8	14	40	18	14	10	12	8	5.1	
TOPEKA	877	984.1	1015.8	69	44	56.3	1.9	85	11	25	7	0	7	41	59	1.08	- 2.21	0.69	7	5	T	T	0.9	15	37	NW	1	14	3	13	5.2	62
WICHITA	1321	966.8	1014.7	69	45	57.0	0.3	86	12	24	7	0	5	39	55	2.35	0.05	1.77	7	4	0.0	0	3.1	16	47	NW	1	11	8	11	5.2	65
KENTUCKY																																
COVINGTON	869	984.8	1016.5	67	40	53.1	0.9	82	12	30	10+	0	4	36	55	1.04	- 2.18	0.56	4	2	T	0	2.1	30	29	25	9	10	10	10	5.3	
LEXINGTON	966	981.4	1016.9	65	39	52.0	- 2.4	80	13	28	7	0	3	35	56	2.10	- 1.94	0.82	5	3	0.0	0	1.4	26	29	21	1	12	11	7	4.7	
LOUISVILLE	477	998.6	1016.5	68	42	54.7	- 0.1	82	17+	33	7+	0	0	37	53	2.16	- 1.66	0.85	5	3	0.1	T	1.8	31	29	W	9	12	12	6	4.9	73
LOUISIANA																																
ALEXANDRIA	92	1012.5	1016.9	76	51	63.1	- 2.7	87	28+	32	8+	0	3			1.11	- 4.59	0.91	4	2	0.0	0	0.9	18	24	25	23	11	8	11	5.4	
BATON ROUGE	64	1013.9	1016.6	78	54	66.4	- 1.8	88	28+	37	8+	0	0	55	71	0.75	- 4.02	0.26	8	2	0.0	0	1.6	17	23	34	6+	10	8	12	5.4	
LAKE CHARLES	9	1015.2	1016.3	78	55	66.5	- 1.4	90	23	34	7	1	0	56	75	0.93	- 3.44	0.52	5	1	0.0	0	4.1	15	24	31	6	10	5	15	5.9	
NEW ORLEANS	4	1016.5	1017.0	79	55	66.9	- 1.0	88	23	32	8	0	1	56	69	1.53	- 3.02	0.78	3	1	0.0	0	2.0	15	28	35	2	10	11	9	5.0	
SHREVEPORT	254	1006.8	1015.9	77	52	64.3	- 1.0	86	28+	33	3	0	0	51	67	1.06	- 3.51	0.40	6	2	0.0	0	2.1	13	30	32	6	10	8	12	5.3	56
MAINE																																
CARIBOU	624	987.1		44	28	36.1	- 0.3	59	13	16	9	0	25			2.09	- 0.54	0.44	15		12.2	17						4	6	24	7.9	
PORTLAND	43	1008.5	1016.8	49	34	41.6	- 0.9	61	20+	21	9	0	12	32	71	1.86	- 1.87	0.76	11	0	9.2	8	2.7	32	29	N	7	4	8	18	7.2	46
MARYLAND																																
BALTIMORE	148	1009.1	1014.7	66	40	52.7	- 1.5	79	21+	32	15+	0	3	29	43	1.75	- 1.85	1.34	5	1	T	0	5.8	29	38	SW	24	11	11	8	4.8	72
MASSACHUSETTS																																
BLUE HILL OBS R	629			52	34	43.2	- 2.5	69	13	26	1	0	11			3.10	- 0.90	1.31	13		4.8	3			49	ENE	7+					49
BOSTON	15	1010.2	1011.1	54	37	45.1	- 2.8	72	13	30	17+	0	9	32	66	2.92	- 0.85	1.37	14	2	1.9	1	4.2	31	40	NE	7	6	11	13	6.5	60
WORCESTER	986	974.3	1011.7	53	32	42.5	- 2.1	71	13	23	9	0	16	27	59	1.71	- 2.22	0.75	11	0	7.8	7	6.5	30	30	3	7	6	11	13	6.4	
MICHIGAN																																
ALPENA	689	990.2	1015.9	49	28	38.3	- 0.8	69	11	12	4	0	21	26	65	1.71	- 0.92	0.55	12	1	4.2	7	2.7	29	28	SW	2	8	11	11	6.0	54
DETROIT	619			56	36	45.6	- 2.0	79	12	21	5	0	12	29	55			0.33		3			3.3	30	31	24	2					
DETROIT METRO	633	991.2	1015.8	57	33	45.2	- 1.3	81	12	19	4	0	14	30	60	0.92	- 2.13	0.37	7	3	0.6	T	3.7	30	35	NW	7	8	10	12	5.8	60
FLINT	771	987.5	1015.6	54	33	43.3	- 2.0	75	12	19	4	0	14	31	65	1.62	- 1.04	0.85	10	3	0.9	T	3.5	29	28	28	24+	11	6	13	5.9	
GRAND RAPIDS	784	986.8	1016.2	56	32	43.9	- 1.8	77	12	13	4	0	15	30	61	2.27	- 0.67	1.42	11	4	4.1	1	3.3	28	36	SW	2	9	8	13	5.8	61
HOUGHTON LAKE	1149	973.2	1016.0	50	28	38.8	- 1.3	71	20	11	5	0	21	28	68	2.19	- 0.12	1.32	10	1	3.5	2	4.2	30	25	25	7	9	5	16	6.1	
LANSING	841	984.1	1016.1	56	32	44.2	- 1.5	79	12	14	4	0	14	31	62	1.50	- 1.37	0.99	9	3	1.2	1	3.7	29	36	W	24	10	7	13	5.7	65
MARQUETTE J	677			48	31	39.7	0.4	72	11	15	3	0	17			1.41	- 1.29	0.82	10		2.7	24			35	SW	10	8	11	11	5.9	67

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	993.2	1016.5	54	32	42.9	- 2.3	72	19	17	4	0	16	28	59	1.67	- 0.91	1.40	10	2	3.2	2	3.1	28	35	34	9	10	8	12	5.4	
SAULT STE MARIE	721	988.2	1015.3	45	27	35.8	- 2.2	60	19	10	3	0	22	27	71	1.13	- 1.03	0.43	9	0	6.8	19	2.4	31	28	NW	24+	7	6	17	6.8	60
MINNESOTA																																
DULUTH	1428	964.1	1016.6	49	28	38.3	1.3	68	20	2	5	0	20	25	63	1.29	- 1.07	0.70	9	0	6.5	22	1.4	34	40	W	1	6	10	14	6.6	66
INTERNATIONAL FALLS	1179	971.9	1015.9	50	28	39.4	2.0	71	16	- 1	5	0	16	26	61	1.06	- 0.50	0.38	8	0	3.3	11	1.4	31	25	14	16	5	13	12	6.5	
MINNEAPOLIS	834	985.4	1016.3	59	35	47.0	2.7	79	20	17	3+	0	9	29	52	1.11	- 0.74	0.48	11	1	1.9	1	1.9	33	36	NW	1	8	10	12	6.0	70
ROCHESTER	1297	967.8	1016.1	58	34	45.9	1.9	79	16	15	3	0	11	33	65	1.58	- 0.61	0.76	9	1	1.6	1	2.3	27	39	30	1	8	10	12	5.8	
ST CLOUD	1034	978.0	1016.7	56	33	44.4	1.6	77	20	13	2	0	11			1.66	- 0.36	0.71	8		4.4	1						10	5	15	6.1	
MISSISSIPPI																																
JACKSON	310	1005.1	1016.9	76	48	62.2	- 2.7	88	19	30	8	0	3	51	71	6.86	1.95	2.20	7	5	T	0	1.2	18	26	N	23	12	8	10	4.7	69
MERIDIAN	290	1006.1	1017.2	77	47	61.9	- 2.5	87	28+	31	8+	0	3	50	71	4.66	- 0.67	2.82	8	6	0.0	0	0.8	26	28	31	29	12	7	11	4.9	
MISSOURI																																
COLUMBIA REGIONAL	887	984.1	1016.5	69	43	56.4	1.8	86	19	27	3	0	2	36	50	1.38	- 1.92	0.64	9	4	3.3	3	0.5	21	34	W	2	11	8	11	5.2	71
KANSAS CITY	742	988.5	1015.6	72	48	59.7	4.0	90	12	33	5	1	0	38	48	1.29	- 2.27	0.87	9	5	0.0	0	1.2	11	42	NW	27	11	10	9	5.1	79
ST JOSEPH	811			73	47	59.9	6.3	90	12	28	7	1	4			1.85	- 1.30		7				0.2	12	46	35	26	9	11	10	5.2	
ST LOUIS	535	996.3	1016.6	69	43	55.9	1.0	89	12	29	7+	0	5	38	55	1.65	- 2.06	0.79	6	3	6.5	6	0.5	25	34	SW	20	14	7	9	5.1	74
SPRINGFIELD	1268	970.9	1016.3	70	42	55.9	0.3	84	19	25	5	0	6	38	54	3.14	- 0.95	1.60	9	3	7.1	3	2.8	16	30	SW	8+	11	11	8	5.0	73
MONTANA																																
BILLINGS	3567	890.3	1015.5	56	33	44.2	- 1.8	75	14	20	1	0	12	28	62	1.60	0.29	0.61	11	4	2.5	1	3.0	31	49	NW	10	3	6	21	7.8	59
GLASGOW	2284	933.0	1015.8	56	33	44.9	1.5	74	6	19	1	0	12	29	59	0.42	- 0.59	0.36	5	0	T	2	3.4	9	39	31	10	6	10	14	6.4	
GREAT FALLS	3662	886.6	1015.0	57	33	45.0	1.4	76	14	19	1	0	15	24	48	0.66	- 0.32	0.56	5	1	4.7	2	4.6	23	38	SW	2	2	11	17	7.6	64
HAVRE	2584	922.1	1014.9	58	32	45.2	2.1	76	6	19	1	0	16	27	54	0.39	- 0.58	0.25	5	1	0.2	T	0.7	17	38	W	10	2	13	15	7.6	69
HELENA	3828	879.1	1015.8	55	28	41.5	- 1.8	71	6	16	11	0	19	24	54	0.58	- 0.25	0.29	6	1	0.7	T	3.7	28	33	NW	2	1	9	20	8.1	62
KALISPELL	2965	910.3	1015.7	57	30	43.6	- 0.1	72	6	21	13	0	19	28	58	0.44	- 0.60	0.29	6	0	T	T	1.5	19	26	23	10+	4	7	19	7.4	
MILES CITY	2629			58	34	46.4	0.7	77	10	19	1	0	9			1.26	0.20		7	0	T		2.2	1								
MISSOULA	3190	903.5	1016.4	59	31	44.8	0.5	77	6	20	1	0	17	29	63	2.09	1.12	0.79	12	0	3.5	2	2.2	29	39	SW	15	3	9	18	7.3	66
NEBRASKA																																
GRAND ISLAND	1841	949.2	1015.4	65	39	51.7	2.1	85	15	22	6	0	7	33	54	0.95	- 1.33	0.45	7	4	0.2	T	0.5	15	38	35	8	8	11	11	5.7	
LINCOLN U	1150			66	43	54.3	2.5	83	15	26	6	0	6			0.78	- 1.67	0.22	7		0.4	T			36	NW	8	9	11	10	5.6	63
NORFOLK	1544			62	38	50.3	1.9	83	15	22	6+	0	8			1.21	- 0.97	0.66	6		0.3	T						9	8	13	5.9	
NORTH PLATTE	2775	916.7	1015.1	61	35	48.0	0.3	83	15	19	6+	0	13	32	61	3.94	1.93	2.42	11	6	0.8	1	2.2	9	38	NW	8	8	12	10	5.7	63
OMAHA	977	980.4	1015.8	67	41	54.4	2.7	83	19+	23	6	0	7	34	50	0.90	- 1.66	0.34	6	1	0.5	T	0.3	2	37	NW	1	8	10	12	5.8	68
SCOTTSBLUFF	3957	877.8	1013.9	62	35	48.2	1.6	82	7	19	5+	0	11	30	58	1.71	- 0.10	0.50	8	2	3.0	1	1.2	9	30	16	17+	6	7	17	6.7	
VALENTINE	2587			61	35	47.8	2.1	88	15	19	6+	0	11			3.26	1.28	1.91	9		7.7	6			48	SW	15	8	7	15	6.3	54
NEVADA																																
ELKO	5050	841.9	1013.6	56	28	41.8	- 2.5	70	6	16	1	0	25	24	55	0.96	0.14	0.28	9	1	10.1	T	2.9	26	27	3	12	5	9	16	6.9	
ELY	6253	804.9	1011.7	56	26	41.3	- 1.3	69	16+	12	1	0	27	21	53	1.31	0.36	0.49	7	0	13.1	4	3.4	22	35	SW	10	9	7	14	6.1	76
LAS VEGAS	2162	935.3	1011.2	77	49	63.0	- 1.5	89	13	39	2	0	0	19	21	T	- 0.23	T	0	0	0.0	0	5.3	22	44	SW	17	19	9	2	2.5	91
RENO	4404	863.9	1013.9	62	29	45.9	- 2.1	78	5	20	22	0	24	27	51	0.59	0.05	0.40	4	0	3.3	2	3.2	28	40	SW	10	8	11	11	5.7	63
WINNEMUCCA	4301	866.2	1013.9	62	27	44.5	- 1.4	78	5	14	3	0	26	26	53	1.47	0.65	0.62	7	0	8.8	4	2.1	27	34	S	20	7	7	16	6.7	79
NEW HAMPSHIRE																																
CONCORD	342	998.6	1011.5	54	30	42.1	- 1.7	74	13	17	9	0	20	29	62	2.19	- 1.12	0.54	14	1	6.3	14	5.3	32	35	NW	7	5	9	16	6.9	59
MT WASHINGTON OBS	6262			27	13	20.3	- 2.7	42	13	- 2	15	0	30			7.57	1.68	2.80	21	1	55.9	22			99Y	N	7	3	4	23	8.4	26
NEW JERSEY																																
ATLANTIC CITY	64	1011.2	1013.6	59	36	47.6	- 3.4	75	21	25	1	0	8	31	54	1.29	- 2.12	0.57	7	2	T	0	5.6	29	40	3	6	9	14	7	5.1	66
ATLANTIC CITY U	11			56	41	48.7	- 1.2	68	24	34	15+	0	0			1.35	- 2.03	0.88	8						44	NNE	6					
NEWARK	7	1011.9	1012.8	61	41	51.4	0.1	77	21	34	8	0	0	33	53	1.35	- 2.16	1.00	7	2	2.2	2	6.2	30	30	36	7+	8	11	11	5.8	
TRENTON U	56			60	41	50.4	- 1.3	75	13	33	6	0	0			2.59	- 0.62	1.97	6		4.4	3			38	NW	24+	10	11	9	5.2	66

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

APRIL 1971

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days							No. of days		Snow, ice pellets		Resultant speed	Resultant direction	Fastest mile			Clear 0-3	Partly cloudy 4-7	Cloudy 8-10		
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
NEW MEXICO	Ft	Mb	Mb	F.	F.	F	F.	F.		F.				F.	%	In.	In	In			In	In.	M.p.h		M p h							%
ALBUQUERQUE	5311	835.4	1011.4	69	38	53.3	- 2.4	85	11	28	1	0	5	18	32	0.78	0.31	0.35	4	1	T	0	2.4	20	45	E	5	16	7	7	3.7	82
CLAYTON	4969			65	36	50.1	- 0.6	86	12	17	6	0	6			1.16	- 0.03	0.54	7		0.8	1						11	11	8	4.8	
ROSWELL	3612			76	41	58.5	- 0.5	93	11	28	7	2	4			0.26	- 0.47	0.26	1		0.0	0			34	W	15					86
NEW YORK																																
ALBANY	275	1002.4	1013.1	54	30	42.3	- 3.9	77	13	19	1	0	23	28	61	2.00	- 0.77	0.58	12	0	3.9	4	5.4	30	41	W	24	4	9	17	7.2	55
BINGHAMTON	1590	954.6	1014.0	50	32	40.7	- 2.8	76	13	21	6	0	17	26	60	2.32	- 0.92	1.00	11	0	0.8	1	6.3	30	31	NW	18	5	10	15	7.0	49
BUFFALO	705	988.8	1015.0	51	32	41.8	- 1.7	72	12	21	6+	0	14	29	65	1.48	- 1.53	0.66	13	1	2.9	1	6.3	27	31	SW	3	6	11	13	6.5	59
NEW YORK C	132	1009.5	1012.7	60	42	50.8	- 0.6	76	21	33	8	0	0	31	51	2.95	- 0.48	2.19	9	1	0.4	T	4.6	33	35	NE	6					68
NEW YORK KENNEDY	13	1012.2	1013.0	56	40	47.8	- 1.2	71	20	31	1	0	1	32	59	2.90	- 0.58	2.12	9	1	3.2	2	5.9	31	40	31	24+	8	12	10	5.5	
NEW YORK LA GUARDIA	11	1012.2	1013.1	58	42	49.6	- 1.6	73	21	34	8	0	0	31	53	2.08	- 1.49	1.55	11	2	1.0	1	6.4	32	44	NE	6	9	9	12	5.6	
ROCHESTER	547	993.6	1014.1	52	30	41.1	- 4.0	77	12	17	5	0	19	30	69	1.28	- 1.39	0.63	14	1	1.2	1	7.0	28	34	NW	7	6	8	16	6.6	55
SYRACUSE	410	998.6	1013.8	53	33	42.8	- 3.2	74	13+	23	6	0	15	29	62	2.19	- 0.89	0.64	13	0	4.8	3	5.8	29	29	W	23	6	9	15	6.8	57
NORTH CAROLINA																																
ASHEVILLE	2140	939.7	1015.8	71	40	55.2	0.6	85	13	28	3	0	6	38	57	2.06	- 1.96	0.98	7	3	0.2	T	3.5	35	28	35	14	12	10	8	4.2	88
CAPE HATTERAS R	7	1014.9	1015.3	65	45	54.7	- 4.6	77	26	29	1	0	1	45	71	3.73	0.74	2.94	9	0	0.0	0	0.4	23	35	10	6	15	8	7	3.9	75
CHARLOTTE	736	987.8	1015.4	72	44	58.3	- 2.0	87	20	31	3	0	1	39	52	2.79	- 0.70	0.81	6	4	0.0	0	1.8	27	23	N	14	14	8	8	4.4	80
GREENSBORO	877	983.7	1015.4	69	39	54.4	- 3.0	84	13	28	3	0	4	35	53	2.74	- 0.69	1.01	8	3	T	T	2.6	27	31	NW	14	15	8	7	4.3	79
RALEIGH	434	999.7	1015.5	72	41	56.4	- 2.9	88	13	31	15	0	3	37	53	2.59	- 0.93	1.16	8	3	0.0	0	2.9	28	29	31	21	16	6	8	4.1	77
WILMINGTON	28	1014.2	1015.5	73	48	60.4	- 2.1	89	21	36	8	0	0	45	62	3.46	0.60	1.79	7	4	0.0	0	2.6	26	32	W	21	14	7	9	4.5	78
NORTH DAKOTA																																
BISMARCK	1647	955.3	1015.9	56	32	43.8	0.3	82	15+	19	2	0	17	28	59	1.06	- 0.16	0.46	7	3	1.8	1	2.5	1	45	NW	10	6	9	15	6.8	67
FARGO	896	982.7	1016.0	56	33	44.5	2.5	80	20	15	4+	0	14	33	65	1.10	- 0.62	0.75	9	0	1.0	1	2.0	1	43	NW	1	6	9	15	6.4	71
WILLISTON	1899	946.8	1016.2	55	31	43.1	0.8	83	10	15	2	0	17	29	64	0.91	- 0.03	0.43	10	1	1.9	1	2.8	35	40	NW	10	5	8	17	6.9	48
OHIO																																
AKRON	1208	970.9	1015.9	58	34	46.3	- 2.4	80	12	22	4	0	12	28	52	0.91	- 2.43	0.46	8	0	T	T	4.1	29	27	32	9+	8	6	16	6.3	
CINCINNATI AUBE 08	761			65	40	52.4	- 1.8	81	12	30	7	0	4			1.57	- 2.06	0.70	4		0.0	0			24	NW	28					67
CLEVELAND	777	987.1	1016.7	54	33	43.2	- 3.8	78	12	19	4	0	16	28	56	1.24	- 2.17	0.64	10	2	0.7	T	3.1	28	34	SW	9	7	10	13	6.3	61
COLUMBUS	812	986.1	1016.5	62	36	49.0	- 1.8	81	12	25	7+	0	11	32	54	0.67	- 2.82	0.30	6	1	T	0	3.1	29	35	SW	1	10	10	10	5.7	62
DAYTON	1002	980.0	1016.5	64	39	51.4	0.7	83	12	29	7	0	6	32	51	1.00	- 2.32	0.49	4	1	T	0	2.6	28	33	N	13	12	8	10	5.1	73
MANSFIELD	1295			58	34	46.0	- 0.9	78	12	20	4	0	14	29	56	0.75	- 2.56	0.34	8	3	T	T	4.4	27	30	21	9	9	6	15	5.9	
TOLEDO	669	990.5	1016.0	60	33	46.1	- 0.8	83	12	14	4	0	14	30	57	1.08	- 1.69	0.56	5	2	T	T	3.7	29	42	NW	24	6	12	12	5.8	73
YOUNGSTOWN	1178	972.9	1016.1	55	32	43.4	- 3.6	79	12	22	7+	0	16	28	59	1.57	- 2.13	0.55	11	1	0.4	T	4.1	30	28	28	28	9	8	13	6.4	
OKLAHOMA																																
OKLAHOMA CITY	1285	968.5	1014.7	73	48	60.4	0.5	86	12	29	6	0	4	41	53	0.62	- 2.50	0.32	7	5	0.0	0	4.5	15	38	N	13+	11	10	9	4.7	67
TULSA	650	990.9	1015.2	73	48	60.2	1.3	89	12	29	7	0	2	42	56	1.37	- 2.65	0.51	8	5	0.0	0	4.1	17	36	S	8	12	10	8	5.3	65
OREGON																																
ASTORIA	8	1016.6	1017.4	55	38	46.5	- 2.5	66	26	32	12+	0	2	39	77	4.09	- 1.09	1.49	15	2	0.2	0	3.4	24	23	10	12+	3	4	24	8.0	
BURNS	4151	871.0	1014.9	57	29	42.7	- 3.3	70	30+	21	10+	0	23	26	55	0.33	- 0.42	0.11	9		1.6	1	4.1	29				7	9	14	6.9	
EUGENE	359	1004.4	1017.9	59	38	48.3	- 2.5	73	5	32	1	0	1	39	75	4.49	2.11	2.25	11	0	T	0	3.2	22	33	17	8	4	4	22	7.6	
MEACHAM	4305	875.4	1016.8	47	29	37.9	- 2.9	63	6	23	12+	0	25			2.42	- 3.48	0.72	12		18.9	9			21	W	15	5	5	20	7.4	
MEDFORD	1298	969.5	1017.4	61	36	48.4	- 2.2	78	5	30	23+	0	8	37	69	1.34	0.28	0.41	8	0	T	T	2.1	32	23	34	24+	5	7	18	7.2	
PENDLETON	1482	962.4	1016.6	62	37	49.4	- 2.6	80	5	26	1	0	5	33	59	1.15	0.06	0.33	10	0	T	0	3.9	27	43	31	9	2	11	17	7.1	
PORTLAND	21	1016.3	1017.5	60	39	49.6	- 2.2	76	26+	30	1	0	2	38	67	2.72	0.63	1.33	13	1	T	T	1.3	19	31	S	10	4	3	23	7.8	54
SALEM	196	1015.2	1017.5	59	35	47.1	- 4.0	75	5	27	1	0	8	36	69	4.05	1.72	2.22	13	1	T	T	3.2	22	23	19	10	4	4	22	7.9	
SEXTON SUMMIT R	3830	885.2	1017.2	48	32	39.8	- 4.9	66	5+	23	21+	0	19			3.75	1.90	1.02	14		31.0	9			50	20	9	6	5	19	7.3	
PACIFIC AREA																																
GUAM TAGUAC R	361	995.6	1008.3	86	73	79.7	- 0.2	89	24	70	25+	0	0	75	87	5.74	2.71	1.35	26	0	0.0	0	7.2	9	24	E	9	0	14	16	7.7	44
JOHNSTON	7	1014.2	1014.7	80	74	77.2	- 0.8	82	30+	71	22+	0	0	70	78	1.33	- 0.95	0.37	11	1	0.0	0	17.6	8	28	NE	15+	4	10	16	6.4	59
KOROR R	74	1005.4	1007.1	89	77	82.9	1.6	94	21	74	24+	11	0	76	84	8.32	- 2.07	2.65	18	5	0.0	0	11.7	30	36	E	14	0	4	26	7.1	74
KWAJALEIN	8	1008.1	1009.1	85	76	80.4	- 0.4	87	10+	73	15	0	0	75	84	20.29	15.27	5.41	28	1	0.0	0	12.3	9	32	10	8	0	1	29	7.7	
MAJURO	10	1009.5	1009.8	84	75	79.5	- 1.1	87	5	73	18+	0	0	74	84	31.10	18.79	5.20	28	0	0.0	0	11.1	9	26	E	27+	0	3	27	7.4	36

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CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
PACIFIC AREA	Ft.	Mb.	Mb	F	F.	F.	F	F		F.				F	%	In.	In	In.			In.	In.	M.p.h.		M.p.h.							%
PAGO PAGO	12	1010.8	1010.9	86	73	79.3		88	28+	69	4	0	0	74	84	11.70		4.28	24	5	0.0	0	3.2	7	23	NE	16+	3	17	10	6.5	55
PONAPE R	123	1002.4	1007.9	87	72	79.7	- 0.8	90	18+	69	21+	3	0	74	87	17.37	- 2.67	4.30	27	3	0.0	0	3.1	12	17	NE	24	0	6	24	9.0	60
TRUK MOEN ISLAND	5	1007.1	1007.4	87	77	81.6	0.8	89	24+	74	30	2	0	76	83	10.20	- 2.12	1.97	25	0	0.0	0	5.3	8	40	NE	30	3	1	29	9.7	72
WAKE	11	1012.9	1013.2	84	74	79.4	1.0	87	7+	69	11	0	0	70	76	3.01	1.14	0.57	15	0	0.0	0	14.1	9	31	S	17	7	17	6	5.7	71
YAP R	44			87	75	81.1	- 0.7	89	19	72	27+	0	0			12.25	5.87	3.16	19	2	0.0	0			26	W	9	0	8	22	8.4	87
PENNSYLVANIA																																
ALLENTOWN	387	999.7	1013.7	60	35	47.7	- 1.6	78	13	27	9+	0	11	30	54	1.65	- 2.11	0.95	7	0	0.5	T	6.6	30	37	30	24	11	8	11	5.6	
ERIE	731	988.8	1016.1	49	32	40.6	- 4.9	72	12	18	7	0	16	26	59	1.81	- 1.75	0.65	13	1	2.8	T	5.2	26	24	26	24+	7	8	15	6.4	
HARRISBURG	338	1001.4	1014.3	63	38	50.4	- 1.4	82	13	28	3	0	6	29	48	1.04	- 1.98	0.43	5	1	T	0	6.4	30	38	W	24	9	9	12	5.9	61
PHILADELPHIA	5	1012.5	1013.6	62	41	51.6	- 0.4	76	13	32	1	0	1	30	48	1.84	- 1.56	1.44	7	1	4.3	1	5.8	31	38	NE	6	7	16	7	5.5	67
PITTSBURGH	1137	971.2	1015.7	58	34	46.0	- 3.0	79	13+	24	27+	0	10	27	51	0.48	- 2.60	0.17	8	0	0.2	T	6.2	30	35	23	1	7	9	14	6.3	55
SCRANTON	930	979.7	1014.4	56	34	45.0	- 3.4	79	13	27	15+	0	15	28	57	1.29	- 1.98	0.42	12	1	1.6	1	4.6	29	34	NW	24	7	9	14	6.4	56
WILLIAMSPORT	524	995.3	1014.5	60	37	48.4	- 1.0	81	13	29	9+	0	9	29	54	1.17	- 2.38	0.69	12	2	T	T	5.5	30	26	29	24+	8	9	13	6.0	
RHODE ISLAND																																
BLOCK ISLAND	110			50	36	42.9	- 1.7	56	23	29	18+	0	4			3.33	- 0.28	1.60	9		0.0	0										
PROVIDENCE	51	1009.5	1011.7	56	36	45.9	- 1.3	68	10	29	1	0	7	31	59	2.31	- 1.44	1.03	12	0	1.9	1	4.5	32	35	5	7	6	12	12	6.2	52
SOUTH CAROLINA																																
CHARLESTON	40	1014.6	1016.5	76	50	62.7	- 2.1	90	18	33	4	1	0	48	64	4.11	1.23	1.95	10	5	0.0	0	2.6	24	71Y	NW	23	12	9	9	4.8	73
CHARLESTON U	9			73	56	64.4	- 1.2	87	21+	41	7	0	0			3.61	1.07	1.24	11		0.0	0			29	N	5					
COLUMBIA	213	1007.8	1015.9	77	46	61.3	- 2.3	90	20+	31	8	2	3	46	63	4.31	0.30	2.27	7	4	0.0	0	2.7	27	25	28	21	15	6	9	4.6	77
GRNVLLE-SPRTNBRG	957	980.7	1015.3	74	45	59.2	- 1.7	87	18	28	3	0	1	38	48	3.09	- 0.85	1.10	8	4	0.0	0	2.0	26	26	NW	20+	15	7	8	4.1	75
SOUTH DAKOTA																																
ABERDEEN	1296	968.2	1015.5	63	33	47.9	3.1	85	15+	14	3	0	14	30	55	1.86	- 0.18	1.44	7	2	3.5	1	1.4	2	39	33	1	10	9	11	5.8	
HURON	1281	968.5	1015.6	59	32	45.4	0.4	80	15+	12	5	0	17	32	64	2.22	0.38	1.06	5	1	T	T	0.5	18	44	S	10	10	8	12	5.9	74
RAPID CITY	3162	903.5	1015.1	59	33	46.0	1.5	83	10	19	2	0	15	28	58	2.86	1.19	1.27	11	2	5.3	3	2.7	34	52	NW	10	6	9	15	6.7	55
SIOUX FALLS	1418	964.1	1016.0	62	34	47.8	1.9	82	15	18	4+	0	15	32	58	1.59	- 0.72	0.79	7	3	0.3	T	1.5	29	39	33	1	12	9	9	5.2	
TENNESSEE																																
BRISTOL	1507	961.7	1016.0	70	40	55.1	- 1.5	84	20	27	3	0	5	35	52	3.38	0.22	1.34	8	4	T	T	2.7	28	22	25	9	14	8	8	4.5	
CHATTANOOGA	665	991.2	1015.9	74	44	58.9	- 2.0	89	20	30	8+	0	2	41	57	2.26	- 2.03	1.03	7	2	1.0	T	1.4	29	25	SW	1	18	3	9	4.0	74
KNOXVILLE	980	981.0	1016.1	71	46	58.5	- 0.4	85	19	34	7+	0	0	38	51	3.87	0.17	1.50	9	5	7.0	2	2.4	26	30	W	21	12	8	10	4.7	77
MEMPHIS	258	1006.8	1016.9	73	48	60.5	- 0.9	86	19	32	7+	0	2	44	55	2.89	- 1.74	1.38	9	6	T	T	1.8	22	46	W	23	11	7	12	5.2	77
NASHVILLE	590	994.6	1016.3	72	44	57.9	- 1.7	87	20	31	11+	0	3	43	61	3.34	- 0.40	1.13	6	4	1.1	T	2.1	28	35	SW	27	13	9	8	4.8	73
OAK RIDGE R	905			72	43	57.6	- 0.2	85	19	32	8	0	1			4.73	0.53	1.72	9		0.3	T			37Y		13	13	5	12	4.6	
TEXAS																																
ABILENE	1762	952.6	1013.6	77	52	64.5	0.2	96	26	30	7	2	1	40	49	2.44	0.17	1.73	4	4	0.0	0	4.7	18	39	S	3	15	6	9	4.3	73
AMARILLO	3604	889.3	1011.9	71	41	55.7	- 1.8	93	12	24	6	2	4	29	43	0.77	- 0.55	0.46	2	2	T	0	6.4	19	47	NE	13	16	7	7	4.1	84
AUSTIN	597	992.6	1014.5	80	57	68.2	0.5	95	27	37	7	1	0	51	61	1.07	- 2.48	1.02	3	2	0.0	0	3.6	15	27	N	5	11	5	14	5.5	58
BROWNSVILLE	19	1012.9	1013.5	83	66	74.3	0.4	96	29	46	7	5	0	62	70	1.82	0.27	1.59	4	1	0.0	0	9.0	13	33	SE	15	6	12	12	6.1	63
CORPUS CHRISTI	41	1012.9	1014.1	81	61	70.9	- 0.8	95	23	39	7	2	0	61	76	2.29	0.15	1.33	4	2	0.0	0	8.9	12	34	SE	16	8	8	14	6.2	61
DALLAS	481	997.6	1014.8	77	55	66.2	1.2	89	12	38	7+	0	0	47	54	2.79	- 1.21	1.11	7	5	0.0	0	5.1	15	30	NW	1	10	7	13	5.1	65
DEL RIO	1026	977.0	1012.6	83	57	70.2	- 1.4	97	28	38	7	8	0	46	47	2.16	0.80	2.01	3	4	0.0	0	7.2	11	30	14	18	8	9	13	5.7	
EL PASO	3918	880.1	1010.8	77	48	62.6	- 0.8	89	11+	36	7	0	0	22	24	0.42	0.13	0.34	3	1	T	T	3.5	27	39	W	21	19	7	4	2.8	95
FORT WORTH	537	995.3	1015.5	75	53	64.0	- 0.8	87	12	31	7	0	1	48	62	2.76	- 0.84	1.42	6	6	0.0	0	4.6	16	29	18	8	10	6	14	5.6	
GALVESTON U	7			72	64	68.1	- 0.4	86	23	50	7	0	0			1.77	- 0.82	1.76	3		0.0	0			29	N	6					44
HOUSTON INTERCON	96	1012.2	1016.0	79	55	66.6	- 0.9	86	26	32	7	0	1	55	70	2.14	- 1.20	2.08	3	1	0.0	0	3.9	13	29	30	16	8	7	15	6.1	57
LUBBOCK	3254	901.8	1012.2	74	45	59.7	0.2	90	11	29	6+	1	4	34	45	1.36	0.21	0.88	3	2	0.0	0	2.4	19	39	24	22	19	5	6	3.9	
MIDLAND	2851	914.7	1012.1	77	49	62.8	- 2.1	89	28+	30	5	0	2	32	38	0.81	- 0.02	0.80	3	2	0.0	0	3.9	16	36	5	5	17	5	8	3.7	
PORT ARTHUR	16	1015.6		79	59	69.0	0.8	89	23	37	7	0	0	59	74	1.76	- 2.18	1.17	5	2	0.0	0	4.7	14	30	SE	17	10	6	14	5.6	62
SAN ANGELO	1903	946.8	1012.8	81	53	66.7	- 0.4	96	26	29	7	5	1	40	45	3.89	1.88	3.32	5	4	0.0	0	4.6	17	29	2	1	14	6	10	4.5	
SAN ANTONIO	788	986.5	1014.2	83	56	69.4	1.2	95	27	35	7+	3	0	50	56	1.39	- 1.43	1.28	3	2	0.0	0	4.2	12	28	NE	1	10	6	14	6.0	62
VICTORIA	104	1010.8	1014.8	80	58	69.1	- 0.9	89	23	36	7	0	0	56	69	1.75	- 0.87	1.20	4	3	0.0	0	5.9	13	35Y	N	20+	8	7	15	6.3	
WACO	501	997.0	1014.9	79	57	67.8	1.2	94	27	35	7	1	0	50	57	2.79	- 1.09	1.86	5	5	0.0	0	5.0	15	28	35	1	12	4	14	5.1	

See footnotes at end of table

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In			In.	In.	M.p.h.		M.p.h.							%
TEXAS																																
WICHITA FALLS	994	977.7	1014.1	78	48	63.0	- 1.0	93	26	28	6	4	4	43	54	0.74	- 1.79	0.57	4	5	0.0	0	5.2	13	37	36	1	13	9	8	4.6	
UTAH																																
MILFORD	5028	843.2		62	31	46.7	- 1.0	76	13	14	2	0	19			0.91	0.19	0.30	7		7.2	1						13	8	9	4.7	
SALT LAKE CITY	4220	868.9	1013.0	62	35	48.2	- 1.7	76	10	22	1	0	9	30	53	2.16	0.40	0.57	12	2	1.7	1	1.5	19	34	S	17	7	7	16	6.6	64
WENDOVER	4237	867.9	1013.3	58	38	47.9	- 3.7	74	10	26	1	0	2			1.98	1.47	0.73	10		T	T						8	5	17	6.5	
VERMONT																																
BURLINGTON	332	1000.3	1013.0	46	28	37.3	- 3.9	60	13	12	1	0	20	28	72	2.65	0.02	0.83	14	0	12.6	9	2.4	32	27	N	15	5	3	22	7.6	54
VIRGINIA																																
LYNCHBURG	916			70	40	54.8	- 1.4	87	13	30	3	0	1			2.29	- 0.85	1.67	6		4.8	3			29	SW	9	15	11	4	3.9	80
NORFOLK	24	1013.5	1014.6	67	45	55.9	- 2.1	87	13	35	1	0	0	39	56	2.18	- 0.98	1.08	7	0	T	0	1.4	29	44	NE	6	16	8	6	3.8	82
RICHMOND	164	1008.5	1014.8	71	39	55.0	- 3.1	88	13	33	16+	0	0	34	51	1.76	- 1.39	1.23	5	0	0.6	T	2.5	30	33	NW	14	15	9	6	4.2	78
ROANOKE	1149	972.6	1014.6	71	40	55.5	- 0.9	85	20+	30	15+	0	2	30	42	2.55	- 0.55	1.83	6	1	7.3	3	4.9	30	32	31	24	17	8	5	3.7	
WALLOPS ISLAND	9			60	43	51.6		70	25	34	15+	0	0			2.69		2.13	6		0.0	0			62Y	NNE	6					
WEST INDIES																																
SAN JUAN P.R.	13	1013.5	1015.9	85	74	79.7	3.1	92	24+	71	11	3	0	67	68	2.93	- 0.79	0.89	15	2	0.0	0	6.0	9	29	NE	4+	9	13	8	5.5	61
WASHINGTON																																
OLYMPIA	195	1009.8	1017.0	58	34	46.0	- 4.0	78	26	26	24	0	10	38	76	2.78	- 0.18	0.75	12	0	0.1	T	3.9	21	26	20	7	3	5	22	8.1	
QUILLAYUTE	179	1009.1	1016.6	55	36	45.5	- 1.7	75	25	28	21+	0	5	38	78	6.21	- 1.18	1.39	20	1	0.6	T	2.0	19	22	SW	10+	2	6	22	8.2	40
SEATTLE-TACOMA	400	1000.3	1016.9	57	41	48.9	- 0.3	76	26	33	1	0	0	36	67	2.39	- 0.01	0.99	13	0	T	0	3.7	20	27	SW	14	3	7	20	7.8	54
SPOKANE	2356	930.6	1015.0	56	35	45.3	- 2.0	70	5	27	16+	0	10	30	57	1.85	0.94	0.85	9	0	T	0	3.6	22	41	SW	9	4	10	16	7.0	48
STAMPEDE PASS R	3958	877.4		39	29	33.9	- 2.6	57	26	23	12+	0	24			2.43	- 3.17	0.55	17		21.0	171						4	2	24	8.4	
WALLA WALLA U	949			61	41	51.0	- 2.8	77	5	33	1	0	0			1.35	- 0.05	0.40	10		T	T			32	NW	9	5	9	16	7.2	54
YAKIMA	1052	977.3	1016.0	62	33	47.8	- 2.7	74	25	23	12	0	16	28	49	0.47	0.00	0.20	4	0	0.0	0	3.8	28	29	24	10	6	11	13	6.8	
WEST VIRGINIA																																
BECKLEY	2504	927.2	1016.0	62	37	49.4	- 1.4	78	13	27	15+	0	9	28	50	2.97	- 0.98	1.50	10	2	8.2	8	5.2	29	26	26	28+	11	11	8	5.0	
CHARLESTON	939	981.7	1016.0	66	38	51.9	- 3.4	84	13	27	15+	0	5	30	47	1.19	- 2.49	0.42	9	2	T	T	3.3	29	31	24	1	11	11	8	4.9	
ELKINS	1948			63	28	45.4	- 4.8	83	13	17	15	0	21			1.02	- 2.46	0.34	10		4.8	3						9	9	12	5.8	
HUNTINGTON	827	985.8	1015.9	68	41	54.0	- 1.7	85	13	30	15+	0	3	34	50	1.20	- 2.47	0.52	6	3	0.0	0	2.5	28	30	29	13	12	8	10	5.2	
PARKERSBURG U	615			65	38	51.4	- 2.7	83	13	29	7	0	4			1.22	- 2.03	0.47	7		T	0			36	SW	1					65
WISCONSIN																																
GREEN BAY	682	990.2	1016.0	55	32	43.7	0.5	75	20	15	3	0	14	31	63	1.05	- 1.41	0.71	5	1	0.2	T	1.8	29	33	SW	11	10	10	10	5.4	62
LA CROSSE	651	991.5	1016.5	60	34	47.1	0.1	84	20	18	6+	0	11	31	61	1.74	- 1.01		9	4	0.5		1.1	25								
MADISON	858	984.4	1016.1	59	32	45.4	1.0	78	20	16	4	0	16	31	59	2.42	- 0.15	1.38	7	3	0.7	1	1.9	29	32	W	2	10	8	12	5.7	63
MILWAUKEE	672	991.2	1016.7	52	30	40.9	- 2.7	76	11	13	3	0	17	29	63	1.31	- 1.22	0.72	7	2	0.7	1	1.4	31	41	NE	23	10	10	10	5.5	65
WYOMING																																
CASPER	5338	835.1	1014.1	54	28	40.9	- 2.2	74	17	7	1	0	25	26	64	3.40	1.71	1.37	11	1	24.2	7	2.4	26	30	25	17	6	7	17	7.0	
CHEYENNE	6126	810.4	1015.0	53	29	41.0	- 1.6	70	10	16	5	0	20	24	57	2.81	0.93	0.69	12	4	13.0	6	2.7	30	40	Nw	8	6	10	14	6.5	60
LANDER	5563	826.6	1013.9	54	28	41.0	- 2.2	71	17+	8	1	0	22	22	54	5.22	2.77	2.16	8	1	45.2	13	3.4	24	43	Sw	17	5	9	16	6.8	72
SHERIDAN	3964	877.4	1015.6	57	30	43.7	0.1	78	10	19	5+	0	17	26	55	3.83	1.67	1.95	12	2	5.2	1	2.1	32	43	Nw	10	5	7	18	7.4	62

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day-data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile 1.6 kilometers: Speed	Wind: Fastest mile 1.6 kilometers: Direction	Wind: Fastest mile 1.6 kilometers: Date	No of days (sunrise to sunset): Clear 0.3	No of days (sunrise to sunset): Partly cloudy 4-7	No of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C.	C.	C.	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	994.6	1017.1	23.9	7.2	15.7	- 1.6	30.6	20	- 1.1	3	0	2	6.1	59	108	- 6	29	9	6	T	0	0.8	30	11.6	SW	23+	14	7	9	4.4	77
HUNTSVILLE	196	993.9	1017.1	23.9	8.9	16.2	- 0.3	32.2	20	1.1	8	1	0	6.1	56	84	- 18	26	8	5	T	0	0.8	31	14.3	31	13	16	6	8	4.3	
MOBILE	64	1009.1	1017.2	26.7	13.3	19.9	0.2	32.8	28	3.3	7	1	0	12.2	67	25	-136	20	5	4	0	0	0.9	16	12.5	32	2	11	7	12	5.2	
MONTGOMERY	56	1009.8	1017.0	24.4	9.4	17.0	- 0.8	30.6	28+	1.1	3	0	0	8.9	64	97	- 27	65	6	4	0	0	1.0	25	15.2	Nw	23	16	4	10	4.4	67
ALASKA												8																				
ANCHORAGE	35	997.6	1002.5	3.9	- 2.8	0.8	- 1.9	8.9	25	-10.0	2	0	25	- 4.4	70	16	5	10	8	0	211	178	0.2	24	11.2	2	3	1	5	24	8.5	48
ANNETTE	34	1007.8	1011.8	8.9	1.7	5.3	- 1.0	17.8	25	- 1.7	17	0	4	0.0	72	253	21	62	22	0	564	76	3.0	13	17.9	12	6	3	4	23	8.4	
BARROW	9	1019.6	1023.1	-17.2	-23.3	-20.3	- 2.6	- 7.8	27	-31.1	1	0	30	-22.8	80	1	- 2	1	1	0	5	254	2.7	5	13.4	6	13	11	8	11	5.0	
BARTER ISLAND	12	1016.3	1018.2	-17.8	-25.0	-21.3	- 4.0	- 7.2	27	-38.9	1	0	30	-24.4	74	2	- 3	1	2	0	15	457	0.1	3	18.3	26	27	8	13	9	5.4	
BETHEL	38	999.7	1005.6	- 3.9	-12.8	- 8.3	- 4.9	8.3	26	-22.8	5	0	28	-10.6	84	4	- 11	2	6	0	157	203	3.4	36	16.5	6	24	9	7	14	6.0	
BETTLES	196	984.1	1010.3	- 1.1	-13.3	- 7.2		10.0	25+	-27.2	9+	0	30	-13.9	59	3		3	2	0	76	737	2.3	2	11.2	1	28	5	16	9	5.7	
BIG DELTA	386			2.2	- 8.3	- 3.1		11.7	25	-24.4	2	0	26			9		5	3	0	152	381			14.3	20	14	3	7	20	7.6	
COLD BAY	29	1000.7	1004.3	0.6	- 5.0	- 2.2	- 2.9	6.7	16	-10.6	9	0	30	- 5.0	82	11	- 26	6	9	0	155	61	3.4	30	18.8	17	15	0	4	26	9.1	
FAIRBANKS	133	988.5	1005.8	2.2	- 7.8	- 2.9	- 1.5	12.8	25	-23.9	10	0	28	-11.7	50	3	- 4	2	2	0	23	914	1.3	36	9.8	25	26+	4	9	17	7.2	
GULKANA	479	946.2	1004.7	3.9	- 7.2	- 1.5		8.3	26	-22.2	2	0	29	- 7.2	65	2		1	4	0	38		2.3	18	13.4	18	12+	4	8	18	7.5	
HOMER	20	998.6	1001.2	4.9	- 2.8	0.5		8.9	27	-10.0	9	0	26	- 3.4	78	26	- 7	8	13	0	274	533	0.3	30	13.0	7	24	2	7	21	8.2	
JUNEAU	4	1009.1	1009.8	7.8	- 0.6	3.7	0.3	12.8	24	- 5.6	10	0	17	0.0	81	62	- 11	20	15	0	28	127	3.3	12	15.6	13	3	1	2	27	9.2	33
KING SALMON	15	1000.3	1002.2	2.2	- 7.8	- 2.9	- 3.3	10.0	28+	-19.4	6	0	27	- 7.8	68	21	- 5	11	5	0	226	152	0.6	1	17.9	9	24	1	12	17	7.6	
KOTZEBUE	3	1010.8	1011.2	- 7.2	-17.8	-12.4	- 2.0	3.3	17	-27.8	8	0	30	-16.1	74	4	- 4	1	6	0	109	381	1.3	31	16.1	35	28	12	9	9	5.0	
MC GRATH	105	992.2	1005.0	0.6	-10.6	- 5.3	- 2.8	11.7	26	-27.8	2	0	30	-10.6	65	8	- 4	4	5	0	142	660	1.3	35	9.4	11	24	4	9	17	7.4	
NOME	4	1008.5	1009.3	- 6.1	-15.0	-10.6	- 4.6	3.9	25	-24.4	4	0	30	-15.0	66	1	- 20	1	2	0	20	381	3.0	3	13.4	5	11+	15	4	11	4.9	73
ST. PAUL ISLAND	7	1006.1	1007.1	- 2.8	- 8.9	- 5.8	- 3.8	1.7	27+	-17.8	8	0	30	- 7.2	87	21	- 3	5	15	0	345	483	5.1	36	17.9	34	20+	2	8	20	8.2	
SHEMYA	37	1005.8	1009.4	2.8	- 0.6	1.2	- 0.7	4.4	27+	- 3.3	13+	0	18	- 3.9	71	55	3	25	12	0	61	25	1.1	30	20.6	3	15	0	4	26	9.0	
SUMMIT	732	916.0	1005.0	- 1.1	-10.6	- 5.7		5.6	17	-23.3	2	0	30	-10.0	73	8		3	7	0	249	889	3.2	5	14.8	8	13	3	4	23	8.1	
TALKEETNA	105			5.0	- 6.1	- 0.5	- 1.5	10.0	25	-16.1	10	0	30			21	2	7	7	0	310	813			9.8	2	8					
UNALAKLEET	5			- 5.6	-15.6	-10.4		5.0	25	-24.4	6	0	30			2		1	4	0	15	559			20.1	7	11	13	9	8	4.8	
YAKUTAT	9	1006.1	1007.3	3.3	- 2.8	0.1	- 2.7	5.6	24	-12.8	20	0	25	- 1.1	90	277	93	49	22	0	1207	940	2.8	12	16.5	14	13	2	1	27	9.0	
ARIZONA																																
FLAGSTAFF	2135	785.0	1013.4	15.0	- 3.9	5.5	- 0.8	22.8	13	- 9.4	3	0	27	- 8.9	41	14	- 16	10	5	0	127	76	1.7	20	10.7	21	25	16	8	6	3.5	
PHOENIX	340	972.6	1011.2	27.2	11.1	19.2	- 0.4	34.4	13	6.7	19	6	0	- 3.3	24	3	- 5	3	1	0	0	0	0.4	22	17.4Y	WSW	17	21	6	3	2.1	89
TUCSON	788	923.5	1010.9	25.6	8.3	17.1	- 1.7	33.3	11	3.9	20+	2	0	- 5.6	26	14	7	13	2	0	0	0	1.8	20	13.0	SW	25+	21	7	2	2.1	93
WINSLOW	1492	849.0	1012.6	21.1	1.1	11.2	- 1.9	30.0	11	- 6.1	1	0	13			13	2	8	3	0	20	T	2.8	21	21.9	20	25	17	9	4	3.0	
YUMA	59	1004.4	1011.7	27.8	11.7	19.7	- 1.8	35.0	13	7.8	22	8	0	2.2	36	4	2	4	2	0	0	0	1.4	26	18.8	W	17	25	4	1	1.4	93
ARKANSAS																																
FORT SMITH	136	999.7	1016.2	23.3	7.2	15.4	- 1.1	29.4	19+	- 1.1	7	0	2	6.1	59	73	- 35	19	11	4	T	0	0.4	10	12.5	W	20	7	12	11	5.8	68
LITTLE ROCK	78	1007.1	1016.6	22.8	7.8	15.2	- 1.7	28.3	19	- 2.2	7	0	3	7.8	65	43	- 82	26	9	6	T	T	0.3	21	14.8	NW	1	9	6	15	5.8	76
CALIFORNIA																																
BAKERSFIELD	145	998.3	1015.9	23.3	10.0	16.6	- 0.6	35.0	5	5.6	22+	2	0	3.9	47	14	- 6	11	3	0	0	0	2.0	35	13.0	32	6	17	7	6	3.6	
BISHOP	1252	870.6		21.7	1.7	11.6	- 1.2	27.2	16+	- 4.4	22	0	9			2	- 10	1	3		T	0						14	10	6	4.2	
BLUE CANYON	1609			8.9	0.6	4.9	- 2.7	17.8	4	- 6.7	21	0	15			92	- 30	27	11		561	635			10.7	19	16+	9	7	14	6.1	
EUREKA U	13			11.7	6.1	8.9	- 1.3	15.6	8	1.7	21	0	0			74	6	22	11		0	0			18.8	N	24	5	3	22	7.9	52
FRESNO	100	1004.4	1016.2	22.8	7.2	15.1	- 1.2	33.3	5	2.8	22	1	0	6.1	60	26	- 2	24	3	0	0	0	2.1	31	13.0	NW	17	19	6	5	3.2	87
LONG BEACH	8	1014.6	1015.8	22.2	9.4	15.7	0.2	33.3	4	5.6	22	2	0	8.3	65	16	- 4	14	2	0	0	0	1.7	24	13.0	27	17+	16	8	6	3.9	
LOS ANGELES	30	1011.5	1015.2	19.4	10.6	14.9	- 0.3	32.8	4	7.2	22+	1	0	8.9	71	17	- 9	17	2	0	0	0	2.5	25	19.2Y	W	17	17	8	5	3.7	
LOS ANGELES U	82			21.7	11.7	16.7	0.1	33.9	4	8.3	22+	2	0			13	- 17	13	1		0	0			13.0	SW	18+	19	9	2	2.7	80
MT SHASTA R	1080	891.3	1016.0	13.9	0.0	6.7	- 1.9	21.1	5+	- 5.6	10	0	17	- 0.6	63	42	- 28	28	9		94	25	0.4	4								
OAKLAND	2	1018.0	1018.2	16.1	8.9	12.2	- 1.4	23.3	4	5.0	21	0	0	6.7	72	16	- 19	7	7	0	0	0	3.6	28	11.2	28	23+	14	11	5	4.2	
RED BLUFF	104	1003.1	1015.9	21.1	6.7	13.9	- 1.9	26.1	14+	0.6	21	0	0	3.3	53	11	- 36	5	4	0	0	0	0.6	29	20.6	SE	9	14	7	9	4.7	87
SACRAMENTO	5	1015.6	1016.4	20.6	6.1	13.6	- 1.1	27.2	4	1.7	21	0	0	5.0	62	11	- 24	4	8	0	0	0	2.0	23	13.9	W	16	14	11	5	4.1	89
SANDBERG R	1377	860.8		12.8	2.2	7.4	- 3.0	21.7	5	- 5.6	21	0	11			17	- 8	7	5		94	51			19.7	35	23	14	10	6	3.9	
SAN DIEGO	4	1014.9	1015.9	20.0	12.2	15.9	- 0.4	32.8	4	10.0	26+	1	0	8.3	64	24	4	17	5	0	0	0	2.3	27	11.6	NW	17	13	8	9	4.9	71
SAN FRANCISCO	2	1017.6	1018.4	16.1	7.2	11.7	- 1.5	24.4	4	4.4	21+	0	0	6.1	72	20	- 13	8	6	0	0	0	4.6	28	13.4	29	23	12	11	7	4.5	
SAN FRANCISCO U	16			15.0	8.9	11.7	- 1.4	23.9	4	6.1	21	0	0			18	- 18	8	6		0	0			12.1	W	17					73
SANTA MARIA	72			17.2	3.9	10.3	- 2.8	28.9	4	- 0.6	24+	0	3			26	- 5	20	3		0	0						14	11	5	4.0	
STOCKTON	7	1016.3	1017.4	21.7	6.7	14.2	- 1.2	27.8	5+	2.2	21+	0	0	4.4	57	25	- 4	11	7	1	0	0	2.9	29	13.9	26	16	14	9	7	3.9	
COLORADO																																
ALAMOSA	2297	769.1		14.4	- 5.6	4.5	- 0.9	22.8	11	-14.4	2	0	29			8	- 9	4	4		104	T						13	10	7	4.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

APRIL 1971

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						No. of days		Snow, ice pellets				Fastest mile (1.6 kilometers)								
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	M	Mb	Mb	C.	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s		M.p.s								%
COLORADO																																
COLORADO SPRINGS	1873	808.7	1013.8	14.4	0.6	7.4	- 0.2	23.3	12	- 7.8	6	0	12	- 3.9	51	35	1	11	13	8	71	25	1.2	10	15.6	17	18	9	7	14	6.0	
DENVER	1610	833.4	1011.5	16.7	0.6	8.8	0.8	25.6	10	- 6.1	6+	0	12	- 2.2	55	50	- 3	35	10	1	152	76	1.1	14	21.0	SE	18	6	14	10	6.1	76
GRAND JUNCTION	1476	849.0	1011.1	19.4	2.8	11.2	- 0.1	26.7	11	- 8.9	1	0	7	- 5.6	38	11	- 8	4	5	0	28	T	1.3	15	17.0	SW	25+	11	8	11	5.1	68
PUEBLO	1428	853.0	1012.0	18.9	1.1	9.9	- 0.4	26.7	14+	- 9.4	2	0	10	- 2.8	48	22	- 8	13	8	1	150	51	0.8	9	20.1	SW	14	9	13	8	5.5	82
CONNECTICUT																																
BRIDGEPORT	2	1012.2	1012.8	13.3	3.3	8.3	- 0.6	20.0	19	- 1.1	9	0	4	- 3.3	47	54	- 43	27	10	1	30	25	2.8	30	17.9	3	6	7	13	10	5.8	
HARTFORD	52	1005.1	1011.8	13.9	1.7	7.9	- 1.2	22.2	21	- 4.4	1	0	11	- 2.2	53	72	- 22	24	12	1	102	76	2.3	31	14.8	N	7	7	11	12	6.4	58
DELAWARE																																
WILMINGTON	23	1010.8	1013.9	17.8	3.9	10.6	- 0.6	24.4	21+	- 0.6	15	0	3	- 0.6	50	55	- 30	46	6	1	15	T	2.6	31	14.8	6	6	6	14	10	5.6	
DIST. OF COLUMBIA																																
WASHINGTON NATIONAL	3	1012.2	1014.5	20.0	5.6	12.8	- 0.4	27.2	21+	1.7	7	0	0	0.6	47	65		44	7	1	8	T	1.8	30	13.4	33	24	11	14	5	5.0	
WASHINGTON DULLES	88	1003.1	1014.8	19.4	2.2	10.8		30.0	13	- 3.9	11	0	9	0.0	52	53	- 27	38	5	1	T	0	2.2	31	15.2	NW	14+	11	13	6	4.6	74
FLORIDA																																
APALACHICOLA U	4			23.9	15.0	19.3	- 0.4	30.0	24	5.6	7	0	0			31	- 78	13	6	0	0	0			11.2	NE	3	15	6	9	4.2	85
DAYTONA BEACH	9	1016.3	1017.7	26.1	13.9	20.0	- 0.5	32.8	29+	3.9	8	2	0	12.8	67	65	- 10	60	3	2	0	0	0.6	22	10.3	26	30+	14	8	8	4.5	
FORT MYERS	5	1017.3	1017.8	27.8	15.0	21.3	- 1.3	30.6	29+	6.7	8	0	0	15.0	70	18	- 49	10	2	1	0	0	1.2	23	11.2	23	24	20	6	4	3.3	
JACKSONVILLE	8	1015.9	1017.0	26.7	11.7	19.1	- 1.3	32.2	24	2.8	8	1	0	12.2	70	103	13	50	8	4	0	0	0.9	26	15.6	SW	23	15	8	7	4.1	67
KEY WEST	1	1016.3	1017.1	27.2	21.7	24.4	0.1	31.1	28+	15.0	8	0	0	17.2	68	6	- 57	6	1	1	0	0	2.1	10	11.6	NW	7+	22	6	2	2.2	88
LAKELAND U	65			26.7	15.6	21.1	- 0.8	31.7	29	6.7	8+	0	0			32	- 57	15	6		0	0						14	11	5	4.2	67
MIAMI	2	1016.9	1017.3	28.3	19.4	23.9	0.4	35.6	30	7.8	8	5	0	16.7	65	2	- 97	1	2	0	0	0	1.7	13	11.2	21	24	19	9	2	3.2	
ORLANDO	33	1012.9	1017.2	28.9	15.6	22.3	0.5	35.0	30	6.7	8	8	0	13.9	63	39	- 48	28	3	1	0	0	1.3	26	12.1	25	30+	13	11	6	4.5	
PENSACOLA	34	1013.2	1017.4	25.0	13.3	19.3	- 0.6	29.4	28+	2.8	7	0	0	12.2	68	17	-116	6	6	1	0	0	0.7	22	11.2	22	23	13	5	12	5.1	
TALLAHASSEE	17	1014.6	1017.0	26.1	8.3	17.2	- 2.6	31.1	22	- 1.7	8	0	1	9.4	67	47	- 71	19	6	3	0	0	0.7	25	10.3	3	29	12	7	11	5.0	
TAMPA	6	1016.9	1017.4	26.7	15.0	20.8	- 1.1	30.6	30+	4.4	8	0	0	14.4	70	46	- 26	35	4	0	0	0	1.7	27	11.2	32	7+	13	10	7	4.4	72
WEST PALM BEACH	5	1016.6	1017.3	28.3	16.1	22.1	- 1.2	37.2	30	7.2	8+	8	0	13.3	61	32	- 78	12	4	2	0	0	1.1	14	12.5	23	24	15	11	4	3.9	
GEORGIA																																
ATHENS	244	986.8	1015.7	23.3	8.3	16.1	- 0.1	31.1	20	1.7	3	0	0	6.1	55	106	- 6	63	7	2	0	0	1.3	27	9.4	25	6	15	6	9	4.2	
ATLANTA	308	979.3	1015.9	23.3	8.9	16.0	0.3	30.0	20	0.0	3	0	1	5.0	52	104	- 10	41	7	2	T	T	1.7	30	10.3	NW	14+	14	6	10	4.6	78
AUGUSTA	41	1011.5	1015.8	24.4	6.7	15.7	- 1.7	31.1	20+	- 0.6	3	0	3	7.2	64	60	- 30	42	5	2	0	0	1.0	26	10.7	28	6	15	5	10	4.6	
COLUMBUS	117	1002.4		25.6	8.9	17.2	- 0.4	31.1	19	0.6	3	0	0	8.9	62	83	- 34	29	8	3	T	0	1.1	27	8.0	30	7	14	7	9	4.4	
MACON	108	1003.7	1016.6	26.1	8.9	17.7	- 1.0	32.8	20	- 0.6	3	1	1	8.3	60	86	- 9	35	5	3	0	0	1.0	27	10.7	N	23	11	9	10	4.7	70
ROME	194			23.9	5.6	14.9	- 0.6	31.1	20	- 1.7	8	0	4			94	- 23	39	9		T	0										
SAVANNAH	14	1014.6	1016.3	26.1	10.6	18.1	- 0.6	32.8	18	1.1	4	1	0	8.3	59	90	- 4	35	9	5	0	0	1.2	24	10.1	NW	23	15	8	7	4.9	78
HAWAII																																
HILO	8	1017.3	1018.3	25.6	17.8	21.6	- 0.4	28.3	25	16.7	23+	0	0	18.3	87	707	404	281	28	5	0	0	0.8	19	8.9	E	25	2	5	24	6.8	21
HONOLULU	2	1017.3	1017.7	27.8	21.1	24.2	0.8	31.1	25	18.3	19	0	0	17.8	69	56	22	20	8	2	0	0	5.5	6	14.8	NE	1	2	10	18	7.5	61
KAHULUI	15	1014.9	1017.1	28.3	18.9	23.5	0.5	30.6	26	14.4	14	0	0	18.3	75	29	- 8	12	12	4	0	0	4.8	5	13.0	NE	6	5	9	16	7.2	61
LIHUE	31	1013.9	1019.0	26.7	22.2	24.4	1.9	27.8	26+	20.0	24	0	0	19.4	76	162	77	40	16	3	0	0	5.1	6	11.6	NE	5	6	8	20	8.0	
IDAHO																																
BOISE	865	913.6	1014.6	16.1	3.3	9.6	- 0.7	22.8	3[illegible]	- 2.2	19+	0	6	- 1.7	49	10	- 19	4	6	0	T	0	0.6	32	14.8	W	20+	5	5	16	6.8	71
LEWISTON	431			16.7	3.3	9.8	- 0.7	24.4	5	- 1.7	12+	0	5			19	- 10	8	10		T	T						4	5	21	7.4	
POCATELLO	1358	862.1	1013.8	12.8	- 0.6	5.9	- 2.2	20.6	30+	- 8.3	13	0	16	- 3.9	55	59	32	23	10	1	8	T	2.4	22	18.3	SW	20	6	6	18	7.1	48
ILLINOIS																																
CAIRO	96			21.7	9.4	15.3	0.1	30.6	20+	0.6	7	0	0			38	- 66	16	9		25	25			15.6	S	27+	18	6	6	4.0	76
CHICAGO O HARE	201	992.2	1016.7	15.6	2.8	9.2	0.8	29.4	12	- 4.4	4+	0	10	0.0	55	25	- 50	11	10	3	20	25	0.6	32	17.4	24	2	11	10	9	5.2	
CHICAGO MIDWAY	185	993.9	1016.7	15.6	3.3	9.3	- 0.2	30.0	12	- 5.0	3	0	8	- 0.6	54	11	- 66	4	8	3	20	25	0.4	34	14.8	N	23	12	11	7	4.9	68
MOLINE	177	994.9	1016.4	18.3	2.8	10.5	0.5	30.6	12	- 6.7	4	0	10	- 0.6	51	47	- 33	36	6	5	T	T	0.8	26	21.0	E	27	14	8	8	4.7	76
PEORIA	199	992.2	1016.4	18.3	3.9	11.1	0.6	30.0	12	- 3.9	4+	0	7	- 1.7	44	18	- 83	11	4	3	0	0	0.2	34	15.2	W	1	10	9	11	5.5	81
ROCKFORD	221	989.2	1016.3	15.6	2.2	8.9	0.1	26.7	20+	- 6.7	3	0	9	0.6	60	45	- 32	16	9	4	10	T	0.6	31	14.3	27	2	14	5	11	4.9	
SPRINGFIELD	179	993.9	1016.3	20.0	5.0	12.4	0.6	30.6	20	- 3.9	3	0	7	- 0.6	44	19	- 73	8	6	2	97	76	0.4	24	14.8	NW	1	10	12	8	5.2	70
INDIANA																																
EVANSVILLE	116	1003.1	1017.1	21.1	5.6	13.4	- 0.9	31.1	20	- 4.4	7	0	2	4.4	59	71	- 30	26	5	1	218	152	0.6	31	11.6	SW	24	12	12	6	4.3	75

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C	C		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M p.s.		M p.s							%
INDIANA																																
FORT WAYNE	241	986.8	1017.2	16.1	1.1	8.7	- 0.9	27.8	12	- 3.9	7+	0	14	- 0.6	57	34	- 46	12	6	1	8	T	1.4	28	15.6	SW	9	11	9	10	5.2	71
INDIANAPOLIS	241	987.5	1016.8	18.3	2.8	10.6	0.1	27.8	20	- 3.3	7	0	7	0.6	53	29	- 66	11	4	1	T	T	0.6	30	14.3	W	28	12	9	9	5.1	76
SOUTH BEND	236	988.2	1016.4	14.4	1.7	7.9	- 0.7	26.7	12	- 4.4	5+	0	14	- 0.6	59	13	- 78	3	7	1	66	76	1.3	30	11.6	35	9	9	11	10	5.3	
IOWA																																
BURLINGTON	211			18.9	4.4	11.4	1.0	30.6	20	- 4.4	4+	0	7	0.0	48	17	- 70	16	3	3	T	0	0.6	27	12.5	29	2	8	16	6	5.4	
DES MOINES	286	981.7	1016.6	18.3	4.4	11.2	1.9	28.3	20	- 4.4	6+	0	8	1.1	54	39	- 25	21	7	5	10	T	0.6	31	17.9	SW	20	8	10	12	5.9	79
DUBUQUE	322	977.0		15.6	2.2	8.7	0.5	26.1	20	- 8.3	3	0	11			35	- 43	9	9		36	25						14	7	9	5.2	
SIOUX CITY	334	976.0	1016.0	18.3	3.9	11.1	1.7	28.9	15	- 5.0	6+	0	9	0.0	52	41	- 16	24	6	2	5	T	0.2	34	18.3	SE	15	9	10	11	5.6	75
WATERLOO	265	984.4	1016.6	15.6	0.6	8.1	- 0.4	27.8	20	- 6.1	6+	0	17	- 0.6	58	24	- 44	15	7	1	T	T	0.8	32	14.8	31	2	13	8	9	5.2	
KANSAS																																
CONCORDIA	448	961.7	1014.9	18.9	5.6	12.2	0.6	27.2	11	- 5.6	6	0	6	3.3	60	30	- 24	13	10	6	T	0	0.9	14	17.4	NW	1	13	6	11	4.7	75
DODGE CITY	787	923.1	1013.8	19.4	4.4	12.0	0.0	26.7	10	- 6.1	6	0	5	1.7	57	28	- 19	22	5	2	T	0	0.8	15	19.2	N	13	9	9	12	5.5	64
GOODLAND	1114	886.6	1013.4	17.2	2.2	9.7	0.7	28.3	15	- 8.3	6	0	7	0.0	59	49	9	27	7	4	T	T	0.8	14	17.9	18	14	10	12	8	5.1	
TOPEKA	267	984.1	1015.8	20.6	6.7	13.5	1.1	29.4	11	- 3.9	7	0	7	5.0	59	27	- 56	18	7	5	T	T	0.4	15	16.5	NW	1	14	3	13	5.2	62
WICHITA	403	966.8	1014.7	20.6	7.2	13.9	0.2	30.0	12	- 4.4	7	0	5	3.9	55	60	1	45	7	4	0	0	1.4	16	21.0	NW	1	11	8	11	5.2	65
KENTUCKY																																
COVINGTON	265	984.8	1016.5	19.4	4.4	11.7	0.5	27.8	12	- 1.1	10+	0	4	2.2	55	26	- 55	14	4	2	T	0	0.9	30	13.0	25	9	10	10	10	5.3	
LEXINGTON	294	981.4	1016.9	18.3	3.9	11.1	1.3	26.7	13	- 2.2	7	0	3	1.7	56	53	- 49	21	5	3	0	0	0.6	26	13.0	21	1	12	11	7	4.7	
LOUISVILLE	145	998.6	1016.5	20.0	5.6	12.6	- 0.1	27.8	17+	0.6	7+	0	0	2.8	53	55	- 42	22	5	3	T	T	0.8	31	13.0	W	9	12	12	6	4.9	73
LOUISIANA																																
ALEXANDRIA	28	1012.5	1016.9	24.4	10.6	17.3	1.5	30.6	28+	0.0	8+	0	3			28	-117	23	4	2	0	0	0.4	18	10.7	25	23	11	8	11	5.4	
BATON ROUGE	20	1013.9	1016.6	25.6	12.2	19.1	1.0	31.1	28+	2.8	8+	0	0	12.8	71	19	-102	7	8	2	0	0	0.7	17	10.3	34	6+	10	8	12	5.4	
LAKE CHARLES	3	1015.2	1016.3	25.6	12.8	19.2	0.8	32.2	23	1.1	7	1	0	13.3	75	24	- 87	13	5	1	0	0	1.8	15	10.7	31	6	10	5	15	5.9	
NEW ORLEANS	1	1016.3	1017.0	26.1	12.8	19.4	0.6	31.1	23	0.0	8	0	1	13.3	69	39	- 77	20	3	1	0	0	0.9	15	12.5	35	2	10	11	9	5.2	
SHREVEPORT	77	1006.8	1015.9	25.0	11.1	17.9	0.6	30.0	28+	0.6	3	0	0	10.6	67	27	- 89	10	6	2	0	0	0.9	13	13.4	32	6	10	8	12	5.3	56
MAINE																																
CARIBOU	190	987.1		6.7	- 2.2	2.3	0.2	15.0	13	- 8.9	9	0	25			53	- 14	11	15		310	432						4	2	24	7.9	
PORTLAND	13	1008.5	1010.8	9.4	1.1	5.3	0.5	16.1	20+	- 6.1	9	0	12	0.0	71	47	- 47	19	11	0	234	203	1.2	32	13.0	N	7	4	8	18	7.2	46
MARYLAND																																
BALTIMORE	45	1009.1	1014.7	18.9	4.4	11.5	0.8	26.1	21+	0.0	15+	0	3	- 1.7	43	44	- 47	34	5	1	T	0	2.6	29	17.0	SW	24	11	11	8	4.8	72
MASSACHUSETTS																																
BLUE HILL OBS R	192			11.1	1.1	6.2	1.4	20.6	13	- 3.3	1	0	11			79	- 23	33	13		122	76			21.9	ENE	7+					49
BOSTON	5	1010.2	1011.1	12.2	2.8	7.3	1.6	22.2	13	- 1.1	17+	0	9	0.0	66	74	- 22	35	14	2	48	25	1.9	31	17.9	NE	7	6	11	13	6.5	60
WORCESTER	301	974.3	1011.7	11.7	0.0	5.8	1.2	21.7	13	- 5.0	9	0	16	- 2.8	59	43	- 56	19	11	0	198	178	2.9	30	13.4	3	7	6	11	13	6.4	
MICHIGAN																																
ALPENA	210	990.2	1015.9	9.4	- 2.2	3.5	0.4	20.6	11	-11.1	4	0	21	- 3.3	65	43	- 23	14	12	1	107	178	1.2	29	12.5	SW	2	8	11	11	6.0	54
DETROIT	189			13.3	2.2	7.6	1.1	26.1	12	- 6.1	5	0	12	- 1.7	55			8		3			1.5	30	13.9	24	2					
DETROIT METRO	193	991.2	1015.8	13.9	0.6	7.3	0.7	27.2	12	- 7.2	4	0	14	- 1.1	60	23	- 54	9	7	3	15	T	1.7	30	15.6	NW	9	8	10	12	5.8	60
FLINT	235	987.5	1015.6	12.2	0.6	6.3	1.1	23.9	12	- 7.2	4	0	14	- 0.6	66	41	- 26	22	10	3	23	T	1.6	29	12.5	28	24+	11	6	13	5.9	
GRAND RAPIDS	239	986.8	1016.2	13.3	0.0	6.6	1.0	25.0	12	-10.6	4	0	15	- 1.1	61	58	- 17	36	11	4	104	25	1.5	28	16.1	SW	2	9	8	13	5.8	61
HOUGHTON LAKE	350	973.2	1016.0	10.0	- 2.2	3.8	1.1	21.7	20	-11.7	5	0	21	- 2.2	68	56	- 3	34	10	1	89	51	1.4	30	11.2	25	2	9	5	16	6.1	
LANSING	256	984.1	1016.1	13.3	0.0	6.8	0.8	26.1	12	-10.0	4	0	14	- 0.6	62	38	- 35	25	9	3	30	25	1.7	29	16.1	W	24	10	7	13	5.7	65
MARQUETTE U	206			8.9	- 0.6	4.3	0.2	22.2	11	- 9.4	3	0	17			36	- 33	21	10		69	610			15.6	SW	10	8	11	11	5.9	67
MUSKEGON	191	993.2	1016.5	12.2	0.0	6.1	1.3	22.2	19	- 8.3	4	0	16	- 2.2	59	42	- 23	36	10	2	81	51	1.4	28	15.6	34	9	10	8	12	5.4	
SAULT STE MARIE	220	988.2	1015.3	7.2	- 2.8	2.1	1.2	15.6	19	-12.2	3	0	22	- 2.8	71	29	- 26	11	9	0	173	483	1.1	31	12.5	NW	24+	7	6	17	6.8	60
MINNESOTA																																
DULUTH	435	964.1	1016.6	9.4	- 2.2	3.5	0.7	20.0	20	-16.7	5	0	20	- 3.9	63	33	- 27	18	9	0	165	559	0.6	34	17.9	W	1	6	10	14	6.6	66
INTERNATIONAL FALLS	359	971.9	1015.9	10.0	- 2.2	4.1	1.1	21.7	16	-18.3	5	0	16	- 3.3	61	27	- 13	10	8	0	84	279	0.6	31	11.2	14	16	5	13	12	6.5	
MINNEAPOLIS	254	985.4	1016.3	15.0	1.7	8.3	1.5	26.1	20	- 8.3	3+	0	9	- 1.7	52	28	- 19	12	11	1	48	25	0.8	33	16.1	NW	1	8	10	12	6.0	70
ROCHESTER	395	967.8	1016.1	14.4	1.1	7.7	1.1	26.1	16	- 9.4	3	0	11	0.6	65	40	- 15	19	9	1	41	25	1.0	27	17.4	30	1	8	10	12	5.8	
ST CLOUD	315	978.0	1016.7	13.3	0.6	6.9	0.9	25.0	20	-10.6	2	0	11			42	- 9	18	8		112	25						10	5	15	6.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

APRIL 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm. or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0.3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb.	C.	C.	C.	C.	C		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M p.s							%
MISSISSIPPI																																
JACKSON	94	1005.1	1016.9	24.4	8.9	16.8	- 1.5	31.1	19	- 1.1	8	0	3	10.6	71	174	50	56	7	5	T	0	0.5	18	11.6	N	23	12	8	10	4.7	69
MERIDIAN	88	1006.1	1017.2	25.0	8.3	16.6	- 1.4	30.6	28+	- 0.6	8+	0	3	10.0	71	118	- 17	72	8	6	0	0	0.4	26	12.5	31	29	12	7	11	4.9	
MISSOURI																																
COLUMBIA REGIONAL	270	984.1	1016.5	20.6	6.1	13.6	1.0	30.0	19	- 2.8	3	0	2	2.2	50	35	- 49	16	9	4	84	76	0.2	21	15.2	W	2	11	8	11	5.2	71
KANSAS CITY	226	988.5	1015.6	22.2	8.9	15.4	2.2	32.2	12	0.6	5	1	0	3.3	48	33	- 58	22	9	5	0	0	0.5	11	18.8	NW	27	11	10	9	5.1	79
ST JOSEPH	247			22.8	8.3	15.5	3.5	32.2	12	- 2.2	7	1	4			47	- 33		7				0.1	12	20.6	35	26	9	11	10	5.2	
ST LOUIS	163	996.3	1016.6	20.6	6.1	13.3	0.6	31.7	12	- 1.7	7+	0	5	3.3	55	42	- 52	20	6	3	165	152	0.2	25	15.2	SW	20	14	7	9	5.1	74
SPRINGFIELD	386	970.9	1016.3	21.1	5.6	13.3	0.2	28.9	19	- 3.9	5	0	6	3.3	54	80	- 24	41	9	3	180	76	1.3	16	13.4	SW	8+	11	11	8	5.0	73
MONTANA																																
BILLINGS	1087	890.3	1015.5	13.3	0.6	6.8	- 1.0	23.9	14	- 6.7	1	0	12	- 2.2	62	41	7	15	11	4	64	25	1.3	31	21.9	NW	10	3	6	21	7.8	59
GLASGOW	696	933.0	1015.8	13.3	0.6	7.2	0.8	23.3	6	- 7.2	1	0	12	- 1.7	59	11	- 15	9	5	0	T	51	1.5	9	17.4	31	10	6	10	14	6.4	
GREAT FALLS	1116	886.6	1015.0	13.9	0.6	7.2	0.8	24.4	14	- 7.2	1	0	15	- 4.4	48	17	- 8	14	5	1	119	51	2.1	23	17.0	SW	2	2	11	17	7.6	64
HAVRE	788	922.1	1014.9	14.4	0.0	7.3	1.2	24.4	6	- 7.2	1	0	16	- 2.8	54	10	- 15	6	5	1	5	T	0.3	17	17.0	W	10	2	13	15	7.6	69
HELENA	1167	879.1	1015.8	12.8	- 2.2	5.3	- 1.0	21.7	6	- 8.9	11	0	19	- 4.4	54	15	- 6	7	6	1	18	T	1.7	28	14.8	NW	2	1	9	20	8.1	62
KALISPELL	904	910.3	1015.7	13.9	- 1.1	6.4	- 0.1	22.2	6	- 6.1	13	0	19	- 2.2	58	11	- 15	7	6	0	T	T	0.7	19	11.6	23	10+	4	7	19	7.4	
MILES CITY	801			14.4	1.1	8.0	0.4	25.0	10	- 7.2	1	0	9			32	5		7	0	T		1.0	1								
MISSOULA	972	903.5	1016.4	15.0	- 0.6	7.1	0.3	25.0	6	- 6.7	1	0	17	- 1.7	63	53	28	20	12	0	89	51	1.0	29	17.4	SW	15	3	9	18	7.3	66
NEBRASKA																																
GRAND ISLAND	561	949.2	1015.4	18.3	3.9	10.9	1.2	29.4	15	- 5.6	6	0	7	0.6	54	24	- 34	11	7	4	5	T	0.2	15	17.0	35	8	8	11	11	5.7	
LINCOLN U	351			18.9	6.1	12.4	1.4	28.3	15	- 3.3	6	0	6			20	- 42	6	7		10	T			16.1	NW	8	9	11	10	5.6	63
NORFOLK	471			16.7	3.3	10.2	1.1	28.3	15	- 5.6	6+	0	8			31	- 25	17	6		8	T						9	8	13	5.9	
NORTH PLATTE	846	916.7	1015.1	16.1	1.7	8.9	0.2	28.3	15	- 7.2	6+	0	13	0.0	61	100	49	61	11	6	20	25	1.0	9	17.0	NW	8	8	12	10	5.7	63
OMAHA	298	980.4	1015.8	19.4	5.0	12.4	1.5	28.3	19+	- 5.0	6	0	7	1.1	50	23	- 42	9	6	1	13	T	0.1	2	16.5	NW	1	8	10	12	5.8	68
SCOTTSBLUFF	1206	877.8	1013.9	16.7	1.7	9.0	0.9	27.8	7	- 7.2	5+	0	11	- 1.1	58	43	- 3	13	8	2	76	25	0.5	9	13.4	16	17+	6	7	17	6.7	
VALENTINE	789			16.1	1.7	8.8	1.2	31.1	15	- 7.2	6+	0	11			83	33	49	9		196	152			21.5	SW	15	8	7	15	6.3	54
NEVADA																																
ELKO	1539	841.9	1013.6	13.3	- 2.2	5.4	- 1.4	21.1	6	- 8.9	1	0	25	- 4.4	55	24	4	7	9	1	257	T	1.3	26	12.1	3	12	5	9	16	6.9	
ELY	1906	804.9	1011.7	13.3	- 3.3	5.2	- 0.7	20.6	16+	-11.1	1	0	27	- 6.1	53	33	9	12	7	0	333	102	1.5	22	15.6	SW	10	9	7	14	6.1	76
LAS VEGAS	659	935.3	1011.2	25.0	9.4	17.2	- 0.8	31.7	13	3.9	2	0	0	- 7.2	21	T	- 6	T	0	0	0	0	2.4	22	19.7	SW	17	19	9	2	2.5	91
RENO	1342	863.9	1013.9	16.7	- 1.7	7.7	- 1.2	25.6	5	- 6.7	22	0	24	- 2.8	51	15	1	10	4	0	84	51	1.4	28	17.9	SW	10	8	11	11	5.7	63
WINNEMUCCA	1311	866.2	1013.9	16.7	- 2.8	6.9	- 0.8	25.6	5	-10.0	3	0	26	- 3.3	53	37	17	16	7	0	224	102	0.9	27	15.2	S	20	7	7	16	6.7	79
NEW HAMPSHIRE																																
CONCORD	104	998.6	1011.5	12.2	- 1.1	5.6	- 0.9	23.3	13	- 8.3	9	0	20	- 1.7	62	56	- 28	14	14	1	160	356	2.4	32	15.6	NW	7	5	9	16	6.9	59
MT WASHINGTON OBS	1909			- 2.8	-10.6	- 6.5	- 1.5	5.6	13	-18.9	15	0	30			192	43	71	21	1	1420	559			44.3	N	7	3	4	23	8.4	26
NEW JERSEY																																
ATLANTIC CITY	20	1011.2	1013.6	15.0	2.2	8.7	- 1.9	23.9	21	- 3.9	1	0	8	- 0.6	54	33	- 54	14	7	2	T	0	2.5	29	17.9	3	6	9	14	7	5.1	66
ATLANTIC CITY U	3			13.3	5.0	9.3	- 0.7	20.0	24	1.1	15+	0	0			34	- 52	22	8						19.7	NNE	6					
NEWARK	2	1011.9	1012.8	16.1	5.0	10.8	0.1	25.0	21	1.1	8	0	0	0.6	53	34	- 55	25	7	2	56	51	2.8	30	13.4	36	7+	8	11	11	5.8	
TRENTON U	17			15.6	5.0	10.2	- 0.7	23.9	13	0.6	6	0	0			66	- 16	50	6		112	76			17.0	NW	24+	10	11	9	5.2	66
NEW MEXICO																																
ALBUQUERQUE	1619	835.4	1011.4	20.6	3.3	11.8	- 1.3	29.4	11	- 2.2	1	0	5	- 7.8	32	20	8	9	4	1	T	0	1.1	20	20.1	E	5	16	7	7	3.7	82
CLAYTON	1515			18.3	2.2	10.1	- 0.3	30.0	12	- 8.3	6	0	6			29	- 1	14	7		20	25						11	11	8	4.8	
ROSWELL	1101			24.4	5.0	14.7	- 0.3	33.9	11	- 2.2	7	2	4			7	- 12	7	1		0	0			19.2	W	15					86
NEW YORK																																
ALBANY	84	1002.4	1013.1	12.2	- 1.1	5.7	- 2.2	25.0	13	- 7.2	1	0	23	- 2.2	61	51	- 20	15	12	0	99	51	2.4	30	18.3	W	24	4	9	17	7.2	55
BINGHAMTON	485	994.6	1014.0	10.0	0.0	4.8	- 1.6	24.4	13	- 6.1	6	0	17	- 3.3	60	51	- 23	25	11	0	20	25	2.8	30	13.9	NW	18	5	10	15	7.0	49
BUFFALO	215	988.8	1015.0	10.6	0.0	5.4	- 0.9	22.2	12	- 6.1	6+	0	14	- 1.7	65	38	- 39	17	13	1	74	25	2.8	27	13.9	SW	3	6	11	13	6.5	59
NEW YORK U	40	1009.5	1012.7	15.6	5.6	10.4	- 0.3	24.4	21	0.6	8	0	0	- 0.6	51	75	- 12	56	9	1	10	T	2.1	33	15.6	NE	6					68
NEW YORK KENNEDY	4	1012.2	1013.0	13.3	4.4	8.8	- 0.7	21.7	20	- 0.6	1	0	1	0.0	59	74	- 15	54	9	1	81	51	2.6	31	17.9	31	24+	8	12	10	5.5	
NEW YORK LA GUARDIA	3	1012.2	1013.1	14.4	5.6	9.8	- 0.9	22.8	21	1.1	8	0	0	- 0.6	53	53	- 38	39	11	2	25	25	2.9	32	19.7	NE	6	9	9	12	5.6	
ROCHESTER	167	993.6	1014.1	11.1	- 1.1	5.1	- 2.2	25.0	12	- 8.3	5	0	19	- 1.1	69	33	- 35	16	14	1	30	25	3.1	28	15.2	NW	7	6	8	16	6.6	59
SYRACUSE	125	998.6	1013.8	11.7	0.6	6.0	- 1.8	23.3	13+	- 5.0	6	0	15	- 1.7	62	56	- 23	16	13	0	122	76	2.6	29	13.0	W	23	6	9	15	6.8	57

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days Max. 32.2 °C or above	Temperature: No of days Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days 25 mm or more	Precipitation: No of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1 6 kilometers) Speed	Wind: Fastest mile (1 6 kilometers) Direction	Wind: Fastest mile (1 6 kilometers) Date	No. of days sunrise to sunset: Clear, 0 3	No. of days sunrise to sunset: Partly cloudy 4 7	No. of days sunrise to sunset: Cloudy 8 10	Sky cover tenths sunrise to sunset	Possible sunshine
NORTH CAROLINA	M.	Mb	Mb	C	C.	C.	C.	C		C.				C.	%	Mm.	Mm	Mm			Mm	Mm.	M.p.s		M.p.s							%
ASHEVILLE	652	939.7	1015.8	21.7	4.4	12.9	0.3	29.4	13	- 2.2	3	0	6	3.3	57	52	- 50	25	7	3	5	T	1.6	35	12.5	35	14	12	10	8	4.2	88
CAPE HATTERAS R	2	1014.9	1015.3	18.3	7.2	12.6	- 2.6	25.0	26	- 1.7	1	0	1	7.2	71	95	19	75	9	0	0	0	0.2	23	15.6	10	6	15	8	7	3.9	75
CHARLOTTE	224	987.8	1015.4	22.2	6.7	14.6	- 1.1	30.6	20	- 0.6	3	0	1	3.9	52	71	- 18	21	6	4	0	0	0.8	27	10.3	N	14	14	8	8	4.4	80
GREENSBORO	273	983.7	1015.4	20.6	3.9	12.4	- 1.7	28.9	13	- 2.2	3	0	4	1.7	53	70	- 18	26	8	3	T	T	1.2	27	13.9	Nw	14	15	8	7	4.3	77
RALEIGH	132	999.7	1015.5	22.2	5.0	13.6	- 1.6	31.1	13	- 0.6	15	0	3	2.8	53	66	- 24	29	8	3	0	0	1.3	28	12.0	31	21	16	6	8	4.1	77
WILMINGTON	9	1014.2	1015.5	22.8	8.9	15.8	- 1.2	31.7	21	2.2	8	0	0	7.2	62	88	15	45	7	4	0	0	1.7	26	14.3	n	21	14	7	9	4.5	78
NORTH DAKOTA																																
BISMARCK	502	955.3	1015.9	13.3	0.0	6.6	0.2	27.8	15+	- 7.2	2	0	17	- 2.2	59	27	- 4	12	7	3	46	25	1.1	1	20.1	NW	10	6	9	15	6.8	67
FARGO	273	982.7	1016.0	13.3	0.6	6.9	1.4	26.7	20	- 9.4	4+	0	14	0.6	65	28	- 16	19	9	0	25	25	0.9	1	19.2	NW	1	6	9	15	6.4	71
WILLISTON	579	946.8	1016.2	12.8	- 0.6	6.2	0.4	28.3	10	- 9.4	2	0	17	- 1.7	64	23	- 1	11	10	1	48	25	1.3	35	17.9	NW	10	5	8	17	6.9	48
OHIO																																
AKRON	368	970.9	1015.9	14.4	1.1	7.9	- 1.3	26.7	12	- 5.6	4	0	12	- 2.2	52	23	- 62	12	8	0	T	T	1.8	29	12.1	32	9+	8	6	16	6.3	
CINCINNATI ABBE OB	232			18.3	4.4	11.3	- 1.0	27.2	12	- 1.1	7	0	4			40	- 52	18	4		0	0			10.7	NW	28					67
CLEVELAND	237	987.1	1016.7	12.2	0.6	6.2	- 2.1	25.6	12	- 7.2	4	0	16	- 2.2	56	31	- 55	16	10	2	18	T	1.4	28	15.2	Sw	9	7	10	13	6.3	61
COLUMBUS	247	986.1	1016.5	16.7	2.2	9.4	- 1.0	27.2	12	- 3.9	7+	0	11	0.0	54	17	- 72	8	6	1	T	0	1.4	29	15.6	Sw	1	10	10	10	5.7	62
DAYTON	335	980.0	1016.5	17.8	3.9	10.8	0.4	28.3	12	- 1.7	7	0	6	0.0	51	25	- 59	12	4	1	T	0	1.2	28	14.8	N	13	12	8	10	5.1	73
MANSFIELD	395			14.4	1.1	7.8	- 0.5	25.6	12	- 6.7	4	0	14	- 1.7	56	19	- 65	9	8	3	T	T	2.0	27	13.4	21	9	9	6	15	5.9	
TOLEDO	204	990.5	1016.0	15.6	0.6	7.8	- 0.4	28.3	12	-10.0	4	0	14	- 1.1	57	27	- 43	14	5	2	T	T	1.7	29	18.8	Nw	24	6	12	12	5.8	73
YOUNGSTOWN	359	972.9	1016.1	12.8	0.0	6.3	- 2.0	26.1	12	- 6.7	7+	0	16	- 2.2	59	40	- 54	14	11	1	10	T	1.8	30	12.5	28	28	9	8	13	6.4	
OKLAHOMA																																
OKLAHOMA CITY	392	968.5	1014.7	22.8	8.9	15.8	0.3	30.0	12	- 1.7	6	0	4	5.0	53	16	- 64	8	7	5	0	0	2.0	15	17.0	N	13+	11	10	9	4.7	67
TULSA	198	990.9	1015.2	22.8	8.9	15.7	0.7	31.7	12	- 1.7	7	0	2	5.6	56	35	- 67	13	8	6	0	0	1.8	17	16.1	S	8	11	10	9	5.3	65
OREGON																																
ASTORIA	2	1016.6	1017.4	12.8	3.3	8.1	- 1.4	18.9	26	0.0	12+	0	2	3.9	77	104	- 28	38	15	2	5	0	1.5	20	10.3	10	12+	3	4	23	8.0	
BURNS U	1265	871.0	1014.9	13.9	- 1.7	5.9	- 1.8	21.1	30+	- 6.1	10+	0	23	- 3.3	55	8	- 11	3	9		41	25	1.8	29				7	9	14	6.4	
EUGENE	109	1004.4	1017.9	15.0	3.3	9.1	- 1.4	22.8	5	0.0	1	0	1	3.9	75	114	54	57	11	0	T	0	1.4	22	14.8	17	8	4	4	22	7.6	
MEACHAM	1234	875.4	1016.8	8.3	- 1.7	3.3	- 1.6	17.2	6	- 5.0	12+	0	25			59	- 12	18	12		480	229			9.4	34	15	5	5	20	7.4	
MEDFORD	396	969.5	1017.4	16.1	2.2	9.1	- 1.2	25.6	5	- 1.1	23+	0	8	2.8	69	34	7	10	8	0	T	T	0.9	32	10.3	34	24+	5	7	18	7.2	
PENDLETON	452	962.4	1016.6	16.7	2.8	9.7	- 1.4	26.7	5	- 3.3	1	0	5	0.6	59	29	2	8	10	0	T	0	1.7	27	19.2	31	9	2	11	17	7.1	
PORTLAND	6	1016.3	1017.5	15.6	3.9	9.8	- 1.2	24.4	26+	- 1.1	1	0	2	3.3	67	69	16	34	13	1	T	0	0.6	19	13.9	S	10	4	3	23	7.8	59
SALEM	60	1010.2	1017.5	15.0	1.7	8.4	- 2.2	23.9	5	- 2.8	1	0	8	2.2	69	103	44	56	13	1	T	T	1.4	22	10.3	19	10	4	4	22	7.9	
SEXTON SUMMIT R	1169	883.2	1017.2	8.9	0.0	4.3	- 2.7	18.9	5+	- 5.0	21+	0	19			95	48	26	14		787	229			22.4	20	9	6	5	19	7.3	
PACIFIC AREA																																
GUAM TAGUAC R	110	995.6	1008.3	30.0	22.8	26.5	- 0.1	31.7	24	21.1	25+	0	0	23.9	87	146	69	34	26	0	0	0	3.2	9	10.7	E	9	0	14	16	7.7	44
JOHNSTON	2	1014.2	1014.7	26.7	23.3	25.1	- 0.4	27.8	30+	21.7	22+	0	0	21.1	78	34	- 24	9	11	1	0	0	7.9	8	12.5	NE	19+	4	10	16	6.8	59
KOROR R	29	1003.4	1007.1	31.7	25.0	28.3	- 0.9	33.3	21	23.3	24+	11	0	24.4	84	211	- 53	67	18	5	0	0	0.8	30	11.6	E	24	0	4	26	9.2	74
KWAJALEIN	2	1008.1	1009.0	29.4	24.4	26.9	- 0.2	30.6	10+	22.8	15	0	0	23.9	84	515	388	137	28	1	0	0	5.5	9	14.3	10	2	0	1	29	9.7	
MAJURO	3	1009.5	1009.8	28.9	23.9	26.4	- 0.6	30.6	5	22.8	18+	0	0	23.3	84	790	477	132	28	0	0	0	5.0	8	11.6	E	27+	0	3	27	9.4	38
PAGO PAGO	4	1010.8	1010.9	30.0	22.8	26.3		31.1	28+	20.6	4	0	0	23.3	84	297		109	24	5	0	0	1.4	7	10.3	NE	16+	3	17	10	6.5	55
PONAPE R	37	1002.4	1007.9	30.6	22.2	26.5	- 0.4	32.2	18+	20.6	21+	3	0	23.3	87	441	- 68	109	27	3	0	0	1.4	12	7.6	NE	24	0	6	24	9.0	60
TRUK MOEN ISLAND	2	1007.1	1007.4	30.6	25.0	27.6	0.4	31.7	24+	23.3	30	0	0	24.4	83	259	- 54	50	25	0	0	0	2.4	8	17.9	NE	30	0	1	29	9.7	72
WAKE	3	1012.9	1013.2	28.9	23.3	26.3	0.6	30.6	7+	20.6	11	0	0	21.1	76	76	29	14	15	0	0	0	6.3	9	13.9	S	17	7	17	6	5.7	71
YAP R	13			30.6	23.9	27..	- 0.4	31.7	19	22.2	27+	0	0			311	149	80	19	2	0	0			11.6	W	9	0	8	22	8.4	87
PENNSYLVANIA																																
ALLENTOWN	118	999.7	1013.7	15.6	1.7	8.7	- 0.9	25.6	13	- 2.8	9+	0	11	- 1.1	54	42	- 54	24	7	0	13	T	3.0	30	16.5	30	24	11	8	11	5.6	
ERIE	223	988.8	1016.1	9.4	0.0	4.8	- 2.7	22.2	12	- 7.8	7	0	16	- 3.3	59	46	- 44	17	13	1	71	T	2.3	26	10.7	26	24+	7	8	15	6.4	
HARRISBURG	103	1001.4	1014.3	17.2	3.3	10.2	- 0.8	27.8	13	- 2.2	3	0	6	- 1.7	48	26	- 50	11	5	1	T	0	2.9	30	17.0	W	24	9	9	12	5.9	61
PHILADELPHIA	2	1012.5	1013.6	16.7	5.0	10.9	- 0.2	24.4	13	0.0	1	0	1	- 1.1	48	47	- 40	37	7	1	109	25	2.6	31	17.0	NE	6	7	16	7	5.5	67
PITTSBURGH	347	971.2	1015.7	14.4	1.1	7.8	- 1.7	26.1	13+	- 4.4	27+	0	10	- 2.8	51	12	- 66	4	8	0	5	T	2.8	30	15.6	23	1	7	9	14	6.3	55
SCRANTON	283	979.7	1014.4	13.3	1.1	7.2	- 1.9	26.1	13	- 2.8	15+	0	15	- 2.2	57	33	- 50	11	12	1	41	25	2.1	29	15.2	NW	24	7	9	14	6.4	56
WILLIAMSPORT	160	995.3	1014.5	15.6	2.8	9.1	- 0.6	27.2	13	- 1.7	9+	0	9	- 1.7	54	30	- 60	18	12	2	T	T	2.5	30	11.6	29	24+	8	9	13	6.0	
RHODE ISLAND																																
BLOCK ISLAND	34			10.0	2.2	6.1	- 0.9	13.3	23	- 1.7	18+	0	4			85	- 7	41	9		0	0										
PROVIDENCE	16	1009.5	1011.7	13.3	2.2	7.7	- 0.7	20.0	10	- 1.7	1	0	7	- 0.6	59	59	- 37	26	12	0	48	25	2.0	32	15.6	5	7	6	12	12	6.2	52

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

APRIL 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						No. of days		Snow, Ice pellets		Resultant speed	Resultant direction	Fastest mile (1.6 kilometers)						
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy 8-10		
	M	Mb	Mb.	C	C.	C.	C.	C.		C.				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							%
SOUTH CAROLINA																																
CHARLESTON	12	1014.6	1016.5	24.4	10.0	17.1	- 1.2	32.2	18	0.6	4	1	0	8.9	64	104	51	50	10	5	0	0	1.2	24	31.7Y	NW	23	12	9	9	4.8	73
CHARLESTON U	3			22.8	13.3	18.0	- 0.7	30.6	21+	5.0	7	0	0			92	27	31	11		0	0			13.0	N	5					
COLUMBIA	65	1007.8	1015.9	25.0	7.8	16.3	- 1.3	32.2	20+	- 0.6	8	2	3	7.8	63	109	8	58	7	4	0	0	1.2	27	11.2	28	21	15	6	9	4.6	77
GRNVLLE SPRTNBRG	292	980.7	1015.3	23.3	7.2	15.1	- 0.9	30.6	18	- 2.2	3	0	1	3.3	48	78	- 22	28	8	4	0	0	0.9	26	11.6	NW	20+	15	7	8	4.1	75
SOUTH DAKOTA																																
ABERDEEN	395	968.2	1015.5	17.2	0.6	8.8	1.7	29.4	15+	-10.0	3	0	14	- 1.1	55	47	- 5	37	7	2	89	25	0.6	2	17.4	33	1	10	9	11	5.8	
HURON	390	968.5	1015.6	15.0	0.0	7.4	0.2	26.7	15+	-11.1	5	0	17	0.0	64	56	10	27	5	1	T	T	0.2	18	19.7	2	10	10	8	12	5.9	74
RAPID CITY	964	903.5	1015.1	15.0	0.6	7.8	0.8	28.3	10	- 7.2	2	0	15	- 2.2	58	73	30	32	11	2	135	76	1.2	34	23.2	NW	10	6	9	15	6.7	55
SIOUX FALLS	432	964.1	1016.0	16.7	1.1	8.8	1.1	27.8	15	- 7.8	4+	0	15	0.0	58	40	- 18	20	7	3	8	T	0.7	29	17.4	35	1	12	9	9	5.2	
TENNESSEE																																
BRISTOL	459	961.7	1016.0	21.1	4.4	12.8	- 0.8	28.9	20	- 2.8	3	0	5	1.7	52	86	6	34	8	4	T	T	1.2	28	9.8	25	9	14	8	8	4.5	
CHATTANOOGA	203	991.2	1015.9	23.3	6.7	14.9	- 1.1	31.7	20	- 1.1	8+	0	2	5.0	57	57	- 52	26	7	2	25	T	0.6	29	11.2	SW	1	18	3	9	4.0	74
KNOXVILLE	299	981.0	1016.1	21.7	7.8	14.7	- 0.2	29.4	19	1.1	7+	0	0	3.3	51	98	4	38	9	5	178	51	1.1	26	13.4	W	21	12	8	10	4.7	77
MEMPHIS	79	1006.8	1016.9	22.8	8.9	15.8	- 0.5	30.0	19	0.0	7+	0	2	6.7	55	73	- 44	35	9	6	T	T	0.8	22	20.6	W	23	11	7	12	5.2	77
NASHVILLE	180	994.6	1016.3	22.2	6.7	14.4	- 0.9	30.6	20	- 0.6	11+	0	3	6.1	61	85	- 10	29	6	4	28	T	0.9	28	15.6	SW	27	13	9	8	4.9	73
OAK RIDGE R	276			22.2	6.1	14.2	- 0.1	29.4	19	0.0	8	0	1			120	13	44	9		8	T			16.5Y		13	13	5	12	4.6	
TEXAS																																
ABILENE	537	952.6	1013.6	25.0	11.1	18.1	0.1	35.6	26	- 1.1	7	2	1	4.4	49	62	4	44	4	4	0	0	2.1	18	17.4	S	3	15	6	7	4.3	73
AMARILLO	1098	889.3	1011.9	21.7	5.0	13.2	- 1.0	33.9	12	- 4.4	6	2	4	- 1.7	43	20	- 14	12	2	2	T	0	2.9	19	21.0	NE	13	16	7	7	4.1	84
AUSTIN	182	992.6	1014.5	26.7	13.9	20.1	0.3	35.0	27	2.8	7	1	0	10.6	61	27	- 63	26	3	2	0	0	1.6	15	12.1	N	6	11	5	14	5.5	58
BROWNSVILLE	6	1012.9	1013.5	28.3	18.9	23.5	0.2	35.6	29	7.8	7	5	0	16.7	70	46	7	40	4	1	0	0	4.0	13	14.8	SE	15	6	12	12	6.1	63
CORPUS CHRISTI	12	1012.9	1014.1	27.2	16.1	21.6	- 0.4	35.0	23	3.9	7	2	0	16.1	76	58	4	34	4	2	0	0	4.0	12	15.2	SE	16	8	8	14	6.2	61
DALLAS	147	997.6	1014.8	25.0	12.8	19.0	0.7	31.7	12	3.3	7+	0	0	8.3	54	71	- 31	28	7	5	0	0	2.3	15	13.4	NW	1	13	7	10	5.1	65
DEL RIO	313	977.0	1012.6	28.3	13.9	21.2	- 0.8	36.1	28	3.3	7	8	0	7.8	47	55	20	51	3	4	0	0	3.2	11	15.4	W	18	8	9	13	5.7	
EL PASO	1194	880.1	1010.8	25.0	8.9	17.0	- 0.4	31.7	11+	2.2	7	0	0	- 5.6	24	11	3	9	3	1	T	T	1.6	27	17.4	W	21	19	7	4	2.8	95
FORT WORTH	164	995.3	1015.5	23.9	11.7	17.8	- 0.4	30.6	12	- 0.6	7	0	1	8.9	62	70	- 21	36	6	6	0	0	2.1	16	13.0	18	8	10	6	14	5.6	
GALVESTON U	2			22.2	17.8	20.1	- 0.2	30.0	23	10.0	7	0	0			45	- 21	45	3		0	0			13.0	N	6					44
HOUSTON INTERCON	29	1012.2	1016.0	26.1	12.8	19.2	- 0.5	30.0	26	0.0	7	0	1	12.8	70	54	- 30	53	3	1	0	0	1.7	13	15.0	30	16	8	7	15	6.1	57
LUBBOCK	992	901.8	1012.2	23.3	7.2	15.4	0.1	32.2	11	- 1.7	6+	1	4	1.1	45	35	5	22	3	2	0	0	1.1	19	17.4	24	22	19	5	6	3.9	
MIDLAND	869	914.7	1012.1	25.0	9.4	17.1	- 1.2	31.7	28+	- 1.1	5	0	2	0.0	38	21	- 1	20	3	2	0	0	1.7	16	16.1	S	5	17	5	8	3.7	
PORT ARTHOR	5	1015.6		26.1	15.0	20.6	0.4	31.7	23	2.8	7	0	0	15.0	74	45	- 55	30	5	2	0	0	2.1	14	13.4	SE	17	10	6	14	5.6	62
SAN ANGELO	580	946.8	1012.8	27.2	11.7	19.3	0.2	35.6	26	- 1.7	7	5	1	4.4	45	99	48	84	5	4	0	0	2.1	17	13.0	2	1	14	6	10	4.5	
SAN ANTONIO	240	986.5	1014.2	28.3	13.3	20.8	0.7	35.0	27	1.7	7+	3	0	10.0	56	35	- 36	33	3	2	0	0	1.9	12	12.5	NE	1	10	6	14	6.0	62
VICTORIA	32	1010.8	1014.8	26.7	14.4	20.6	0.5	31.7	23	2.2	7	0	0	13.3	69	44	- 22	30	4	3	0	0	2.6	13	15.6Y	N	20+	8	7	15	6.3	
WACO	153	997.0	1014.9	26.1	13.9	19.9	0.7	34.4	27	1.7	7	1	0	10.0	57	71	- 28	47	5	5	0	0	2.2	19	12.5	35	1	12	6	12	5.1	
WICHITA FALLS	303	977.7	1014.1	25.6	8.9	17.2	0.6	33.9	26	- 2.2	6	4	4	6.1	54	19	- 45	14	4	5	0	0	2.3	13	16.5	36	1	13	9	8	4.6	
UTAH																																
MILFORD	1533	843.2		16.7	- 0.6	8.2	- 0.6	24.4	13	-10.0	2	0	19			23	5	8	7		183	25						13	8	9	4.7	
SALT LAKE CITY	1286	868.9	1013.6	16.7	1.7	9.3	- 0.9	24.4	10	- 5.6	1	0	9	- 1.1	53	55	10	14	12	2	43	25	0.7	19	19.2	S	17	8	7	16	5.6	64
WENDOVER	1274	867.9	1013.3	14.4	3.3	8.8	- 2.1	23.3	10	- 3.3	1	0	2			50	37	19	10		1	T						8	5	17	5.1	
VERMONT																																
BURLINGTON	101	1001.3	1013.6	7.8	- 2.2	2.9	- 2.2	15.6	13	-11.1	1	0	20	- 2.2	72	67	1	21	14	4	220	229	1.1	32	12.1	N	15	5	3	22	7.6	54
VIRGINIA																																
LYNCHBURG	279			21.1	4.4	12.7	- 0.8	30.6	13	- 1.1	3	0	1			58	- 22	42	6		122	76			13.1	SW	9	15	11	4	3.9	80
NORFOLK	7	1013.9	1014.6	19.4	7.2	13.3	- 1.2	30.6	13	1.7	1	0	0	3.9	56	55	- 25	27	7	0	T	0	0.6	29	19.7	NE	6	16	8	6	3.8	82
RICHMOND	51	1008.5	1014.8	21.7	3.9	12.8	- 1.7	31.1	13	0.6	16+	0	2	1.1	51	45	- 35	31	5	3	15	T	1.2	30	14.8	NW	14	15	7	6	4.1	78
ROANOKE	358	972.6	1014.6	21.7	4.4	13.1	- 0.5	29.4	20+	- 1.1	15+	0	2	- 1.1	42	65	- 14	46	6	1	185	76	2.2	30	14.3	SE	24	17	8	5	3.7	
WALLOPS ISLAND	3			15.6	6.1	10.9		21.1	25	1.1	15+	0	0			68		54	6		0	0			27.7Y	NNE	6					
WASHINGTON																																
OLYMPIA	59	1009.8	1017.3	14.4	1.1	7.8	- 2.2	25.6	26	- 3.3	24	0	10	3.3	76	71	- 5	19	14		T	T	1.7	21	11.6	SE	7	3	5	22	3.4	
QUILLAYUTE	55	1009.1	1016.6	12.8	2.2	7.5	- 0.9	23.9	25	- 2.2	21+	0	5	3.3	78	158	- 30	35	20	1	15	T	0.7	19	9.8	W	10+	2	6	22	8.2	40
SEATTLE TACOMA	122	1006.3	1016.9	13.9	5.0	9.4	- 0.2	24.4	26	0.6	1	0	0	2.2	67	61	T	25	15	0	T	0	1.7	23	13.1	W	14	3	7	20	7.8	54
SPOKANE	718	930.6	1015.0	13.3	1.7	7.4	- 1.1	21.1	5	- 2.8	16+	0	10	- 1.1	57	47	24	22	9	3	T	0	1.6	22	18.3	SW	9	4	10	16	7.0	48
STAMPEDE PASS R	1206	877.4		3.9	- 1.7	1.1	- 1.4	13.9	26	- 5.0	12+	0	24			62	- 81	14	17		541	4341						4	2	24	8.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

APRIL 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 32.2°C. or above	Temperature: No. of days Min. 0°C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 25 mm or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset) Clear, 0-3	No. of days (sunrise to sunset) Partly cloudy, 4-7	No. of days (sunrise to sunset) Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C.	C.	C.	C.	C		C.				C	%	Mm.	Mm.	Mm			Mm	Mm.	M p.s.		M p.s							%
WASHINGTON																																
WALLA WALLA U	289			16.1	5.0	10.6	- 1.6	25.0	5	0.6	1	0	0			34	- 1	10	10		T	T			14.3	NW	9	5	9	16	7.2	54
YAKIMA	321	977.3	1016.0	16.7	0.6	8.8	- 1.5	23.3	25	- 5.0	12	0	16	- 2.2	49	12	0	5	4	0	0	0	1.7	28	13.0	24	10	6	11	13	6.8	
WEST INDIES																																
SAN JUAN P.R.	4	1013.5	1015.9	29.4	23.3	26.5	1.7	33.3	24+	21.7	11	3	0	19.4	68	74	- 20	23	15	2	0	0	2.7	9	13.0	NE	4+	9	13	8	5.5	61
WEST VIRGINIA																																
BECKLEY	763	927.2	1016.0	16.7	2.8	9.7	- 0.8	25.6	13	- 2.8	15+	0	9	- 2.2	50	75	- 25	38	10	2	208	203	2.3	29	11.6	26	28+	11	11	8	5.0	
CHARLESTON	286	981.7	1016.0	18.9	3.3	11.1	- 1.9	28.9	13	- 2.8	15+	0	5	- 1.1	47	30	- 63	11	9	2	T	T	1.5	29	13.9	24	1	11	11	8	4.9	
ELKINS	594			17.2	- 2.2	7.4	- 2.7	28.3	13	- 8.3	15	0	21			26	- 62	9	10		122	76						9	9	12	5.8	
HUNTINGTON	252	985.8	1015.9	20.0	5.0	12.2	- 0.9	29.4	13	- 1.1	15+	0	3	1.1	50	30	- 63	13	6	3	0	0	1.1	28	13.4	29	13	12	8	10	5.2	
PARKERSBURG U	187			18.3	3.3	10.8	- 1.5	28.3	13	- 1.7	7	0	4			31	- 52	12	7		T	0			16.1	SW	1					65
WISCONSIN																																
GREEN BAY	208	990.2	1016.0	12.8	0.0	6.5	0.3	23.9	20	- 9.4	3	0	14	- 0.6	63	27	- 36	18	5	1	5	T	0.8	29	14.8	SW	11	10	10	10	5.4	62
LA CROSSE	198	991.5	1016.5	15.6	1.1	8.4	0.1	28.9	20	- 7.8	6+	0	11	- 0.6	61	44	- 26		9	4	13		0.5	25								
MADISON	262	984.4	1016.1	15.0	0.0	7.4	0.6	25.6	20	- 8.9	4	0	16	- 0.6	59	61	- 4	35	7	3	18	25	0.8	29	14.3	W	2	10	8	12	5.7	63
MILWAUKEE	205	991.2	1016.7	11.1	- 1.1	4.9	- 1.5	24.4	11	-10.6	3	0	17	- 1.7	63	33	- 31	18	7	2	18	25	0.6	31	18.3	NE	23	10	10	10	5.5	65
WYOMING																																
CASPER	1627	835.1	1014.1	12.2	- 2.2	4.9	- 1.2	23.3	17	-13.9	1	0	25	- 3.3	64	86	43	35	11	1	615	178	1.1	26	13.4	25	17	6	7	17	7.0	
CHEYENNE	1867	810.4	1015.0	11.7	- 1.7	5.0	- 0.9	21.1	10	- 8.9	5	0	20	- 4.4	57	71	24	18	12	4	330	152	1.2	30	17.9	NW	8	6	10	14	6.5	60
LANDER	1696	826.6	1013.9	12.2	- 2.2	5.0	- 1.2	21.7	17+	-13.3	1	0	22	- 5.6	54	133	70	55	8	1	1148	330	1.5	24	19.2	SW	17	5	9	16	6.8	72
SHERIDAN	1208	877.4	1015.6	13.9	- 1.1	6.5	0.1	25.6	10	- 7.2	5+	0	17	- 3.3	55	97	42	50	12	2	132	25	0.9	32	19.2	NW	10	5	7	18	7.4	62

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

APRIL 1971

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	171	3036	2542
HUNTSVILLE	161	3129	3051
MOBILE	57	1461	1560
MONTGOMERY	122	2316	2291
ALASKA			
ANCHORAGE	940	10543	9820
ANNETTE	694	6705	6258
BARROW	2090	19194	17772
BARTER ISLAND	2144	19216	17565
BETHEL	1430	13253	11988
BETTLES	1374	16703	
BIG DELTA	1152	14172	
COLD BAY	1103	8939	8498
FAIRBANKS	1141	14556	13502
GULKANA	1063	13929	
HOMER	956	9975	
JUNEAU	784	9113	8093
KING SALMON	1140	11686	10262
KOTZEBUE	1658	15543	14412
MC GRATH	1269	14836	13377
NOME	1558	14353	12668
ST. PAUL ISLAND	1300	10109	9537
SHEMYA	915	8204	8154
SUMMIT	1289	14363	
TALKEETNA	1010	12153	10633
UNALAKLEET	1548	14349	
YAKUTAT	982	9409	8025
ARIZONA			
FLAGSTAFF	683	6444	6535
PHOENIX	53	1327	1765
TUCSON	111	1710	1794
WINSLOW	374	4762	4686
YUMA	36	1079	1217
ARKANSAS			
FORT SMITH	176	3422	3270
LITTLE ROCK	182	3113	3210
CALIFORNIA			
BAKERSFIELD	117	2019	2103
BISHOP	356	4075	4048
BLUE CANYON	718	5298	4915
EUREKA U	502	4288	3986
FRESNO	181	2539	2436
LONG BEACH	146	1376	1603
LOS ANGELES	191	1402	1624
LOS ANGELES U	127	1043	1263
MT SHASTA R	623	5516	5216
OAKLAND	323	2791	2600
RED BLUFF	232	2737	2468
SACRAMENTO	249	2694	2665
SANDBERG R	580	4203	3888
SAN DIEGO	143	1364	1319
SAN FRANCISCO	354	2906	2675
SAN FRANCISCO U	351	2917	2582
SANTA MARIA	426	3116	2569
STOCKTON	217	2624	2642
COLORADO			
ALAMOSA	738	7887	7921
COLORADO SPRINGS	584	6148	6020
DENVER	508	5830	5929
GRAND JUNCTION	378	5443	5474
PUEBLO	450	4884	5273
CONNECTICUT			
BRIDGEPORT	531	5250	5382
HARTFORD	556	6085	5971
DELAWARE			
WILMINGTON	411	4719	4812
DIST.OF COLUMBIA			
WASHINGTON DULLES	401	4854	
WASHINGTON NATIONAL	294	4109	4150
FLORIDA			
APALACHICOLA U	66	1389	1308
DAYTONA BEACH	55	985	879
FORT MYERS	13	365	442
JACKSONVILLE	79	1382	1239
KEY WEST	0	61	108
LAKELAND U	31	686	661
MIAMI	5	213	214
ORLANDO	20	591	766
PENSACOLA	66	1504	1463
TALLAHASSEE	129	1958	1485
TAMPA	36	770	683
WEST PALM BEACH	18	381	253
GEORGIA			
ATHENS	156	2995	2907
ATLANTA	156	3003	2958
AUGUSTA	165	2764	2397
COLUMBUS	113	2261	2383
MACON	109	2223	2136
ROME	201	3438	3292
SAVANNAH	100	1919	1819
IDAHO			
BOISE	465	5347	5483
LEWISTON	457	5141	5213
POCATELLO	666	6930	6573
ILLINOIS			
CAIRO U	207	3889	3774
CHICAGO O HARE	484	6024	6307
CHICAGO MIDWAY	482	5952	5896
MOLINE	425	6319	6180
PEORIA	402	6057	5809
ROCKFORD	504	6669	6534
SPRINGFIELD	342	5327	5275
INDIANA			
EVANSVILLE	290	4690	4367
FORT WAYNE	518	6033	5977
INDIANAPOLIS	417	5557	5483
SOUTH BEND	562	6201	6140
IOWA			
BURLINGTON	385	6146	5904
DES MOINES	393	6310	6558
DUBUQUE	515	7167	7038
SIOUX CITY	390	6857	6698
WATERLOO	549	7756	7037
KANSAS			
CONCORDIA	330	5784	5312
DODGE CITY	337	5226	4853
GOODLAND	463	5691	5863
TOPEKA	274	5388	5046
WICHITA	253	5004	4527
KENTUCKY			
COVINGTON	351	4787	5092
LEXINGTON	382	4790	4578
LOUISVILLE	303	4501	4546
LOUISIANA			
ALEXANDRIA	129	2202	1921
BATON ROUGE	85	1733	1560
LAKE CHARLES	67	1361	1459
NEW ORLEANS	38	1517	1385
SHREVEPORT	94	2039	2184
MAINE			
CARIBOU	860	8899	9116
PORTLAND	695	7251	7028
MARYLAND			
BALTIMORE	364	4399	4564
MASSACHUSETTS			
BLUE HILL OBS R	647	6324	6032
BOSTON	586	5778	5390
WORCESTER	667	6953	6587
MICHIGAN			
ALPENA	796	7852	7904
DETROIT	573	6091	5970
DETROIT METRO	588	6328	6196
FLINT	646	6742	6524
GRAND RAPIDS	626	6902	6604
HOUGHTON LAKE	781	7903	7805
LANSING	621	6780	6567
MARQUETTE U	754	7689	7748
MUSKEGON	657	6727	6308
SAULT STE MARIE	868	8833	8370
MINNESOTA			
DULUTH	794	9355	9312
INTERNATIONAL FALLS	761	10087	9989
MINNEAPOLIS	537	7904	8013
ROCHESTER	566	8079	7901
ST CLOUD	612	8626	8448
MISSISSIPPI			
JACKSON	147	2332	2203
MERIDIAN	142	2463	2289
MISSOURI			
COLUMBIA REGIONAL	275	4884	4913
KANSAS CITY	208	4616	4602
ST JOSEPH	201	4955	5336
ST LOUIS	303	4855	4764
SPRINGFIELD	283	4640	4450
MONTANA			
BILLINGS	617	7176	6662
GLASGOW	595	8880	8511
GREAT FALLS	594	7420	7180
HAVRE	589	8712	8200
HELENA	699	7799	7553
KALISPELL	635	7653	7587
MILES CITY	550	7856	7348
MISSOULA	600	7046	7515
NEBRASKA			
GRAND ISLAND	396	6348	6274
LINCOLN U	321	5985	5663
NORFOLK	435	6914	6698
NORTH PLATTE	501	6815	6379
OMAHA	319	6151	6024
SCOTTSBLUFF	497	6647	6313
VALENTINE	508	7327	7053
NEVADA			
ELKO	690	6712	6832
ELY	705	7202	7052
LAS VEGAS	105	2499	2703
RENO	567	5511	5786
WINNEMUCCA	604	5933	6245
NEW HAMPSHIRE			
CONCORD	682	7313	7010
MT WASHINGTON OBS	1334	12343	12284
NEW JERSEY			
ATLANTIC CITY	514	4907	4664
ATLANTIC CITY U	480	4549	4528
NEWARK	402	4730	4931
TRENTON U	434	4794	4847
NEW MEXICO			
ALBUQUERQUE	343	4490	4267
CLAYTON	439	5093	4954
ROSWELL	206	3437	3762
NEW YORK			
ALBANY	672	6951	6591
BINGHAMTON	723	7220	6874
BUFFALO	691	6483	6655
NEW YORK U	419	4853	4744
NEW YORK KENNEDY	508	4965	5040
NEW YORK LA GUARDIA	455	4721	4681
ROCHESTER	707	6699	6421
SYRACUSE	658	6690	6463
NORTH CAROLINA			
ASHEVILLE	290	4014	4346
CAPE HATTERAS R	300	2816	2587
CHARLOTTE	208	3408	3169
GREENSBORO	312	4055	3758
RALEIGH	258	3688	3359
WILMINGTON	160	2508	2347
NORTH DAKOTA			
BISMARCK	631	8907	8405
FARGO	609	8943	8795
WILLISTON	649	9043	8745
OHIO			
AKRON	554	5804	5796
CINCINNATI OBS	370	4885	4679
CLEVELAND	650	6201	5886
COLUMBUS	475	5535	5462
DAYTON	403	5402	5425
MANSFIELD	563	5852	6098
TOLEDO	561	6310	6192
YOUNGSTOWN	642	6414	6109
OKLAHOMA			
OKLAHOMA CITY	163	3721	3691
TULSA	176	3742	3813
OREGON			
ASTORIA	549	4908	4592
BURNS U	665	6763	6414
EUGENE	496	4474	4312
MEACHAM	806	7312	7008
MEDFORD	489	4469	4688
PENDLETON	460	5115	4859
PORTLAND	454	4307	4285
SALEM	528	4883	4337
SEXTON SUMMIT R	750	5988	5510
PENNSYLVANIA			
ALLENTOWN	512	5740	5619
ERIE	723	6487	6103
HARRISBURG	432	5067	5115
PHILADELPHIA	394	4705	4974
PITTSBURGH	562	5833	5753
SCRANTON	593	6377	6026
WILLIAMSPORT	495	5532	5733
RHODE ISLAND			
BLOCK ISLAND	659	5494	5361
PROVIDENCE	566	5851	5667
SOUTH CAROLINA			
CHARLESTON	127	2189	2033
CHARLESTON U	86	1899	1794
COLUMBIA	155	2711	2484
GRNVLLE-SPRTNBRG	188	3415	3021
SOUTH DAKOTA			
ABERDEEN	515	8116	8088
HURON	579	8063	7848
RAPID CITY	563	7343	6893
SIOUX FALLS	511	7897	7491
TENNESSEE			
BRISTOL	296	4103	4075
CHATTANOOGA	206	3620	3229
KNOXVILLE	209	3587	3451
MEMPHIS	171	3237	3210
NASHVILLE	227	3851	3538
OAK RIDGE R	233	3831	3761
TEXAS			
ABILENE	96	2433	2624
AMARILLO	290	3988	3929
AUSTIN	52	1400	1711
BROWNSVILLE	6	388	600
CORPUS CHRISTI	26	647	914
DALLAS	71	1995	2357
DEL RIO	35	1209	1504
EL PASO	110	2572	2700
FORT WORTH	97	2205	2405
GALVESTON U	30	968	1235
HOUSTON INTERCON	72	1417	1676
LUBBOCK	186	3393	3547
MIDLAND	119	2429	2591
PORT ARTHUR	43	1142	1447
SAN ANGELO	81	1902	2255
SAN ANTONIO	52	1228	1546
VICTORIA	45	997	1173
WACO	50	1663	2030
WICHITA FALLS	131	3063	2826
UTAH			
MILFORD	540	6025	6131
SALT LAKE CITY	499	5629	5735
WENDOVER	506	5830	5550
VERMONT			
BURLINGTON	821	8055	7826
VIRGINIA			
LYNCHBURG	303	4194	4088
NORFOLK	269	3257	3384
RICHMOND	295	3928	3812
ROANOKE	285	4163	4085
WALLOPS ISLAND	394	4100	
WASHINGTON			
OLYMPIA	560	5392	4752
QUILLAYUTE	578	5426	5066
SEATTLE-TACOMA	472	4677	4691
SPOKANE	584	5360	6232
STAMPEDE PASS R	925	8471	8146
WALLA WALLA U	412	4485	4583
YAKIMA	508	5676	5652
WEST VIRGINIA			
BECKLEY	461	5304	5195
CHARLESTON	387	4759	4371
ELKINS	580	5894	5429
HUNTINGTON	322	4467	4355
PARKERSBURG U	404	4759	4633
WISCONSIN			
GREEN BAY	636	8011	7595
LA CROSSE	533	7674	7275
MADISON	582	7518	7451
MILWAUKEE	716	7288	7128
WYOMING			
CASPER	714	7255	6900
CHEYENNE	713	6924	6795
LANDER	716	7390	7336
SHERIDAN	631	7465	7167

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

APRIL 1971

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	35	36	
HUNTSVILLE	50	50	
MOBILE	151	219	
MONTGOMERY	58	67	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	M	0	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	0	0	
BIG DELTA	M	0	
COLD BAY	0	M	
FAIRBANKS	0	0	
GULKANA	0	0	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	M	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	0	
PHOENIX	107	192	
TUCSON	51	102	
WINSLOW	M	1	
YUMA	116	233	
ARKANSAS			
FORT SMITH	25	27	
LITTLE ROCK	19	30	
CALIFORNIA			
BAKERSFIELD	32	39	
BISHOP	0	0	
BLUE CANYON	0	0	
EUREKA U	0	0	
FRESNO	8	8	
LONG BEACH	12	56	
LOS ANGELES	13	44	
LOS ANGELES U	46	161	
MT SHASTA R	0	0	
OAKLAND	0	0	
RED BLUFF	0	0	
SACRAMENTO	0	0	
SANDBERG R	0	0	
SAN DIEGO	19	27	
SAN FRANCISCO	M	0	
SAN FRANCISCO U	0	0	
SANTA MARIA	0	7	
STOCKTON	0	0	
COLORADO			
ALAMOSA	0	0	
COLORADO SPRINGS	0	0	
DENVER	0	0	
GRAND JUNCTION	0	0	
PUEBLO	0	0	
CONNECTICUT			
BRIDGEPORT	0	M	
HARTFORD	0	0	
DELAWARE			
WILMINGTON	0	0	
DIST.OF COLUMBIA			
WASHINGTON DULLES	0	0	
WASHINGTON NATIONAL	0	0	
FLORIDA			
APALACHICOLA U	124	146	
DAYTONA BEACH	150	299	
FORT MYERS	182	517	
JACKSONVILLE	121	210	
KEY WEST	334	999	
LAKELAND U	190	409	
MIAMI	315	912	
ORLANDO	238	502	
PENSACOLA	126	172	
TALLAHASSEE	70	108	
TAMPA	174	372	
WEST PALM BEACH	227	611	
GEORGIA			
ATHENS	39	39	
ATLANTA	38	38	
AUGUSTA	26	26	
COLUMBUS	61	64	
MACON	80	83	
ROME	20	20	
SAVANNAH	92	124	
HAWAII			
HILO	185	731	
HONOLULU	326	1095	
KAHULUI	285	925	
LIHUE	336	1028	
IDAHO			
BOISE	0	0	
LEWISTON	0	M	
POCATELLO	M	0	
ILLINOIS			
CAIRO U	49	49	
CHICAGO O HARE	0	0	
CHICAGO MIDWAY	2	2	
MOLINE	9	M	
PEORIA	14	14	
ROCKFORD	1	1	
SPRINGFIELD	32	32	
INDIANA			
EVANSVILLE	28	28	
FORT WAYNE	2	2	
INDIANAPOLIS	2	2	
SOUTH BEND	3	3	
IOWA			
BURLINGTON	20	20	
DES MOINES	13	13	
DUBUQUE	1	1	
SIOUX CITY	7	7	
WATERLOO	2	2	
KANSAS			
CONCORDIA	5	5	
DODGE CITY	1	3	
GOODLAND	0	0	
TOPEKA	21	24	
WICHITA	19	19	
KENTUCKY			
COVINGTON	0	0	
LEXINGTON	0	M	
LOUISVILLE	M	2	
LOUISIANA			
ALEXANDRIA	81	118	
BATON ROUGE	132	186	
LAKE CHARLES	120	188	
NEW ORLEANS	151	249	
SHREVEPORT	82	129	
MAINE			
CARIBOU	0	0	
PORTLAND	0	0	
MARYLAND			
BALTIMORE	M	M	
MASSACHUSETTS			
BLUE HILL OBS R	0	0	
BOSTON	0	0	
WORCESTER	0	0	
MICHIGAN			
ALPENA	0	0	
DETROIT	1	1	
DETROIT METRO	0	0	
FLINT	0	0	
GRAND RAPIDS	0	0	
HOUGHTON LAKE	0	0	
LANSING	0	M	
MARQUETTE U	0	0	
MUSKEGON	0	0	
SAULT STE MARIE	0	0	
MINNESOTA			
DULUTH	0	0	
INTERNATIONAL FALLS	0	0	
MINNEAPOLIS	2	M	
ROCHESTER	0	0	
ST CLOUD	0	0	
MISSISSIPPI			
JACKSON	69	95	
MERIDIAN	57	68	
MISSOURI			
COLUMBIA REGIONAL	28	28	
KANSAS CITY	54	59	
ST JOSEPH	54	58	
ST LOUIS	35	37	
SPRINGFIELD	19	19	
MONTANA			
BILLINGS	0	0	
GLASGOW	0	0	
GREAT FALLS	0	0	
HAVRE	0	M	
HELENA	0	0	
KALISPELL	0	0	
MILES CITY	0	0	
MISSOULA	M	0	
NEBRASKA			
GRAND ISLAND	6	6	
LINCOLN U	8	M	
NORFOLK	3	3	
NEBRASKA			
NORTH PLATTE	0	0	
OMAHA	12	12	
SCOTTSBLUFF	M	0	
VALENTINE	0	0	
NEVADA			
ELKO	0	0	
ELY	0	0	
LAS VEGAS	53	77	
RENO	0	M	
WINNEMUCCA	0	M	
NEW HAMPSHIRE			
CONCORD	0	0	
MT WASHINGTON OBS	0	M	
NEW JERSEY			
ATLANTIC CITY	0	0	
ATLANTIC CITY U	M	0	
NEWARK	M	0	
TRENTON U	0	0	
NEW MEXICO			
ALBUQUERQUE	0	5	
CLAYTON	0	4	
ROSWELL	17	31	
NEW YORK			
ALBANY	0	0	
BINGHAMTON	M	0	
BUFFALO	0	0	
NEW YORK U	M	M	
NEW YORK KENNEDY	0	0	
NEW YORK LA GUARDIA	0	M	
ROCHESTER	0	M	
SYRACUSE	M	0	
NORTH CAROLINA			
ASHEVILLE	3	3	
CAPE HATTERAS R	1	1	
CHARLOTTE	12	12	
GREENSBORO	0	0	
RALEIGH	6	6	
WILMINGTON	31	31	
NORTH DAKOTA			
BISMARCK	0	0	
FARGO	M	0	
WILLISTON	0	0	
OHIO			
AKRON	M	0	
CINCINNATI ABBE OB	0	0	
CLEVELAND	0	0	
COLUMBUS	M	0	
DAYTON	3	3	
MANSFIELD	M	0	
TOLEDO	1	1	
YOUNGSTOWN	0	M	
OKLAHOMA			
OKLAHOMA CITY	31	35	
TULSA	40	43	
OREGON			
ASTORIA	M	0	
BURNS U	0	0	
EUGENE	0	0	
MEACHAM	0	0	
MEDFORD	M	0	
PENDLETON	0	0	
PORTLAND	0	0	
SALEM	0	0	
SEXTON SUMMIT R	0	0	
PACIFIC AREA			
GUAM TAGUAC R	448	1658	
JOHNSTON	374	1415	
KOROR R	539	2053	
KWAJALEIN	469	1996	
MAJURO	443	1891	
PAGO PAGO	438	1776	
PONAPE R	450	1803	
TRUK MOEN ISLAND	507	2004	
WAKE	440	1584	
YAP R	490	1933	
PENNSYLVANIA			
ALLENTOWN	0	0	
ERIE	0	0	
HARRISBURG	0	0	
PHILADELPHIA	0	0	
PITTSBURGH	0	0	
SCRANTON	0	0	
WILLIAMSPORT	1	1	
RHODE ISLAND			
BLOCK ISLAND	0	0	
PROVIDENCE	0	0	
SOUTH CAROLINA			
CHARLESTON	65	77	
CHARLESTON U	75	80	
COLUMBIA	51	59	
GRNVLLE SPRTNBRG	20	20	
SOUTH DAKOTA			
ABERDEEN	7	7	
HURON	0	0	
RAPID CITY	M	0	
SIOUX FALLS	4	4	
TENNESSEE			
BRISTOL	5	5	
CHATTANOOGA	27	27	
KNOXVILLE	20	20	
MEMPHIS	46	49	
NASHVILLE	23	23	
OAK RIDGE R	16	16	
TEXAS			
ABILENE	MM	118	
AMARILLO	18	31	
AUSTIN	157	277	
BROWNSVILLE	294	887	
CORPUS CHRISTI	207	566	
DALLAS	112	157	
DEL RIO	196	339	
EL PASO	45	90	
FORT WORTH	71	98	
GALVESTON U	130	158	
HOUSTON INTERCON	126	247	
LUBBOCK	35	49	
MIDLAND	59	78	
PORT ARTHUR	167	275	
SAN ANGELO	139	192	
SAN ANTONIO	189	369	
VICTORIA	172	381	
WACO	142	228	
WICHITA FALLS	78	92	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	0	0	
WENDOVER	M	0	
VERMONT			
BURLINGTON	M	0	
VIRGINIA			
LYNCHBURG	3	3	
NORFOLK	M	6	
RICHMOND	0	M	
ROANOKE	4	4	
WALLOPS ISLAND	0	0	
WEST INDIES			
SAN JUAN P.R.	445	1634	
WASHINGTON			
OLYMPIA	0	M	
QUILLAYUTE	0	M	
SEATTLE TACOMA	0	0	
SPOKANE	M	0	
STAMPEDE PASS R	M	0	
WALLA WALLA U	M	0	
YAKIMA	0	0	
WEST VIRGINIA			
BECKLEY	0	M	
CHARLESTON	M	0	
ELKINS	0	0	
HUNTINGTON	0	M	
PARKERSBURG U	0	0	
WISCONSIN			
GREEN BAY	M	0	
LA CROSSE	1	1	
MADISON	0	0	
MILWAUKEE	0	0	
WYOMING			
CASPER	0	0	
CHEYENNE	0	0	
LANDER	0	0	
SHERIDAN	0	M	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

APRIL 1971

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ø ALL OTHER			
								† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	2	1	0	0	5	0	0	5	5	1	8	6	5	0	0	4	0									0	0	5	4
Alaska *																													
Arizona										0	0	4	0																
Arkansas	1	1	0	0	0	0	0	0	3	0	5	5	0	0	1	0	0												
California	1	1	0	0	1																								
Colorado	3	1	0	0	3																								
Connecticut										0	0	4	0					0	0	4	0					0	0	4	0
Delaware										0	0	4	0													0	0	4	0
Florida	1	1	0	0	3	0	0	3	5																				
Georgia	14	4	1	27	6	0	0	5	5	0	1	5	0	1	0	4	0												
Hawaii																										0	0	5	*
Idaho										0	11	4						0	0	4									
Illinois	1	1	1	20	6	0	0	?	0																				
Indiana	2	1	0	2	4	0	0	4	2																				
Iowa										0	0	5	0	0	0	5	0												
Kansas						0	3	4	4	0	1	4	0																
Kentucky	7	1	9	150	7	0	1	?	?	0	0	?	?	0	0	5	'												
Louisiana *																													
Maine										0	0	4	0					0	0	4	0								
Maryland										0	0	4	0																
Massachusetts										0	0	4	0					0	0	5	0								
Michigan										0	1	4	0																
Minnesota														0	0	3	0	0	0	3	0								
Mississippi	1	1	0	0	4	0	0	?	0	0	0	?	0	0	0	5	0									0	0	?	0
Missouri	1	1	0	0	4	0	0	7	0	0	0	7	0	1	0	4	0												
Montana *																													
Nebraska	1	1	0	0	3																								
Nevada										0	0	?	0																
New Hampshire										0	0	4	0					0	0	4	0								
New Jersey *																													
New Mexico	4		0	0	4													1	0	0	0								
New York										2	4	5																	
North Carolina						0	0	0	4	0	0	4	0	0	0	5	0												
North Dakota										0	0	5	0																
Ohio								?								4												?	
Oklahoma	8	3	0	7	5	0	15	6	6	0	1	6	0	0	0	?	0												
Oregon						0	0	0	4	0	0	4	0																
Pacific Area *																													
Pennsylvania										0	0	4	0	0	0	5	0									0	0	4	0
Puerto Rico *																													
Rhode Island										0	0	4	0					0	0	4	0					0	0	3	0
South Carolina										1	8	6	2																
South Dakota										0	0	?	?													0	0	?	?
Tennessee	2	1	0	6	5	0	0	7	C	0	15	7	?	0	0	4	0									0	0	4	C
Texas	24	6	0	54	6	0	0	6	6	0	0	5	0																
Utah *																													
Vermont										0	0	3	0					0	0	4	0								
U.S. Virgin Is. *																													
Virginia										0	0	4	0																
Washington *																													
West Virginia										0	0	2	0																
Wisconsin						0	0	4	0	0	0	4	0													0	0	5	0
Wyoming	2	2	0	0	4																								

° Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
Freezing drizzle and freezing rain, commonly known as glaze.
ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
APRIL 1971

Elmer R. Nelson, Office of Hydrology

The most significant flooding during April occurred along the Canadian border in northeastern North Dakota. Farmlands on both sides of the international border were flooded due to runoff from heavy snow areas in the Pembina Basin. Dikes, built in past years and enlarged this year, held off flood waters from the Pembina River in Walhalla and Neche, N. Dak., which cut through low-lying land and park areas. Crests at Walhalla and Neche were higher than in the spring of 1969. The flood damages and cost of protection measures were estimated at $904,000.

The Chena River and other streams in Alaska remained ice covered during April. The water equivalent of snow on the ground at Fairbanks, Alaska, decreased from 8 inches on March 24 to 4 inches on April 23. However, the water equivalent of the snowpack in most of the Chena River Basin remained at least 8 inches.

HUDSON BAY DRAINAGE

Red River of the North Basin--Widespread flooding occurred along the Pembina River during April as water inundated 25,000 to 35,000 acres of agricultural lands in Canada and North Dakota. Most of the flooding was on the American side of the border. The biggest threat along the river was to Neche, N. Dak., where an intensive flood fight saved the town from the highest crest on record, 22.22 feet.

Flooding occurred to a lesser degree on the Park, Souris, Roseau, Two Rivers, and Red Lake Rivers. On the Park River, damage was chiefly to city property in the Grafton, N. Dak., area. A few trailer houses were damaged and water backed up into several basements. Flooding on the Souris River was limited to a small unpopulated area in the river bottoms below Lake Darling. Flooding on the Roseau, Two Rivers, and Red Lake Rivers in Minnesota was mainly limited to agricultural and wildlife areas adjacent to the streams. The dikes at Crookston, Minn., held back a crest of more than 5 feet above flood stage.

Light snow accumulations through the upper portion of the Red River of the North Basin, favorable temperature, and precipitation patterns contributed to lower river stages this spring. Although ground frost depths were extreme in many places this winter, the porous condition of surface soils in some areas also contributed to lower river stages this spring. The absence of frost in the Red Lake River Basin helped to reduce runoff in that basin.

The total flood damages and cost of protection measures in the Red River of the North Basin were estimated at $1.2 million. Of this total, $904,000 occurred in the Pembina Basin.

ST. LAWRENCE DRAINAGE

Lake Ontario--Canaseraga Creek at Groveland, N. Y., rose 2.5 feet above flood stage on the 13th-14th. This was the last in a succession of flood occurrences on the flatland below Dansville, N. Y. Since cultivation had not yet begun, no damage to crops or structures occurred. However, both Route 258 and Route 63 were flooded.

ATLANTIC SLOPE DRAINAGE

Snowmelt through the central and upper Connecticut Basin caused rises on the Connecticut River to 1 foot above flood stage at Hartford, Conn., on the 20th. Lowland flooding of meadows occurred but no damage resulted.

All major water-supply reservoirs in New Jersey were either 99 percent of capacity or spilling at the end of April. New York City's reservoirs on the upper Delaware increased storage by 35.7 billion gallons during April and are at 99 percent of total capacity. Both Cannonsville and Pepacton Reservoirs were spilling. Lake Wallenpaupack in the Poconos increased storage by 4.9 billion gallons and reached 84 percent of usable capacity at the end of April.

Heavy rainfall on the 6th-7th caused minor flooding on the Raritan River in New Jersey. This was a coastal storm that intensified along the Carolina coast and moved northward from Cape Hatteras. The precipitation ranged from 2 inches to over 3.5 inches in northern and central New Jersey. Some stations in the heavy precipitation area reported snowfall of 4 to 8 inches, with Greenwood Lake in extreme northern New Jersey reporting 9 inches of snowfall during the storm.

Minor overflow occurred on the Tioughnioga River at Whitney Point, N. Y., on the 13th-15th and on the Chenango River at Sherburne, N. Y., on the 14th.

Heavy precipitation during the 48-hour period ending at 7 a.m. on the 7th caused flooding on the Neuse River in eastern North Carolina on the 7th-15th. Although most of the precipitation fell as rain, snow occurred over the headwater area of the Roanoke River Basin where as much as 10 inches accumulated on the ground. Rainfall totals ranged from 1 to 2 inches, with local amounts up to 3 inches along the coast.

The Lumber River in the Lumberton, N. C., area continued in flood from January 30 to April 17. It was about 2 feet above flood stage in the beginning of April and was falling slowly from the severe flood of the previous month.

The Little Pee Dee River at Galivants Ferry, S. C., was slightly above flood stage in the beginning of the month. It fell slowly within its banks on April 13 after having been in flood since March 2, a period of 43 days. Minor flooding occurred on the Pee Dee River at Peedee, S. C., on April 2-3. The North Fork of the Edisto at Orangeburg, S. C., which rose above flood stage on March 28, receded within its banks on April 1. The Edisto River at Givhans, S. C., continued in flood from March 29 to April 10.

Minor flooding occurred in Georgia during the first half of April. The Savannah River at Clyo, Ga., was receding from a crest of 8 feet flood stage on March 14. A secondary crest, 5 feet lower, occurred on April 6-7. No significant damage occurred from the flooding on the Ogeechee, Oconee, and Altamaha Rivers.

EAST GULF OF MEXICO DRAINAGE

Heavy rains (1 to 2 inches) on the 23d-24th caused flash flooding on small streams in the Chattahoochee Basin. Peachtree Creek at Atlanta, Ga., reached a crest slightly more than 3 feet above flood stage for a brief period on the 23d. The minor flooding on the Flint and Apalachicola Rivers was due to heavy rains on March 25-26.

The Choctawhatchee River at Caryville, Fla., was in recession but slightly above flood stage on April 1. Additional rains of 1 to 2 inches on the 5th-6th caused an additional rise, with minor flooding on the 6th-9th. The flooding on the Conecuh and Alabama Rivers in Alabama was due to heavy rains during the latter part of March.

Moderate rains on the 21st-23d caused minor flooding on the East Fork Tombigbee River at Fulton, Miss.,

on the 24th-27th. No damage resulted from this overflow.

The widespread lowland flooding along the Pearl River at Jackson, Miss., and the lower portion in Louisiana during the first half of April was due to heavy rains during March. Heavy showers on April 20 caused minor overflow at Jackson, Miss., on the 22d-24th and at Bogalusa, La., on the 26th-30th. All areas adjacent to the rivers remained too wet for timber cutting and agricultural operations during the entire month.

MISSISSIPPI SYSTEM

Upper Mississippi Basin--Precipitation during April in the Upper Mississippi Basin was much below normal for the second consecutive month. The precipitation that did occur (1 to 1.25 inches) fell in small amounts with more than one-half of the total occurring on April 27-28, which was well after the crests occurred.

The temperature pattern during April was favorable for slow and orderly runoff. The month began cold with below freezing temperatures on April 1-7, 13-14, and 21-24. Temperatures on the days in between were in the fifties or higher with nighttime lows above 32°.

The spring snowmelt in Minnesota and Wisconsin produced overflows which were generally less than 2 feet above flood stage.

Snowmelt flooding on streams in Iowa during April was minor. Crests on the East Fork Des Moines at Burt, Iowa, and on the North Raccoon at Jefferson, Iowa, were reached on March 17 and March 30. The Shell Rock and Cedar Rivers reached minor crests on April 1-2.

The main stem of the Mississippi crested between April 14 and April 29. Crests were generally less than 2 feet above flood stage.

Missouri Basin--Heavy rains in the Bozeman and Bridger Mountain area caused the East Gallatin River in Montana to overflow its banks on the 24th-25th. Much silt was carried by the river and a few homes along its banks were briefly evacuated. The river reached a maximum flow of 2,050 c.f.s. on the morning of the 25th, which was the highest flow reached since 1953.

Minor flooding occurred during the last week of April on small creeks in Boulder County, Colo. The lower South Platte River rose to near flood stage at some points as the water moved downstream.

Moderate snowmelt during March caused the Little Sioux River in western Iowa to reach 1 foot to 3 feet above flood stage over the upper reaches on March 30 to April 1. Lowland flooding resulted in minor damage with no property losses.

Arkansas Basin--Heavy rain up to 9.25 inches in Bedrock Creek Basin in north-central Oklahoma on the 27th-28th caused an area of flooding 1 mile wide and 15 miles long. The water was 1-1/2 to 2 feet deep over the flood plain. As much as 4.5 inches of rain occurred in 2 to 4 hours. Damage to crops was estimated at $300,000. Partial damage to crops was from hail.

GREAT BASIN

Minor snowmelt flooding occurred on the lower Blacksmith Fork in northern Utah and in the upper Bear River on April 30 and May 1. Precipitation during April was above normal through northern Nevada, Wyoming, and the northern mountains of Utah and below normal in southern Utah and southern Colorado.

PACIFIC SLOPE DRAINAGE

Sacramento Basin--Heavy precipitation during the last of March caused rises along the Sacramento River on April 1-4. Minor overflow occurred at Tisdale Weir into the Sutter By-Pass.

Columbia Basin--Heavy rains on the 22d-24th over the middle and upper Snake River Basin increased streamflow on the Portneuf at Pocatello, Idaho, and Henrys Fork near Rexburg, Idaho. Willow and Sand Creeks, east of Idaho Falls, rose to bankfull stages but did not overflow.

Heavy precipitation between the 8th and the 11th in the northern Willamette Basin caused the Pudding River at Aurora, Oreg., to exceed flood stage by 1 foot on the 10th-13th. The Corps of Engineers estimated damages at $1,100. Uncontrolled streams in the Willamette Basin responded to the heavy rains with the flow in the Willamette at Salem, Oreg., increasing from 26,000 c.f.s. on the 8th to a peak flow of 61,000 c.f.s. on the 11th. In the local Portland area, Johnson Creek at Sycamore, Oreg., rose from 30 c.f.s. on the 8th to a peak flow of 620 c.f.s. (6.8 feet) on the 9th. Bankfull stage at Sycamore is 7 feet.

FLOOD STAGE DATA

(All dates in April unless otherwise specified)

APRIL 1971

River and station	Flood stage	Above flood stages -dates From—	To—	Crest * Stage	Date
	Ft.			Ft.	
HUDSON BAY DRAINAGE					
Red Lake: High Landing, Minn.	T6.5	1	10	10.5	8
Crookston, Minn.	15	10	11	20.7	10
Park: Grafton, N. Dak.	12	10	15	16.4	10
Two Rivers: Hallock, Minn.	802	9	14	804.2	10
		20	22	802.5	20
Pembina: Windygates, Manitoba, Canada	16.5	10	11	17.8	10
Walhalla, N. Dak.	11	10	13	14.6	11
Neche, N. Dak.	18	10	17	22.2	12
Roseau: Roseau, Minn.	16	8	8	16.0	8
Souris: Foxholm 3 E, N. Dak.	T8	16	30	11.1	22
Red River of the North: Grand Forks, N. Dak.	28	11	11	28.0	11
ST. LAWRENCE DRAINAGE					
Lake Ontario					
Canaseraga Creek: Groveland, N. Y.	11	13	14	13.5	14
ATLANTIC SLOPE DRAINAGE					
Connecticut: Hartford, Conn.	16	20	20	17.0	20
Raritan: Manville, N. J.	12	7	7	12.4	7
Bound Brook, N. J.	8	7	7	8.5	7
Tioughnioga: Whitney Point, N. Y.	12	13	15	E13.4	14
Chenango: Sherburne, N. Y.	8	14	14	8.3	14
Neuse: Smithfield, N. C.	13	7	11	14.9	10
Goldsboro, N. C.	14	8	14	15.3	11
Kinston, N. C.	14	13	15	14.1	14
Lumber: Lumberton, N. C.	9	Jan. 30	17	11.8	Feb. 10
				11.4	Feb. 26-28
				14.4	Mar. 5
Little Pee Dee: Galivants Ferry, S. C.	9	Mar. 2	13	12.3	Mar. 8
Pee Dee: Peedee, S. C.	19	2	3	19.1	2
North Fork Edisto: Orangeburg, S. C.	8	Mar. 28	1	8.1	Mar. 28
Edisto: Givhans, S. C.	10	Mar. 29	10	11.5	2-3
Savannah: Wade Plantation, Ga.	15	1	5	#15.2	1
Clyo, Ga.	11	Mar. 4	13	#18.9	Mar. 14
				13.9	6-7
Ogeechee: Midville, Ga.	6	Mar. 31	1	# 6.5	Mar. 31
Dover, Ga.	7	Mar. 29	7	# 7.7	3
Eden, Ga.	9	Mar. 31	13	#10.4	7
Oconee: Mount Vernon, Ga.	16	Mar. 31	3	17.75	2
Altamaha: Charlotte, Ga.	15	1	10	17.8	5
EAST GULF OF MEXICO DRAINAGE					
Peachtree Creek: Atlanta, Ga.	13	23	23	16.2	23
Flint: Albany, Ga.	20	Mar. 29	1	#21.2	Mar. 31
Apalachicola: Blountstown, Fla	15	Mar. 25	11	#21.5	Mar. 30
Choctawhatchee: Caryville, Fla	12	Mar. 29	3	13.2	Mar. 31
		6	9	12.4	7
Conecuh: Brewton, Ala.	17	1	M	17.4	2
Alabama: Claiborne, Ala	40	Mar. 29	4	41.7	1
East Fork Tombigbee: Fulton, Miss.	16	24	27	16.6	22-23
Tombigbee: Coffeyville Lock & Dam, Ala. (formerly Jackson Lock & Dam)	43	Mar. 27	8	45.8	1
Pearl: Jackson, Miss	18	Feb. 23	7	32.1	Mar. 3
		22	24	20.7	23
Bogalusa, La.	15	Feb. 24	12	19.6	Mar. 10
		26	30	16.5	25
Pearl River, La.	12	Feb. 27	11	15.5	Mar. 8
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Crow: Delano, Minn.	8	Mar. 23	8	# 9.8	Mar. 30
Minnesota: Jordan (nr), Minn.	20	Mar. 19	12	25.2	Mar. 23
				24.0	3
Chaska, Minn.	18	Mar. 21	11	21.5	Mar. 25
				21.0	3
Savage, Minn.	698	Mar. 22	17	700.3	Mar. 27
				700.8	5,6
Chippewa: Eau Claire, Wis.	773	13	13	773.1	13
Durand, Wis.	11	13	17	12.7	14
Zumbro: Zumbro Falls, Minn.	18	1	1	18.1	1
Theilman (nr), Minn.	38	1	2	39.45	1
Trempealeau: Dodge, Wis.	7	2	4	7.6	4
Black: Galesville, Wis.	12	11	12	12.4	12
Root: Hokah, Minn.	47	Mar. 31	3	48.9	2
Upper Iowa: Dorchester (nr), Iowa	14	Mar. 31	2	15.05	1
Wisconsin: Merrill, Wis.	11	12	13	11.6	13
Portage, Wis.	17	14	14	17.1	14
Shell Rock: Shell Rock, Iowa	12	1	3	13.0	2
Cedar: Charles City, Iowa	12	1	3	12.0	1
East Fork Des Moines: Burt, Iowa	10	Mar. 14	13	11.9	Mar. 17
North Raccoon: Jefferson, Iowa	10	Mar. 29	5	10.4	Mar. 30
Mississippi: Libby, Minn.	13	16	May 3	15.7	24
Aitkin, Minn.	15	17	30	16.0	24
Fort Ripley, Minn.	10	14	15	10.1	14
Wabasha, Minn.	12	13	20	13.3	16
Winona, Minn.	13	14	20	14.4	17
LaCrosse, Wis.	12	15	21	12.7	17
Guttenberg, Iowa	15	17	24	16.1	20
Dubuque, Iowa	17	17	26	19.1	21
Clinton, Iowa	16	20	28	17.4	23
LeClaire, Iowa	10	20	27	11.1	24
Davenport, Iowa	15	22	27	16.8	25
Muscatine, Iowa	16	22	28	16.8	25
Keithsburg, Ill.	12	18	May 1	13.8	25
Burlington, Iowa	15	23	28	15.5	26
Hannibal, Mo.	16	25	May 1	16.8	28
Louisiana, Mo.	15	27	30	15.1	28
Clarksville, Mo.	25	28	30	25.3	28-29
Missouri Basin					
Little Sioux: Spencer, Iowa	10	Mar. 28	4	11.5	Mar. 30
Linn Grove, Iowa	12	Mar. 28	7	15.0	1
PACIFIC SLOPE DRAINAGE					
Columbia Basin					
Pudding: Aurora, Oreg.	20	10	13	# 21.0	12

* Provisional
__ Record Stage
\# Highest Stage Observed

E Estimated
M Missing
T Tentative

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. — 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	86	1.7	-3.0	31	2.0
1000	30	112			31	2.1
950	30	526	1.3	-5.9	31	5.6
900	30	960	-.4	-7.5	32	6.8
850	30	1,416	-2.0	-9.9	32	8.0
800	30	1,896	-4.4	-11.4	32	8.8
750	30	2,402	-6.8	-16.0	31	9.2
700	30	2,938	-9.2	-19.4	31	9.7
650	30	3,509	-11.7	-22.8	30	9.9
600	30	4,119	-14.9	-26.7	30	10.1
550	30	4,772	-19.1	-30.6	30	11.0
500	30	5,474	-24.0	-35.4	30	12.5
450	30	6,235	-29.1	-40.6	30	13.7
400	30	7,067	-35.2	-45.9	30	16.2
350	30	7,987	-41.5	-50.0	30	20.5
300	30	9,017	-47.2		30	23.1
250	30	10,211	-52.1		30	22.7
200	30	11,652	-52.7		29	18.6
175	30	12,516	-52.2		29	17.0
150	30	13,513	-52.8		28	13.3
125	30	14,686	-54.2		27	12.0
100	30	16,114	-54.9		27	9.9
80	30	17,539	-55.4		27	7.5
70	30	18,391	-55.9		27	5.4
60	29	19,375	-55.7		26	4.4
50	27	20,537	-54.8		26	3.1
40	26	21,968	-54.2		25	2.6
30	26	23,817	-53.5		25	1.7
25	26	24,992	-52.9		27	1.7
20	23	26,441	-51.3		28	2.8
15	21	28,319	-49.0		27	3.8
10	12	31,014	-43.8			
7						
5						

ALBUQUERQUE, N. MEX. — 836 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,619	5.4	-7.7	09	.8
1000	30	128				
950	30	559				
900	30	1,010				
850	30	1,482				
800	30	1,980	6.9	-10.3	26	1.5
750	30	2,508	3.8	-12.4	27	4.3
700	30	3,064	-.1	-15.1	27	6.5
650	30	3,653	-3.9	-19.2	27	7.7
600	30	4,279	-8.5	-23.0	27	9.8
550	30	4,948	-12.9	-29.3	26	12.1
500	30	5,668	-18.0	-34.8	26	14.0
450	30	6,447	-23.5	-39.3	26	16.3
400	30	7,297	-30.0	-45.4	26	18.8
350	30	8,237	-36.9	-51.0	26	20.4
300	30	9,284	-44.4		26	22.8
250	30	10,483	-52.6		26	25.5
200	29	11,900	-57.0		26	26.7
175	29	12,745	-57.4		26	27.4
150	28	13,717	-57.8		27	26.4
125	28	14,861	-60.2		26	24.4
100	28	16,244	-62.4		26	21.3
80	28	17,617	-63.0		27	13.3
70	28	18,439	-62.9		27	8.4
60	28	19,389	-62.6		28	5.6
50	28	20,518	-60.4		27	4.0
40	28	21,917	-58.3		30	2.7
30	28	23,742	-55.3		27	2.1
25	27	24,913	-53.2		27	3.9
20	27	26,360	-50.3		27	5.2
15	26	28,245	-47.7		27	7.9
10	19	30,968	-40.8		27	11.0
7						
5						

AMARILLO, TEXAS — 889 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,095	6.7	-1.3	21	1.5
1000	30	119				
950	30	549				
900	30	997				
850	30	1,470	8.8	-1.0	24	5.3
800	30	1,970	7.2	-4.6	26	6.0
750	30	2,499	4.5	-8.3	27	7.0
700	30	3,058	1.1	-12.2	26	8.6
650	30	3,650	-2.7	-16.6	26	9.3
600	30	4,279	-7.1	-21.0	26	10.8
550	30	4,951	-11.9	-26.3	26	12.9
500	30	5,674	-17.4	-31.7	26	14.3
450	30	6,454	-23.1	-37.7	27	16.7
400	30	7,305	-29.7	-42.7	26	19.2
350	30	8,247	-36.5	-47.2	26	21.2
300	30	9,295	-44.5		26	24.7
250	30	10,494	-52.7		26	28.2
200	30	11,915	-57.7		27	28.9
175	30	12,756	-58.2		26	27.5
150	30	13,726	-58.6		27	27.5
125	30	14,868	-60.5		27	25.8
100	30	16,251	-63.0		27	20.4
80	29	17,621	-64.1		27	14.8
70	29	18,439	-63.6		28	10.1
60	28	19,387	-62.0		28	5.9
50	27	20,521	-59.6		28	3.6
40	27	21,923	-57.6		28	3.0
30	26	23,759	-53.6		28	3.5
25	26	24,936	-51.9		27	4.5
20	24	26,384	-50.0		25	4.0
15	23	28,272	-47.3		26	6.6
10	22	30,987	-41.1		27	15.1
7						
5						

* ANCHORAGE, ALASKA — 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	-1.0	-5.5	01	.5
1000	30	26			13	.2
950	30	435	-1.5	-8.1	07	1.5
900	30	864	-4.0	-9.9	12	3.3
850	30	1,313	-7.3	-12.2	13	4.9
800	30	1,782	-10.7	-14.4	14	6.0
750	30	2,275	-14.2	-18.3	14	6.7
700	30	2,795	-17.5	-22.7	16	6.9
650	30	3,347	-20.9	-26.5	16	5.9
600	30	3,934	-24.6	-30.7	17	5.7
550	30	4,562	-28.8	-35.4	17	6.4
500	30	5,237	-33.5	-40.7	18	5.9
450	30	5,969	-38.7	-44.0	19	6.1
400	30	6,767	-44.7		19	6.5
350	30	7,652	-50.5		20	7.4
300	30	8,647	-53.5		22	6.9
250	30	9,824	-51.2		22	6.0
200	30	11,280	-49.8		22	5.1
175	30	12,154	-49.8		22	4.6
150	30	13,162	-50.4		22	4.2
125	30	14,349	-51.2		22	3.5
100	30	15,798	-51.9		21	3.0
80	29	17,246	-52.4		22	2.2
70	28	18,099	-52.6		21	1.7
60	28	19,094	-52.9		20	1.3
50	27	20,272	-53.5		18	1.2
40	27	21,707	-54.0		21	.9
30	25	23,532	-55.0		30	.5
25	24	24,694	-55.4		31	.6
20	19	26,114	-55.8		29	1.4
15	13	27,921	-56.2		29	3.9
10						
7						
5						

* ANNETTE, ALASKA — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	3.6	.0	12	3.1
1000	30	96			14	3.0
950	30	511	1.0	-2.4	16	5.8
900	30	944	-1.8	-4.8	17	7.2
850	30	1,396	-4.7	-7.5	18	8.0
800	30	1,871	-7.3	-11.9	18	9.1
750	30	2,371	-10.4	-16.1	19	10.5
700	30	2,899	-13.8	-18.9	19	10.6
650	30	3,459	-17.0	-22.4	19	11.2
600	30	4,055	-20.7	-26.0	19	12.3
550	30	4,694	-24.7	-30.2	19	14.1
500	30	5,380	-29.7	-35.5	19	15.4
450	30	6,123	-35.0	-40.2	20	14.7
400	30	6,935	-40.9	-44.8	21	16.1
350	30	7,834	-46.9		21	14.1
300	30	8,839	-53.3		22	13.4
250	29	10,006	-54.6		22	11.5
200	29	11,437	-53.5		23	10.3
175	29	12,297	-53.1		23	10.4
150	29	13,292	-52.8		22	9.2
125	29	14,466	-53.9		23	7.8
100	29	15,895	-54.8		23	7.3
80	29	17,322	-55.0		21	6.4
70	29	18,176	-55.2		21	6.1
60	29	19,160	-55.1		21	6.2
50	28	20,325	-55.5		21	5.1
40	26	21,752	-55.8		20	5.2
30	26	23,584	-55.7		22	5.0
25	24	24,732	-56.1		22	3.7
20	22	26,169	-56.4		22	3.9
15	21	28,012	-54.5		22	5.0
10	19	30,642	-51.5		25	6.2
7	14	33,003	-46.4		25	7.7
5	8	35,366	-39.1			

ATHENS, GEORGIA — 987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	10.4	5.3	32	1.0
1000	30	137				
950	30	568	13.5	2.0	31	2.2
900	30	1,023	12.0	-1.5	30	3.5
850	30	1,499	9.2	-4.1	28	5.4
800	30	1,998	5.9	-6.1	28	7.0
750	30	2,525	3.6	-10.9	28	8.2
700	30	3,081	.6	-15.5	29	10.1
650	30	3,673	-3.0	-19.8	29	11.9
600	30	4,301	-7.3	-22.1	28	13.3
550	30	4,973	-11.8	-26.7	28	14.2
500	30	5,696	-16.8	-32.4	28	16.3
450	30	6,479	-22.2	-37.5	28	18.1
400	30	7,334	-28.6	-43.1	28	20.7
350	30	8,279	-35.7	-47.9	28	22.2
300	30	9,330	-44.0		28	24.7
250	30	10,530	-52.6		28	30.8
200	30	11,949	-58.7		28	32.4
175	30	12,787	-58.9		28	33.5
150	30	13,756	-58.9		28	30.0
125	30	14,893	-61.5		28	27.7
100	30	16,271	-63.5		28	22.0
80	30	17,637	-64.5		28	15.9
70	30	18,453	-64.3		28	11.3
60	30	19,401	-62.2		29	7.9
50	30	20,536	-59.1		29	4.5
40	30	21,941	-57.1		34	1.6
30	29	23,776	-53.7		04	2.2
25	28	24,955	-51.9		05	3.5
20	28	26,409	-49.7		05	2.0
15	28	28,303	-47.1		30	2.7
10	26	31,020	-41.9		27	10.3
7	10	33,469	-36.5			
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* BARROW, ALASKA — 1023 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	25	8	-22.7	-25.0	05	2.8
1000	25	177	-21.5	-23.1	03	2.8
950	25	557	-18.1	-20.2	03	3.0
900	25	963	-16.3	-20.7	04	3.5
850	25	1,393	-16.6	-22.2	04	3.8
800	25	1,848	-18.1	-23.6	03	3.9
750	25	2,328	-19.9	-26.5	02	4.2
700	25	2,838	-22.4	-28.5	01	3.9
650	25	3,379	-25.4	-30.8	01	4.1
600	25	3,956	-28.7	-34.9	36	5.1
550	25	4,574	-32.4	-38.9	36	6.1
500	25	5,240	-36.5	-42.9	36	6.7
450	25	5,963	-41.2	-45.0	36	7.2
400	25	6,754	-46.4		36	8.4
350	25	7,634	-51.3		35	8.7
300	25	8,626	-54.2		35	8.2
250	25	9,803	-50.9		34	5.6
200	24	11,264	-49.2		33	3.7
175	24	12,141	-49.4		33	2.8
150	24	13,151	-49.7		32	3.3
125	24	14,343	-50.2		32	1.4
100	24	15,797	-51.1		33	.9
80	24	17,246	-51.8		35	.6
70	23	18,104	-52.3		01	.9
60	23	19,101	-52.6		07	.7
50	22	20,281	-52.8		08	.5
40	20	21,704	-53.3		05	1.3
30	17	23,567	-54.3		03	2.2
25	15	24,727	-55.0		02	2.8
20	8	26,249	-55.0			
15						
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BARTER IS., ALASKA — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	-22.8	-26.5	21	.6
1000	30	134			24	1.0
950	30	516	-17.3	-20.5	09	1.5
900	30	924	-14.8	-18.8	09	3.0
850	30	1,358	-13.9	-19.7	11	2.2
800	30	1,817	-15.4	-21.2	11	1.6
750	30	2,303	-17.7	-23.0	12	1.8
700	30	2,816	-20.3	-26.4	14	1.5
650	30	3,362	-23.3	-29.1	17	1.4
600	30	3,944	-26.9	-33.1	21	2.3
550	30	4,567	-30.7	-36.8	22	2.9
500	30	5,237	-35.1	-40.7	25	3.7
450	30	5,965	-39.7	-43.2	25	4.9
400	30	6,761	-45.1		24	5.3
350	30	7,646	-50.2		24	6.9
300	30	8,642	-53.0		23	6.6
250	30	9,824	-50.0		23	5.8
200	30	11,291	-47.7		22	5.1
175	30	12,172	-48.0		22	4.9
150	30	13,188	-48.4		21	4.4
125	30	14,387	-49.1		21	3.6
100	30	15,847	-50.1		19	3.4
80	30	17,303	-50.8		19	2.6
70	29	18,176	-51.3		18	2.7
60	29	19,177	-51.6		19	2.2
50	29	20,359	-52.1		18	1.7
40	29	21,802	-52.8		18	1.4
30	27	23,670	-53.7		15	1.3
25	26	24,853	-53.9		14	.7
20	23	26,287	-54.0		07	.8
15	19	28,135	-54.0		07	.5
10	12	30,902	-51.3			
7	9	33,322	-47.0			
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BETHEL, ALASKA — 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	23	39	-8.0	-9.6	35	2.4
1000	23	31			35	3.8
950	23	433	-5.8	-10.6	05	2.2
900	23	856	-7.6	-12.8	13	1.1
850	23	1,299	-9.3	-14.2	16	1.1
800	23	1,766	-11.5	-17.6	16	1.4
750	23	2,258	-14.4	-20.5	13	1.1
700	23	2,778	-17.5	-23.6	12	1.0
650	23	3,330	-20.5	-26.4	13	2.0
600	23	3,918	-24.1	-30.7	11	2.1
550	23	4,548	-28.6	-35.1	11	2.3
500	23	5,223	-33.5	-40.0	12	2.2
450	23	5,955	-38.7	-41.7	14	1.9
400	23	6,755	-44.0		24	.6
350	23	7,645	-48.3		30	2.7
300	23	8,650	-51.0		31	1.6
250	23	9,840	-49.8		28	1.8
200	23	11,305	-48.7		26	3.0
175	23	12,183	-48.7		25	3.7
150	23	13,196	-49.1		24	2.8
125	23	14,392	-49.7		23	2.8
100	23	15,850	-50.2		22	2.2
80	23	17,304	-51.1		24	2.3
70	21	18,150	-51.3		25	2.6
60	21	19,151	-51.7		25	2.1
50	21	20,332	-52.3		25	2.2
40	21	21,775	-52.7		29	1.6
30	18	23,623	-53.3		31	2.0
25	17	24,786	-53.5		33	2.9
20	16	26,220	-54.2		33	4.8
15	14	28,079	-53.6		32	7.9
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* BISMARCK, N. DAK. — 956 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	503	1.9	-2.3	35	1.3
1000	30	131				
950	30	548			33	1.9
900	30	986	2.8	-5.4	30	2.5
850	30	1,448	1.5	-7.1	29	4.4
800	30	1,934	-.6	-9.4	29	5.5
750	30	2,448	-3.1	-12.0	30	5.7
700	30	2,992	-6.1	-16.3	29	6.4
650	30	3,568	-9.7	-19.6	29	6.9
600	30	4,182	-13.4	-23.3	28	7.3
550	30	4,838	-17.9	-29.1	28	7.7
500	30	5,544	-22.8	-33.9	27	8.9
450	30	6,308	-28.4	-37.9	27	10.0
400	30	7,142	-34.7	-43.2	28	10.7
350	30	8,064	-41.5	-47.7	27	11.1
300	30	9,090	-49.0		27	11.6
250	30	10,269	-55.2		27	13.2
200	30	11,684	-56.9		28	13.4
175	30	12,532	-56.0		27	12.9
150	30	13,514	-55.3		27	12.3
125	30	14,676	-55.9		27	11.0
100	30	16,094	-56.7		28	9.3
80	29	17,506	-57.0		28	7.3
70	29	18,353	-56.4		28	5.8
60	29	19,332	-56.4		29	4.5
50	29	20,491	-55.9		30	2.6
40	29	21,909	-56.4		32	2.4
30	29	23,742	-54.7		35	1.7
25	29	24,912	-53.7		35	1.6
20	28	26,351	-52.4		31	.9
15	[illegible]	28,222	-49.9		30	2.4
10	26	30,901	-44.8		28	6.8
7	21	33,316	-38.6		28	11.9
5	9	35,618	-33.9			

BOISE, IDAHO — 914 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	871	5.1	-1.8	15	1.0
1000	30	124				
950	30	549				
900	30	993	6.4	-3.1	12	1.2
850	30	1,461	5.0	-6.3	31	.5
800	30	1,953	2.0	-8.2	29	2.0
750	30	2,471	-1.5	-10.0	28	3.4
700	30	3,017	-5.3	-12.5	27	5.0
650	30	3,595	-8.8	-17.0	25	5.6
600	30	4,211	-12.5	-21.3	25	6.6
550	30	4,870	-16.5	-26.0	25	8.3
500	30	5,580	-21.7	-30.3	25	9.2
450	30	6,348	-27.3	-36.1	25	10.4
400	30	7,184	-33.9	-42.6	25	10.6
350	30	8,109	-41.0	-47.5	25	10.9
300	30	9,137	-48.8		27	10.3
250	30	10,315	-55.9		27	10.5
200	29	11,721	-58.3		27	12.2
175	29	12,563	-57.6		26	12.5
150	29	13,539	-56.3		26	12.8
125	28	14,696	-56.8		26	11.5
100	28	16,107	-57.6		26	9.1
80	28	17,512	-58.6		25	7.6
70	26	18,357	-57.8		26	6.2
60	26	19,330	-57.7		25	4.4
50	24	20,481	-57.4		25	2.7
40	22	21,893	-57.1		24	1.8
30	20	23,722	-56.0		29	2.5
25	20	24,884	-55.0		30	3.6
20	16	26,320	-52.8		31	4.6
15	13	28,190	-50.1		30	6.9
10	8	30,912	-44.0			
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BOOTHVILLE, LA. — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	5	1	23.9	22.6		
1000	5	67	23.7	22.6		
950	5	515	20.4	19.3		
900	5	983	19.8	14.5		
850	5	1,475	19.1	7.7		
800	5	1,995	16.5	3.2		
750	5	2,540	13.0	-2.3		
700	5	3,118	10.6	-10.3		
650	5	3,731	7.2	-11.8		
600	5	4,384	2.7	-16.6		
550	5	5,080	-3.2	-19.3		
500	5	5,825	-9.6	-24.9		
450	5	6,630	-15.9	-30.8		
400	5	7,506	-22.2	-33.4		
350	5	8,476	-29.8	-39.7		
300	5	9,552	-38.6	-47.8		
250						
200						
175						
150						
125						
100						
80						
70						
60						
50						
40						
30						
25						
20						
15						
10						
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* BROWNSVILLE, TEXAS — 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	19.8	17.0	14	2.5
1000	30	109	19.8	16.5	13	4.2
950	30	551	18.0	12.9	15	7.7
900	30	1,014	16.9	5.1	16	7.2
850	30	1,501	15.9	-1.2	18	6.4
800	30	2,014	14.0	-6.0	19	5.4
750	30	2,555	11.1	-8.9	21	4.3
700	30	3,127	7.8	-13.2	23	4.2
650	30	3,733	3.4	-16.0	25	5.3
600	30	4,376	-1.2	-20.1	27	7.7
550	30	5,063	-6.4	-24.1	27	9.5
500	30	5,800	-11.8	-29.1	26	12.2
450	30	6,598	-17.6	-34.5	26	15.2
400	30	7,469	-24.1	-40.6	27	17.9
350	30	8,431	-31.3	-45.0	27	21.8
300	29	9,505	-39.1	-51.8	27	26.1
250	29	10,731	-48.0		27	31.8
200	27	12,174	-57.5		27	36.7
175	27	13,009	-61.3		27	35.9
150	27	13,960	-63.4		26	31.6
125	26	15,075	-67.3		27	24.8
100	26	16,407	-71.1		27	16.0
80	25	17,715	-74.3		27	8.2
70	25	18,497	-71.5		27	4.2
60	25	19,420	-66.0		28	2.2
50	25	20,540	-61.5		27	.4
40	25	21,932	-58.9		08	1.1
30	25	23,758	-53.8		07	3.1
25	25	24,936	-51.1		08	4.6
20	23	26,404	-46.7		08	5.1
15	20	28,313	-43.6		08	3.0
10	19	31,071	-37.8		16	.5
7	16	33,558	-33.1			
5	6	35,972	-28.9			

BUFFALO, N. Y. — 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	218	1.5	-2.0	25	2.5
1000	30	126				
950	30	541	2.3	-5.8	27	4.6
900	30	977	.4	-8.2	29	6.4
850	30	1,434	-1.7	-10.2	29	7.8
800	30	1,915	-3.8	-12.2	30	9.2
750	30	2,423	-5.9	-15.1	30	11.1
700	30	2,960	-8.5	-18.7	30	12.2
650	30	3,532	-11.3	-21.7	30	13.5
600	30	4,143	-14.6	-26.4	30	14.8
550	30	4,797	-18.8	-30.6	30	15.2
500	30	5,500	-23.7	-36.1	30	16.8
450	30	6,262	-28.8	-40.4	30	17.5
400	30	7,095	-34.8	-46.2	30	18.8
350	30	8,017	-41.5	-49.6	29	20.4
300	30	9,046	-47.9		29	23.2
250	30	10,236	-52.4		29	24.5
200	30	11,673	-53.9		29	21.8
175	30	12,531	-53.3		29	19.6
150	30	13,523	-53.9		28	17.4
125	30	14,693	-54.6		29	14.1
100	30	16,118	-55.7		28	11.0
80	29	17,535	-55.9		28	9.2
70	29	18,384	-56.1		28	6.1
60	28	19,365	-56.2		28	4.7
50	28	20,524	-55.7		27	4.0
40	28	21,951	-54.3		25	2.8
30	27	23,800	-53.3		27	3.5
25	26	24,977	-52.5		27	4.1
20	24	26,427	-50.9		27	4.2
15	23	28,309	-49.0		26	4.4
10	10	31,012	-43.5			
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CAPE HATTERAS, N. C. — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	11.2	7.9	34	1.0
1000	30	130	13.1	2.9	32	1.7
950	30	560	11.6	-.8	31	4.4
900	30	1,011	9.3	-3.9	31	5.7
850	30	1,482	7.0	-7.8	29	8.4
800	30	1,979	4.6	-11.4	29	10.9
750	30	2,501	1.7	-13.9	28	12.6
700	30	3,054	-1.5	-17.0	29	15.1
650	30	3,641	-4.6	-21.9	28	16.9
600	30	4,266	-8.4	-24.1	29	18.7
550	30	4,936	-12.7	-27.5	29	21.0
500	30	5,657	-17.4	-32.4	28	21.8
450	30	6,439	-22.6	-36.5	28	23.2
400	30	7,292	-28.8	-42.2	28	26.2
350	30	8,237	-35.9	-47.4	28	27.4
300	30	9,287	-44.2		28	26.5
250	30	10,488	-52.1		28	31.4
200	30	11,914	-56.7		28	33.1
175	30	12,762	-55.5		28	29.1
150	30	13,743	-56.5		27	28.7
125	30	14,895	-58.5		27	26.3
100	29	16,296	-60.1		27	21.8
80	29	17,685	-60.7		27	15.4
70	29	18,518	-59.7		27	10.2
60	28	19,487	-58.7		28	6.9
50	28	20,639	-56.2		28	4.1
40	28	22,062	-54.6		22	.2
30	27	23,915	-51.9		06	2.1
25	27	25,101	-50.4		05	2.1
20	23	26,565	-47.9		33	1.3
15	20	28,493	-44.2		28	4.7
10	17	31,250	-39.3		28	14.8
7	7	33,664	-36.9			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	* CARIBOU, MAINE 988 MB				Resultant Wind		CHARLESTON, S. C. 1015 MB				Resultant Wind		CHATHAM, MASS. 1009 MB				Resultant Wind		CHIHUAHUA, MEXICO 855 MB				Resultant Wind		* COLD BAY, ALASKA 1001 MB				Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point	Direction	M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	30	191	-.4	-3.1	32	1.7	30	13	12.0	8.6	27	1.3	30	16	4.6	.9	29	1.9	30	1,428	12.0	-2.9	21	.6	28	30	-2.8	-4.9	30	4.0
1000	30	89					30	137	15.1	7.8	26	1.9	30	86			30	2.9	30	92					28	33			32	5.3
950	30	500	-.5	-5.0	32	1.0	30	572	14.7	.7	28	3.8	30	504	3.2	-2.7	29	5.0	30	533					28	439	-4.9	-7.9	30	6.2
900	30	932	-1.7	-7.2	35	1.4	30	1,028	12.2	-2.0	29	5.5	30	940	1.2	-4.7	29	5.7	30	994					28	862	-7.5	-10.6	30	6.1
850	30	1,385	-3.6	-9.4	35	1.4	30	1,504	9.5	-4.6	29	7.6	30	1,399	-.8	-8.3	29	6.1	30	1,476	13.3	-1.8	22	.5	28	1,305	-9.6	-13.3	30	5.8
800	30	1,863	-5.5	-11.7	33	1.5	30	2,004	6.8	-6.8	29	8.8	30	1,881	-3.2	-10.4	29	6.9	30	1,986	12.3	-2.7	23	3.4	28	1,772	-11.4	-16.4	30	6.1
750	30	2,367	-8.0	-14.6	30	1.3	30	2,532	3.7	-11.3	28	8.9	30	2,389	-5.7	-14.2	29	8.4	30	2,524	8.7	-5.4	24	4.8	28	2,265	-13.9	-18.4	30	6.7
700	30	2,901	-10.5	-18.2	31	1.6	30	3,089	.6	-16.9	28	10.8	30	2,928	-8.5	-18.0	29	9.4	30	3,091	5.5	-8.8	24	7.3	28	2,786	-16.8	-21.6	30	8.1
650	30	3,469	-13.1	-22.4	31	2.8	30	3,680	-3.1	-19.6	29	12.1	30	3,499	-11.4	-22.4	29	10.7	30	3,693	2.1	-12.5	24	8.5	28	3,340	-19.8	-25.6	29	8.2
600	30	4,075	-16.2	-25.7	30	3.0	30	4,309	-6.8	-23.6	28	14.1	30	4,109	-14.9	-26.1	29	11.1	30	4,334	-2.4	-16.6	25	9.9	28	3,930	-23.2	-29.9	29	8.0
550	30	4,725	-20.3	-30.4	26	2.9	30	4,983	-10.9	-27.3	28	15.9	30	4,763	-18.8	-30.4	28	11.6	30	5,018	-7.3	-21.9	25	11.9	28	4,582	-27.3	-35.0	29	7.7
500	30	5,425	-24.9	-35.8	25	2.8	30	5,708	-15.9	-32.5	28	18.0	30	5,466	-23.5	-35.6	29	12.6	30	5,753	-12.8	-27.4	25	13.5	28	5,242	-31.6	-40.4	28	9.1
450	30	6,183	-30.2	-40.7	23	3.0	30	6,494	-21.5	-37.3	28	19.5	30	6,228	-28.9	-40.4	28	13.0	30	6,547	-18.8	-32.7	26	15.1	28	5,980	-36.3	-42.7	28	10.9
400	30	7,010	-36.5	-45.5	21	4.3	30	7,351	-27.9	-42.7	28	20.5	30	7,061	-34.7	-44.9	28	14.0	30	7,413	-25.4	-37.9	26	17.4	28	6,789	-41.4	-44.1	27	12.1
350	30	7,910	-43.0		24	3.8	30	8,299	-35.0	-48.6	28	21.6	30	7,985	-40.4	-48.6	28	15.1	30	8,372	-32.2	-43.5	26	21.1	28	7,688	-46.2		27	11.7
300	30	8,949	-48.5		25	4.5	30	9,354	-42.9	-51.6	28	23.8	30	9,022	-45.5		28	18.1	30	9,439	-40.0	-49.2	26	24.7	28	8,699	-50.8		27	11.1
250	30	10,138	-52.2		27	7.3	30	10,560	-51.6		28	26.9	30	10,226	-49.6		28	18.7	30	10,681	-48.7		27	28.4	28	9,886	-50.8		27	11.1
200	30	11,583	-51.8		26	8.0	30	11,983	-57.9		28	31.3	29	11,672	-51.1		28	16.1	30	12,099	-57.2		27	30.3	27	11,335	-50.1		28	12.1
175	30	12,449	-51.5		26	7.8	30	12,825	-57.9		28	31.7	29	12,562	-50.6		28	15.7	29	12,938	-59.1		27	28.6	27	12,207	-50.8		28	11.3
150	29	13,451	-51.8		25	7.2	30	13,796	-58.6		28	28.9	29	13,544	-52.1		27	13.1	29	13,899	-61.4		27	26.9	27	13,210	-51.2		28	12.4
125	29	14,633	-52.3		25	7.2	30	14,935	-61.2		28	26.1	29	14,721	-53.3		27	13.9	27	15,022	-64.8		27	25.8	27	14,394	-51.5		28	9.8
100	29	16,073	-53.3		26	5.3	30	16,313	-63.5		27	21.3	28	16,154	-54.3		26	9.6	26	16,374	-67.2		27	20.4	27	15,840	-52.3		28	8.8
80	29	17,507	-54.2		25	5.1	29	17,678	-64.8		28	15.9	28	17,582	-55.6		26	7.7	25	17,709	-69.3		27	13.6	27	17,284	-52.2		28	7.2
70	29	18,362	-54.8		24	4.0	29	18,495	-63.5		28	9.7	27	18,431	-55.5		26	5.8	24	18,507	-69.0		27	7.4	26	18,156	-52.6		29	6.4
60	29	19,347	-55.1		24	3.0	29	19,448	-61.1		28	7.6	26	19,413	-55.2		27	4.4	24	19,435	-65.8		29	3.7	26	19,151	-52.9		30	5.2
50	29	20,513	-54.4		21	2.5	29	20,589	-58.1		29	3.5	26	20,579	-54.4		25	4.0	24	20,556	-61.6		27	1.6	26	20,328	-53.0		30	4.4
40	26	21,945	-54.0		21	2.3	29	22,003	-55.8		35	.9	25	22,010	-53.5		25	2.4	23	21,947	-58.4		21	.8	25	21,765	-53.5		30	4.5
30	24	23,788	-53.7		22	3.2	29	23,847	-52.8		06	3.0	24	23,862	-53.0		31	1.6	21	23,771	-54.2		07	.9	24	23,611	-54.1		32	4.9
25	24	24,961	-53.3		24	2.5	29	25,029	-50.9		06	3.7	21	25,040	-51.8		27	1.6	21	24,946	-51.8		07	2.1	24	24,781	-54.0		33	4.6
20	24	26,402	-52.2		26	2.2	28	26,489	-48.1		05	1.7	21	26,493	-50.0		28	4.1	18	26,400	-48.2		08	1.0	24	26,215	-53.7		33	7.0
15	17	28,276	-49.5		26	3.3	27	28,403	-44.5		32	1.5	19	28,377	-47.6		29	5.1	18	28,305	-45.9		22	1.4	23	28,065	-53.0		33	9.1
10	13	30,965	-45.5		26	6.0	18	31,126	-39.4				5	31,077	-41.2				8	31,000	-41.1				22	30,677	-51.6		32	11.2
7	6	33,385	-39.0																						18	33,016	-48.3		31	14.1
5																									13	35,262	-46.2			
4																									6	36,785	-45.5			
3																									6	38,712	-43.7			

Standard pressure surface (mb.)	DAYTON, OHIO 981 MB						DEL RIO, TEXAS 977 MB						DENVER, COLO. 835 MB						DODGE CITY, KANS. 923 MB						EL PASO, TEXAS 880 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Direction	M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	30	259	4.2	-2.1	28	.4	30	314	15.9	8.6	10	3.0	30	1,611	3.1	-1.9	21	1.2	30	791	6.2	.4	23	.7	29	1,193	11.2	-5.8	33	.9
1000	30	144					30	114					30	122					30	124					29	105				
950	30	566	6.5	-4.7	26	2.4	30	551	15.8	8.4	13	5.6	30	549					30	551					29	544				
900	30	1,007	5.1	-6.6	29	5.9	30	1,009	14.5	5.6	16	6.2	30	996					30	997	8.1	-.8	22	3.3	29	1,001				
850	30	1,472	3.2	-8.8	29	8.3	30	1,492	13.5	-.3	19	5.6	30	1,464					30	1,469	7.3	-3.0	24	5.0	29	1,480	12.2	-4.0	32	1.6
800	30	1,961	1.1	-12.1	29	9.9	30	2,001	11.8	-5.4	21	5.3	30	1,958	4.6	-5.0	25	2.2	30	1,967	5.9	-7.9	25	5.2	29	1,983	9.7	-5.9	27	4.1
750	30	2,478	-1.3	-14.8	29	11.1	30	2,539	9.3	-9.6	24	5.7	30	2,482	2.2	-8.8	29	2.9	30	2,493	3.1	-11.9	26	6.3	29	2,518	6.2	-8.6	25	6.6
700	30	3,025	-4.1	-18.3	29	13.5	30	3,107	5.6	-13.8	25	6.7	30	3,035	-1.6	-12.5	28	4.2	30	3,048	-.5	-15.5	26	7.2	29	3,079	2.5	-12.9	25	9.9
650	30	3,606	-7.5	-20.2	29	15.8	30	3,708	1.5	-16.4	26	8.6	30	3,621	-5.8	-16.7	28	5.9	30	3,637	-4.5	-19.0	26	6.9	29	3,674	-1.4	-16.4	25	10.3
600	30	4,225	-11.1	-23.7	29	17.0	30	4,347	-3.3	-20.6	25	11.2	30	4,243	-10.1	-22.1	28	7.9	30	4,262	-9.0	-23.0	25	7.8	29	4,306	-5.7	-20.8	25	12.5
550	30	4,888	-15.3	-27.9	29	18.3	30	5,028	-8.2	-25.9	26	12.2	30	4,907	-15.1	-28.0	28	8.6	30	4,929	-13.8	-27.4	26	9.9	29	4,983	-10.1	-24.7	25	13.8
500	30	5,601	-20.0	-33.6	29	20.3	30	5,760	-13.9	-31.4	26	14.1	30	5,620	-20.3	-34.1	28	9.6	30	5,646	-19.2	-32.2	25	11.8	29	5,710	-15.0	-29.7	25	16.0
450	30	6,374	-25.5	-38.3	29	21.7	30	6,551	-19.9	-34.3	26	16.3	30	6,392	-26.0	-40.4	28	10.6	30	6,421	-24.7	-37.1	26	13.1	29	6,498	-20.9	-34.5	25	18.6
400	30	7,218	-31.9	-43.5	29	23.3	30	7,413	-26.6	-39.6	26	19.1	30	7,234	-32.4	-45.9	28	12.5	30	7,267	-31.1	-43.3	26	15.6	29	7,357	-27.8	-40.6	26	19.6
350	30	8,150	-39.2	-48.1	28	25.2	30	8,367	-33.5	-44.9	26	23.0	30	8,164	-39.3	-50.9	28	13.9	30	8,203	-38.2	-49.3	26	17.6	29	8,305	-34.9	-46.6	26	22.5
300	30	9,185	-47.2		28	25.5	30	9,429	-41.2	-47.4	26	27.7	30	9,201	-46.5		27	15.2	30	9,243	-46.3		26	21.9	29	9,360	-42.7		26	25.2
250	30	10,373	-53.7		28	29.1	30	10,644	-49.7		26	32.2	29	10,392	-53.7		27	17.9	30	10,434	-53.3		26	25.1	29	10,569	-50.9		26	27.1
200	30	11,795	-56.1		28	28.3	30	12,077	-57.2		26	37.0	29	11,812	-57.6		27	19.2	30	11,856	-57.5		27	24.5	29	12,000	-56.6		26	29.3
175	30	12,644	-56.1		29	25.5	30	12,918	-58.9		26	34.9	28	12,655	-58.1		27	20.8	30	12,698	-57.9		27	24.0	29	12,845	-57.7		26	31.4
150	30	13,624	-56.4		28	22.7	30	13,881	-61.3		27	31.7	28	13,629	-57.1		27	20.9	30	13,671	-57.4		27	23.1	29	13,814	-59.7		26	29.4
125	30	14,779	-57.8		29	19.5	30	15,003	-64.6		27	26.5	28	14,781	-58.1		27	17.5	30	14,819	-59.4		27	21.1	29	14,947	-62.3		27	26.6
100	30	16,181	-58.9		29	15.7	29	16,353	-67.8		26	19.7	28	16,182	-59.5		27	14.0	29	16,208	-61.3		27	15.7	29	16,315	-65.0		26	20.8
80	30	17,580	-58.9		28	12.5	28	17,690	-69.8		27	12.4	28	17,572	-60.9		27	10.8	29	17,589	-61.9		27	11.0	29	17,669	-66.7		26	13.3
70	30	18,419	-58.3		29	8.2	28	18,485	-69.7		28	7.6	27	18,404	-59.5		28	8.2	28	18,413	-61.6		27	8.0	27	18,473	-66.7		27	8.6
60	30	19,391	-57.8		29	5.0	28	19,411	-66.0		28	4.4	27	19,370	-59.2		29	5.2	28	19,369	-61.1		28	5.5	26	19,416	-63.6		27	3.9
50	29	20,546	-56.8		27	4.1	28	20,531	-61.4		29	3.1	26	20,516	-58.3		30	4.9	28	20,506	-59.0		28	3.2	24	20,540	-61.2		29	1.3
40	29	21,965	-55.3		28	3.6	28	21,928	-58.2		02	1.0	24	21,919	-57.9		31	3.4	26	21,911	-57.8		30	2.9	24	21,933	-58.4		30	1.2
30	29	23,811	-52.9		27	2.9	26	23,758	-54.5		07	3.5	24	23,746	-54.8		30	2.9	25	23,742	-54.5		28	3.2	24	23,764	-54.0		29	.8
25	28	24,992	-51.7		27	2.9	26	24,931	-52.1		08	3.7	24	24,916	-53.3		29	4.2	24	24,913	-53.0		26	4.2	24	24,941	-51.7		35	.3
20	28	26,443	-50.7		27	4.1	24	26,384	-48.3		09	3.0	24	26,360	-51.3		29	4.4	22	26,355	-51.0		27	5.3	23	26,397	-49.3		25	2.3
15	28	28,330	-48.1		27	6.8	22	28,293	-45.4		26	.9	23	28,234	-48.9		27	6.8	18	28,240	-47.9		26	6.5	22	28,296	-46.6		26	6.2
10	20	31,038	-42.4		27	12.3	20	31,023	-39.6		27	7.6	20	30,935	-43.1		27	12.9	11	30,940	-43.4				15	31,017	-42.3		25	9.8
7	6	33,431	-39.2				9	33,488	-36.1																					

Standard pressure surface (mb.)	ELY, NEV. 905 MB					EMPALME, MEXICO 1010 MB					* FAIRBANKS, ALASKA 989 MB					FLINT, MICH. 987 MB					FORT WORTH, TEXAS 994 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	30	1,908	-.7	-6.6	19	2.4	30	12	13.9	4.8	35	1.1	30	135	-5.0	-13.5	35	2.6	30	236	1.8	-1.7	28	1.3	30	180	14.0	8.0	19	1.2
1000	30	144					30	100			34	1.7	30	47					30	133					30	122				
950	30	566					30	540	18.7	.6	33	2.8	30	451	-4.9	-13.4	06	2.8	30	540	2.7	-4.6	29	3.4	30	556	13.8	6.0	20	5.4
900	30	1,008					30	1,002	16.7	-2.4	31	1.8	30	875	-6.5	-14.1	11	3.0	30	985	.7	-7.0	30	6.1	30	1,011	12.5	2.3	21	6.6
850	30	1,471					30	1,486	14.1	-6.5	23	2.8	30	1,320	-9.0	-15.7	14	2.4	30	1,442	-.8	-9.7	30	8.7	30	1,490	11.3	-3.6	23	6.0
800	30	1,959			18	2.3	30	1,995	11.3	-11.2	22	4.5	30	1,787	-11.5	-17.2	15	2.9	30	1,925	-2.1	-12.1	31	9.7	30	1,994	8.9	-7.0	25	6.0
750	30	2,480	1.0	-7.7	18	1.8	30	2,530	8.5	-14.5	23	5.5	30	2,280	-14.4	-20.7	16	2.4	30	2,436	-4.7	-15.3	30	10.8	30	2,526	6.6	-10.7	26	7.5
700	30	3,031	-2.6	-11.3	25	3.1	30	3,096	5.0	-18.0	24	6.5	30	2,799	-18.0	-24.4	18	2.9	30	2,976	-7.5	-18.9	30	11.9	30	3,089	3.0	-14.2	27	7.7
650	30	3,615	-6.6	-14.6	24	4.4	30	3,696	1.5	-21.1	25	9.4	30	3,349	-21.6	-27.2	19	3.2	30	3,550	-10.2	-24.1	30	12.9	30	3,685	-1.1	-18.2	27	9.2
600	30	4,235	-10.5	-19.9	25	5.7	30	4,336	-2.2	-23.9	26	10.6	30	3,934	-25.7	-31.4	20	3.5	30	4,163	-13.9	-28.1	30	14.2	30	4,318	-5.7	-21.5	27	10.6
550	30	4,899	-15.1	-24.5	25	6.4	29	5,022	-6.6	-27.6	26	13.1	30	4,559	-30.2	-36.2	21	4.3	30	4,818	-18.2	-32.4	30	15.7	30	4,993	-10.7	-26.2	26	12.8
500	30	5,612	-20.2	-30.1	25	7.7	29	5,789	-12.2	-31.9	26	14.9	30	5,231	-34.9	-40.8	20	5.4	30	5,523	-23.0	-36.8	30	17.5	30	5,719	-15.8	-31.8	27	15.4
450	30	6,384	-26.0	-35.5	25	8.4	29	6,555	-18.2	-35.7	27	17.8	30	5,959	-39.8	-44.4	21	6.0	30	6,288	-28.0	-41.3	30	18.6	30	6,505	-21.1	-35.9	27	18.6
400	30	7,226	-32.5	-41.3	26	9.5	29	7,422	-25.2	-40.7	27	20.1	30	6,754	-45.5		21	6.8	30	7,123	-33.8	-46.2	30	20.3	30	7,364	-27.7	-40.5	27	20.5
350	30	8,155	-39.8	-45.9	26	10.6	29	8,381	-32.4	-46.6	27	23.5	30	7,636	-50.7		21	7.1	30	8,049	-40.1	-48.5	29	22.2	30	8,312	-35.0	-45.3	27	22.2
300	30	9,190	-46.9		26	12.8	29	9,447	-40.4	-52.5	27	27.7	30	8,629	-53.9		21	6.7	30	9,084	-46.6		29	25.5	30	9,367	-42.9	-51.3	27	26.9
250	30	10,379	-54.0		27	15.6	29	10,667	-49.0		27	33.0	30	9,806	-51.2		21	5.7	30	10,276	-52.7		30	24.8	30	10,573	-51.4		27	30.4
200	30	11,798	-56.8		27	17.6	27	12,104	-57.6		26	35.1	30	11,266	-49.1		21	4.8	30	11,707	-54.9		29	22.4	30	11,999	-57.6		27	35.1
175	30	12,694	-57.2		27	18.5	27	12,943	-59.5		26	31.7	30	12,142	-49.5		20	4.1	29	12,550	-54.9		29	20.4	29	12,841	-58.3		27	33.3
150	30	13,820	-57.0		27	17.2	25	13,901	-61.2		26	27.7	30	13,151	-49.7		19	4.2	29	13,537	-54.6		29	19.7	29	13,808	-59.8		27	29.7
125	30	14,773	-57.5		26	15.8	23	15,021	-65.2		26	23.9	30	14,341	-50.8		20	3.6	29	14,702	-55.6		29	16.9	29	14,942	-62.2		27	27.6
100	30	16,177	-59.4		26	13.9	23	16,370	-68.9		26	19.0	30	15,791	-51.8		19	3.1	27	16,119	-56.4		29	12.4	29	16,314	-64.2		27	22.5
80	30	17,573	-59.8		26	9.4	22	17,699	-70.6		26	11.4	27	17,245	-52.4		19	2.6	27	17,533	-56.9		28	8.6	28	17,670	-66.9		27	15.0
70	29	18,410	-59.8		26	7.8	20	18,494	-68.9		26	6.8	27	18,108	-52.5		19	1.9	27	18,380	-56.3		29	6.9	28	18,477	-66.8		27	10.0
60	29	19,375	-59.2		27	5.3	20	19,420	-67.0		27	3.6	26	19,109	-52.7		17	2.1	26	19,359	-56.1		29	5.4	27	19,413	-63.6		27	6.9
50	29	20,520	-58.4		27	4.1	20	20,530	-63.2		32	.7	26	20,285	-53.3		19	1.5	26	20,518	-56.1		29	2.9	27	20,542	-60.4		28	5.5
40	26	21,930	-57.6		28	3.3	19	21,921	-59.2		04	1.0	25	21,712	-54.2		21	1.5	26	21,940	-55.3		26	3.0	25	21,939	-57.0		28	2.5
30	25	23,755	-55.3		31	2.8	18	23,730	-56.3		10	3.2	23	23,550	-55.1		21	.9	24	23,789	-53.2		26	3.9	23	23,772	-54.1		31	.8
25	22	24,929	-53.9		31	3.5	17	24,895	-52.7		11	3.6	22	24,721	-55.5		35	.7	22	24,964	-52.4		25	3.4	22	24,949	-52.2		25	.8
20	21	26,372	-50.9		29	4.9	17	26,349	-48.8		12	1.9	19	26,179	-55.2		32	.5	21	26,412	-51.4		26	4.9	20	26,403	-49.8		26	1.3
15	19	28,256	-47.7		29	7.2	13	28,244	-47.0		23	2.4	17	28,011	-55.5		02	.9	19	28,291	-49.4		26	6.3	17	28,287	-47.7		27	5.6
10	11	30,974	-41.4										9	30,812	-52.1				7	30,942	-45.7				12	30,978	-43.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	GLASGOW, MONT. 934 MB						GRAND JUNCTION, COLO. 849 MB						* GREAT FALLS, MONT. 886 MB						GREEN BAY, WIS. 990 MB						GREENSBORO, N. C. 984 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	696	1.8	-2.4	09	1.9	30	1,472	4.9	-5.9	11	3.6	30	1,118	2.6	-5.2	22	2.3	30	210	2.0	-2.1	32	1.1	30	275	5.9	1.4	29	.8
1000	30	136					30	116					30	125					30	128					30	138				
950	30	555					30	540					30	548					30	544	3.0	-6.0	33	2.8	30	565	11.2	-2.4	31	3.4
900	30	993	3.9	-3.9	15	.7	30	995					30	990					30	981	1.5	-8.3	32	3.7	30	1,014	9.1	-5.0	31	5.7
850	30	1,437	2.4	-6.5	28	2.5	30	1,465			11	3.5	30	1,454	3.2	-6.8	24	5.0	30	1,440	-.2	-12.5	31	4.9	30	1,486	6.4	-7.8	31	7.8
800	30	1,945	-.1	-9.1	29	3.8	30	1,964	6.2	-8.0	16	3.9	30	1,943	.4	-9.0	26	4.4	30	1,924	-2.4	-13.3	31	6.4	30	1,981	4.2	-11.4	30	10.2
750	30	2,459	-3.0	-11.8	29	4.3	30	2,490	2.9	-10.4	20	3.0	30	2,458	-3.1	-11.5	27	3.9	30	2,434	-4.4	-16.3	30	7.6	30	2,504	1.9	-15.3	30	11.9
700	30	3,002	-6.3	-17.1	30	4.7	30	3,044	-1.4	-13.1	24	4.5	30	3,000	-6.8	-14.5	26	4.1	30	2,974	-7.1	-18.4	30	8.8	30	3,057	-1.4	-18.5	30	12.7
650	30	3,578	-9.9	-21.1	29	5.5	30	3,630	-5.8	-16.1	25	5.3	30	3,575	-10.5	-19.2	26	5.5	30	3,549	-10.3	-22.9	30	10.2	30	3,644	-4.5	-22.5	30	13.6
600	30	4,191	-14.0	-25.8	28	5.9	30	4,251	-10.5	-20.3	25	7.4	30	4,187	-14.4	-25.1	27	6.5	30	4,162	-13.6	-27.2	31	11.7	30	4,270	-8.4	-25.2	29	15.3
550	30	4,846	-18.6	-31.3	28	6.4	30	4,919	-14.8	-26.7	25	8.4	30	4,840	-19.1	-29.4	27	6.6	30	4,818	-17.7	-30.0	31	12.6	30	4,939	-13.0	-28.6	29	16.1
500	30	5,550	-23.6	-36.4	28	7.7	30	5,629	-19.9	-32.6	26	9.5	30	5,543	-23.9	-36.3	27	7.8	30	5,524	-22.6	-34.9	30	13.5	30	5,658	-18.2	-33.5	29	17.3
450	30	6,312	-29.1	-40.0	28	8.5	30	6,403	-25.2	-37.0	27	10.8	30	6,304	-29.3	-40.8	26	9.3	30	6,290	-28.0	-39.6	30	14.8	30	6,437	-23.7	-38.1	29	20.1
400	30	7,143	-35.6	-44.4	27	9.5	30	7,248	-31.6	-42.5	27	12.4	30	7,135	-35.6	-44.8	26	10.0	30	7,125	-34.4	-45.2	30	16.1	30	7,286	-29.9	-43.5	29	22.0
350	30	8,061	-42.3	-48.1	27	11.2	30	8,181	-39.0	-47.7	27	14.0	30	8,053	-42.4	-46.1	26	12.0	30	8,048	-41.2	-48.4	30	17.1	30	8,227	-37.0	-49.3	29	24.2
300	30	9,085	-49.0		27	12.8	30	9,217	-47.0		27	16.0	30	9,076	-49.5		26	13.9	30	9,076	-48.4		30	18.8	30	9,273	-44.8		29	27.4
250	30	10,266	-55.0		27	13.4	30	10,405	-54.0		26	18.1	30	10,253	-55.4		26	14.3	30	10,260	-54.2		30	19.1	30	10,469	-53.3		29	31.5
200	30	11,684	-56.7		28	12.4	30	11,823	-57.6		26	18.7	30	11,666	-57.9		26	12.5	30	11,680	-56.7		29	20.0	29	11,885	-58.1		29	31.4
175	30	12,533	-55.5		27	10.3	30	12,666	-57.1		26	19.3	29	12,515	-57.4		26	12.2	30	12,527	-56.3		29	18.5	29	12,727	-57.4		29	26.9
150	30	13,517	-55.2		27	9.9	30	13,642	-57.2		26	18.3	28	13,496	-55.7		25	9.5	30	13,509	-55.6		29	17.1	29	13,702	-57.6		28	25.8
125	30	14,680	-55.6		27	8.9	30	14,792	-58.5		26	17.4	28	14,656	-56.1		26	9.0	30	14,669	-55.9		29	14.7	29	14,849	-59.1		28	22.7
100	30	16,099	-56.7		28	7.7	30	16,191	-59.9		26	14.8	28	16,074	-56.5		26	7.1	30	16,084	-57.3		29	12.5	29	16,243	-60.4		28	18.7
80	30	17,514	-56.8		28	6.1	30	17,579	-60.9		26	11.2	27	17,485	-57.5		26	6.4	30	17,493	-57.3		29	8.7	28	17,633	-62.0		29	15.2
70	29	18,363	-56.2		29	4.5	30	18,410	-61.0		26	8.8	27	18,330	-56.5		26	5.3	30	18,339	-57.0		29	7.1	28	18,461	-60.8		28	11.1
60	29	19,344	-55.9		29	3.6	30	19,370	-59.9		27	5.7	27	19,308	-56.6		27	3.5	30	19,315	-56.9		29	5.0	27	19,423	-59.4		28	6.6
50	29	20,504	-56.0		30	2.2	30	20,511	-59.2		27	3.6	27	20,467	-56.0		27	1.9	30	20,471	-56.5		30	2.5	27	20,570	-57.6		29	5.3
40	29	21,925	-55.8		33	1.9	30	21,913	-58.1		29	3.3	27	21,886	-56.0		27	1.4	30	21,888	-56.0		27	2.3	27	21,986	-55.2		29	.9
30	28	23,760	-55.2		01	1.5	29	23,732	-56.2		30	3.6	24	23,718	-55.3		34	1.1	27	23,718	-54.5		27	2.2	26	23,832	-53.2		03	1.6
25	28	24,927	-54.1		36	1.9	28	24,895	-54.6		29	3.7	25	24,883	-54.0		35	1.6	26	24,890	-53.6		27	3.1	25	25,011	-51.8		04	2.7
20	24	26,266	-52.6		01	2.3	25	26,330	-51.6		29	5.4	24	26,321	-53.2		35	1.6	26	26,330	-52.2		25	3.7	24	26,469	-49.1		32	2.4
15	25	28,227	-51.4		32	2.9	21	28,218	-49.6		29	6.3	20	28,184	-51.1		31	1.8	25	28,202	-49.9		26	5.5	22	28,365	-46.7		31	3.7
10	22	30,881	-46.3		29	6.8	14	30,900	-43.8				19	30,858	-45.0		28	5.9	20	30,874	-45.7		27	11.2	20	31,094	-40.3		27	13.4
7	6	33,238	-43.3										12	33,290	-39.1		28	8.2	7	33,270	-41.7				5	33,567	-35.9			

Standard pressure surface (mb)	GUADALUPE IS., MEXICO 1016 MB						* GUAM, MARIANA IS. 996 MB						HILO, HAWAII 1017 MB						HUNTINGTON W. VA. 987 MB						* INTERNATIONAL FALLS, MINN. 972 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	27	23	18.3	13.1	32	10.2	30	111	25.2	23.5	09	2.6	30	10	20.2	18.4	24	1.5	30	246	5.8	.3	25	.4	30	359	.5	-4.2	03	.1
1000	27	154	14.3	3.4	32	9.5	30	79					30	160	20.1	18.0	23	.7	30	141					30	124				
950	27	586	13.8	-1.3	31	8.2	30	531	23.3	20.8	09	7.8	30	603	17.3	15.7	10	3.2	30	564	7.8	-3.1	27	2.5	30	538	.9	-5.8	23	.6
900	27	1,040	12.4	-7.0	31	5.8	30	1,003	20.6	16.6	10	6.8	30	1,083	14.4	13.0	09	4.1	30	1,009	6.5	-6.1	30	4.9	30	972	.0	-7.6	26	2.7
850	27	1,518	10.8	-13.1	30	6.2	30	1,496	18.0	12.8	10	5.6	30	1,544	11.4	10.2	10	3.5	30	1,476	4.3	-8.7	30	7.5	30	1,429	-1.2	-10.5	29	4.4
800	27	2,022	9.6	-15.3	29	6.5	30	2,014	15.3	7.5	10	5.0	30	2,050	9.4	3.2	10	3.6	30	1,967	2.1	-12.5	29	9.1	30	1,911	-2.5	-14.8	30	5.5
750	27	2,555	7.8	-18.1	28	7.0	30	2,539	12.8	4.2	10	4.7	30	2,584	7.4	-4.5	10	3.7	30	2,486	-.5	-15.5	29	10.7	30	2,421	-5.1	-17.4	30	6.3
700	27	3,121	5.6	-20.0	27	8.1	30	3,137	10.1	-1.0	10	4.6	30	3,150	4.7	-7.8	10	2.2	30	3,034	-3.3	-18.2	29	12.5	30	2,961	-7.6	-18.5	30	7.0
650	27	3,723	2.3	-22.5	27	9.1	30	3,750	6.7	-5.9	09	4.7	29	3,750	1.2	-10.6	17	1.3	30	3,617	-6.8	-20.2	29	14.5	30	3,534	-10.7	-20.7	30	7.6
600	27	4,364	+1.7	-26.0	27	10.3	30	4,403	2.8	-9.8	08	4.7	29	4,389	-3.0	-13.4	22	2.5	30	4,238	-10.4	-23.8	29	17.0	30	4,146	-14.5	-24.4	30	7.7
550	27	5,050	-6.3	-29.6	26	11.3	30	5,102	-1.0	-15.2	08	5.2	29	5,073	-7.4	-20.2	22	3.9	30	4,902	-14.4	-28.2	29	18.2	30	4,799	-18.8	-28.0	30	9.1
500	27	5,787	-11.7	-33.8	27	12.1	30	5,857	-5.4	-20.4	08	5.1	29	5,808	-12.4	-26.3	25	4.7	30	5,618	-19.3	-32.8	29	19.5	30	5,503	-23.7	-32.4	30	10.3
450	27	6,585	-17.5	-37.5	27	11.1	30	6,676	-10.4	-26.3	07	5.4	29	6,605	-17.9	-30.5	26	5.8	30	6,393	-24.8	-37.5	29	21.5	30	6,264	-29.2	-37.5	29	10.9
400	27	7,456	-24.4	-44.2	26	11.9	30	7,573	-16.2	-32.2	08	4.5	29	7,474	-24.4	-35.6	25	8.4	30	7,238	-31.4	-44.4	29	22.8	30	7,095	-35.6	-42.8	30	11.5
350	27	8,417	-32.0	-30.7			30	8,564	-23.2	-37.9	08	3.8	29	8,436	-31.7	-42.0	25	9.0	30	8,173	-38.5	-47.9	29	24.6	30	8,013	-42.5	-46.6	30	13.0
300	27	9,484	-40.4	-36.4			30	9,674	-31.3	-45.6	05	2.2	29	9,504	-40.4	-49.0	25	11.5	30	9,212	-46.3		29	26.9	30	9,035	-49.8		30	13.7
250	27	10,703	-49.1				30	10,936	-41.5		03	1.1	29	10,721	-50.0		26	16.5	30	10,404	-53.4		28	30.3	30	10,211	-55.5		29	16.0
200	27	12,139	-57.7				30	12,411	-54.2		02	.4	27	12,152	-58.8		26	21.9	30	11,826	-56.6		28	29.9	30	11,626	-57.4		29	14.0
175	27	12,981	-58.0				30	13,253	-61.4		01	.3	27	12,985	-61.6		27	23.5	29	12,677	-56.6		29	27.5	30	12,475	-55.3		29	12.5
150	27	13,948	-59.6				29	14,191	-69.2		01	.7	27	13,933	-64.6		27	19.7	28	13,659	-56.9		29	23.0	29	13,464	-54.9		29	12.1
125	27	15,082	-61.9				29	15,259	-76.8		07	4.3	27	15,039	-67.6		27	15.5	28	14,811	-58.2		29	21.4	29	14,626	-55.9		29	10.6
100	27	16,454	-64.7				29	16,521	-82.7		09	10.0	27	16,273	-70.0		27	10.5	28	16,209	-60.1		28	16.0	29	16,046	-56.0		29	8.2
80	26	17,810	-65.8				27	17,764	-82.3		09	12.5	25	17,699	-70.8		26	6.6	26	17,596	-60.1		29	13.1	28	17,467	-56.4		30	5.9
70	24	18,623	-65.0				24	18,519	-76.4		09	11.9	24	18,490	-69.5		26	2.7	25	18,431	-59.2		29	9.4	28	18,315	-56.0		30	4.6
60	24	19,569	-63.4				25	19,423	-69.9		09	11.0	23	19,415	-67.0		21	.8	23	19,399	-58.0		29	7.2	28	19,296	-56.1		31	3.7
50	22	20,694	-60.1				25	20,523	-64.5		09	11.0	22	20,525	-64.1		10	1.6	21	20,350	-56.8		30	3.7	27	20,454	-56.4		33	3.0
40	21	22,095	-57.6				25	21,895	-61.0		09	9.7	20	21,899	-61.1		10	5.3	18	21,963	-55.1		28	2.8	27	21,872	-56.0		36	1.9
30	20	23,929	-52.7				25	23,710	-54.5		07	3.4	20	23,706	-55.9		09	6.9	17	23,815	-52.4		30	1.9	27	23,707	-55.0		04	1.8
25	20	25,111	-50.8				25	24,887	-50.9		07	2.3	20	24,875	-52.8		08	7.4	16	25,003	-50.8		30	2.2	26	24,878	-54.2		02	.8
20	19	26,578	-47.0				24	26,356	-47.2		02	1.2	18	26,326	-48.5		09	6.5	15	26,484	-49.6		31	3.0	25	26,313	-53.5		33	.7
15	17	28,499	-43.0				22	28,273	-44.7		35	2.5	18	28,230	-45.9		09	5.0	13	28,352	-47.1		27	4.5	23	28,176	-51.2		29	1.3
10	10	31,231	-37.0				17	30,996	-39.9		05	4.3	12	30,955	-41.7				6	31,057	-40.8				21	30,841	-45.9		27	4.3
7							14	33,444	-36.2		09	6.2													20	33,243	-40.0		27	7.6
5							9	35,794	-33.4																14	35,620	-33.1			
4																									8	37,139	-30.5			

Standard pressure surface (mb)	JACKSON, MISS. 1005 MB						JOHN F. KENNEDY INT. AP NY 1014 MB						JOHNSTON IS., PACIFIC AREA 1015 MB						KEY WEST, FLA. 1017 MB						KING SALMON, ALASKA 1001 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	100	11.6	9.9	14	.9	30	5	6.4	-3.7	31	2.8	30	3	24.9	21.2	08	7.9	29	3	21.5	17.9	10	2.0	30	15	-5.4	-9.5	03	.9
1000	30	142			21	1.0	30	118	5.7	-4.5	32	4.4	30	134	23.4	20.2	08	8.6	29	146	20.8	16.7	10	2.7	30	20			03	1.7
950	30	577	14.1	5.5	22	2.6	30	536	4.1	-5.9	32	7.4	30	580	19.7	18.1	09	10.0	29	586	18.1	11.7	12	3.1	30	423	-5.6	-10.6	05	2.5
900	30	1,032	12.4	.9	24	3.2	30	975	2.3	-7.5	32	8.7	30	1,045	16.9	14.0	09	9.8	29	1,050	15.3	6.3	13	2.7	30	846	-7.4	-11.7	07	1.4
850	30	1,510	9.9	-2.2	26	4.3	30	1,434	-.2	-9.2	32	9.6	30	1,530	13.6	10.8	09	8.8	29	1,532	12.6	-.2	16	2.4	30	1,290	-9.6	-14.0	13	.8
800	30	2,012	8.0	-6.0	26	5.6	30	1,917	+2.6	-11.1	31	10.4	30	2,041	11.6	5.8	09	7.5	29	2,040	11.0	-8.0	18	1.4	30	1,756	-11.5	-17.2	14	1.2
750	30	2,542	5.1	-8.8	26	7.3	30	2,427	+4.9	-14.9	30	12.0	30	2,578	8.9	.0	10	5.6	29	2,574	9.2	-15.8	27	1.3	30	2,749	-14.2	-20.5	18	.9
700	30	3,102	1.7	-13.0	27	8.4	30	2,967	-7.4	-19.0	29	12.7	30	3,147	5.6	-4.9	10	4.3	29	3,144	6.5	-18.8	28	3.2	30	2,769	-17.4	-23.3	17	1.4
650	30	3,695	-1.6	-18.2	27	10.3	30	3,541	-10.5	-22.5	29	14.6	30	3,750	2.1	-9.2	10	3.2	29	3,740	2.9	-21.5	28	4.8	30	3,321	-20.5	-27.6	16	1.6
600	30	4,328	-5.7	-21.8	27	11.7	30	4,153	-14.2	-25.8	30	17.1	30	4,392	-1.3	-15.9	09	2.3	29	4,391	-1.5	-25.0	29	6.3	30	3,909	-24.3	-31.5	17	2.0
550	30	5,004	-10.4	-25.9	27	13.5	30	4,808	-18.0	-30.1	30	19.3	30	5,080	-5.5	-22.0	09	1.1	29	5,065	-6.6	-28.2	29	8.0	30	4,538	-28.2	-36.1	18	1.8
500	30	5,730	-15.9	-30.1	27	15.7	30	5,514	-22.5	-34.6	29	20.8	30	5,821	-10.3	-27.8	30	1.5	29	5,814	-11.8	-31.6	29	10.7	30	5,216	-32.6	-40.8	24	1.9
450	30	6,516	-21.3	-34.2	27	18.5	30	6,280	-27.8	-39.8	29	22.9	30	6,625	-15.5	-32.0	30	4.0	29	6,607	-17.1	-36.0	28	13.1	30	5,950	-37.1	-43.9	25	3.0
400	30	7,374	-27.8	-40.5	27	20.9	30	7,116	-33.7	-45.0	29	24.7	30	7,503	-21.7	-36.1	29	7.7	29	7,487	-23.5	-42.1	28	17.0	30	6,753	-43.4	-43.9	27	4.8
350	30	8,323	-36.8	-45.2	27	23.5	30	8,043	-39.9	-49.2	29	26.9	30	8,476	-28.8	-41.6	29	11.6	29	8,448	-30.0	-47.1	28	20.1	30	7,643	-48.8		27	6.7
300	30	9,377	-43.2	-51.1	27	25.5	30	9,078	-46.9		29	30.1	30	9,558	-36.9	-48.2	28	18.8	29	9,524	-39.0	-51.6	28	24.0	30	8,646	-51.6		27	7.3
250	30	10,383	-51.4		27	28.6	30	10,272	-51.7		29	31.4	30	10,795	-46.2		28	27.4	29	10,751	-47.6		27	29.1	30	9,830	-51.0		27	6.7
200	30	12,010	-57.9		27	32.8	30	11,715	-52.7		29	27.2	30	12,247	-55.7		27	33.2	29	12,199	-55.2		28	33.4	30	11,287	-49.9		27	6.3
175	30	12,850	-58.7		28	33.6	29	12,577	-52.5		29	24.9	29	13,086	-60.3		28	32.9	29	13,042	-59.6		27	32.6	30	12,160	-50.3		27	5.5
150	30	13,816	-59.8		27	31.5	28	13,572	-53.1		29	21.0	29	14,035	-65.6		28	26.3	29	13,997	-63.6		27	29.1	30	13,166	-50.3		26	5.4
125	30	14,949	-62.4		27	27.4	28	14,745	-54.6		28	19.0	28	15,131	-70.1		29	17.2	29	15,107	-67.3		27	25.3	30	14,356	-50.8		25	4.7
100	30	16,318	-65.5		27	21.4	25	16,171	-55.6		28	14.8	28	16,443	-74.4		30	8.9	29	16,437	-71.6		28	19.1	30	15,806	-51.6		25	3.9
80	30	17,671	-67.0		27	15.4	24	17,586	-56.1		27	9.1	28	17,742	-72.9		34	2.9	29	17,746	-72.8		29	9.6	29	17,251	-52.2		26	3.5
70	30	18,477	-66.4		28	9.4	24	18,435	-56.2		27	6.4	27	18,535	-69.1		09	2.0	29	18,534	-69.8		29	5.4	28	18,116	-52.4		29	2.4
60	30	19,417	-63.3		29	5.3	23	19,418	-55.7		26	4.5	27	19,463	-66.6		10	3.8	28	19,461	-65.2		30	2.7	27	19,103	-52.4		29	2.5
50	30	20,349	-59.5		30	2.6	21	20,578	-54.7		21	2.3	27	20,574	-63.6		10	6.5	28	20,584	-61.1		35	1.6	27	20,280	-52.7		28	1.6
40	30	21,952	-57.3		36	1.6	21	22,010	-53.4		22	1.3	27	21,953	-60.7		09	8.4	28	21,978	-58.6		07	3.4	27	21,718	-53.3		33	2.0
30	30	23,787	-53.6		04	2.2	21	23,870	-52.0		22	1.4	25	23,768	-54.2		08	6.4	28	23,807	-54.0		07	6.6	27	23,566	-54.0		31	2.5
25	28	24,968	-51.3		07	2.5	21	25,093	-51.2		29	2.0	25	24,946	-51.0		08	5.2	28	24,988	-50.2		08	7.2	26	24,736	-54.3		32	4.0
20	26	26,420	-48.9		05	1.7	21	26,509	-49.7		26	3.7	23	26,407	-47.2		07	4.8	26	26,459	-46.3		09	6.1	25	26,193	-45.0		33	4.8
15	23	28,321	-45.9		23	2.7	18	28,419	-46.8		27	8.5	20	28,315	-44.0		08	5.6	24	28,388	-42.0		09	5.8	21	28,009	-34.2		34	5.8
10	18	31,044	-40.6				14	31,127	-42.2				17	31,088	+40.5		12	4.7	21	31,186	-35.6		05	1.6	6	30,788	-30.1			
7													5	33,495	-39.0				14	33,669	-32.3									

See reference note at end of table

RAWINSONDE DATA

Average monthly values

APRIL 1971

KOROR, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	28.4	24.8	33	.9
1000	30	70	27.4	22.8	32	.9
950	30	524	24.2	19.6	30	1.7
900	30	996	21.2	15.7	28	2.3
850	30	1,490	18.5	11.9	28	2.3
800	30	2,009	16.1	8.1	28	1.6
750	30	2,556	13.2	4.3	26	1.1
700	30	3,133	10.1	-1.1	35	.5
650	30	3,747	7.0	-5.2	06	1.0
600	30	4,401	3.3	-9.3	07	1.5
550	30	5,102	-.6	-14.4	07	2.4
500	30	5,857	-4.9	-18.1	08	4.0
450	30	6,679	-9.6	-25.3	09	4.7
400	30	7,579	-15.3	-31.9	09	4.9
350	30	8,577	-22.2	-38.5	10	5.2
300	30	9,689	-30.6	-46.0	11	7.5
250	30	10,957	-40.9	-55.8	10	9.3
200	30	12,435	-53.2		09	11.9
175	30	13,283	-60.0		09	12.8
150	30	14,227	-68.1		09	13.4
125	30	15,301	-75.9		08	13.2
100	30	16,567	-81.9		09	12.3
80	30	17,819	-80.2		09	12.0
70	30	18,585	-74.2		08	11.3
60	30	19,497	-68.3		09	13.5
50	30	20,603	-63.7		09	14.3
40	30	21,991	-58.4		09	5.0
30	29	23,825	-52.8		27	3.3
25	28	25,011	-49.6		27	7.1
20	27	26,487	-47.1		26	7.7
15	24	28,407	-43.7		26	7.0
10	17	31,140	-39.9		22	2.5
7	5	33,601	-35.4			
5						

KOTZEBUE, ALASKA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	-14.9	-18.3	02	1.5
1000	30	86			04	2.2
950	30	480	-10.5	-17.5	07	3.8
900	30	896	-11.4	-18.0	08	4.2
850	30	1,333	-12.5	-18.9	08	4.6
800	30	1,795	-14.2	-21.1	08	4.5
750	30	2,283	-16.6	-24.1	09	5.1
700	30	2,798	-19.6	-27.5	09	5.2
650	30	3,345	-22.8	-31.6	08	5.2
600	30	3,928	-26.4	-35.1	09	5.5
550	30	4,552	-30.6	-38.7	09	5.9
500	30	5,222	-35.1	-42.2	09	5.6
450	30	5,950	-39.7	-43.0	09	6.7
400	30	6,746	-44.9	-45.0	09	7.0
350	30	7,632	-49.8		09	7.0
300	29	8,625	-52.6		09	4.0
250	29	9,807	-50.5		10	1.6
200	29	11,269	-49.0		15	1.0
175	29	12,146	-49.1		14	1.6
150	29	13,156	-49.6		16	2.2
125	29	14,350	-50.1		15	2.7
100	29	15,806	-50.4		17	2.2
80	28	17,264	-51.0		15	1.5
70	28	18,133	-51.2		16	1.1
60	28	19,135	-51.3		17	1.3
50	28	20,318	-51.9		20	.4
40	28	21,762	-52.6		29	.7
30	25	23,643	-53.4		34	1.7
25	23	24,825	-53.6		36	2.2
20	20	26,276	-54.0		34	4.4
15	14	28,116	-54.1			
10						
7						
5						

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	26.5	23.7	09	5.7
1000	30	89	25.9	23.2	09	6.4
950	30	541	22.7	20.7	09	8.1
900	30	1,011	19.9	17.3	10	8.4
850	30	1,503	17.2	14.5	10	7.7
800	30	2,020	14.8	11.6	10	7.0
750	30	2,565	12.1	7.9	10	5.8
700	30	3,142	9.1	3.9	10	4.4
650	30	3,753	5.8	.9	09	4.4
600	30	4,405	2.2	-3.5	08	3.4
550	30	5,104	-1.5	-8.7	08	2.4
500	30	5,859	-5.6	-13.6	06	1.6
450	30	6,678	-10.5	-18.6	36	.9
400	30	7,575	-16.1	-24.9	30	2.3
350	30	8,568	-23.0	-31.8	28	4.6
300	30	9,678	-31.7	-40.1	27	5.8
250	30	10,940	-42.0	-50.0	26	8.1
200	30	12,409	-54.7	-62.0	26	11.4
175	30	13,249	-62.0		27	12.2
150	30	14,184	-69.9		28	11.6
125	29	15,248	-77.4		29	9.6
100	24	16,512	-82.9		01	4.9
80	18	17,762	-80.7		06	6.7
70	18	18,526	-74.6		08	7.4
60	16	19,434	-69.7		09	11.7
50	16	20,530	-66.3		09	13.2
40	16	21,898	-61.5		09	7.7
30	16	23,714	-54.6		28	3.1
25	16	24,888	-52.0		27	5.9
20	15	26,352	-48.3		28	7.8
15	14	28,265	-45.1		28	7.5
10	12	31,000	-40.8		24	2.8
7	10	33,445	-37.5			
5	6	35,795	-35.0			

LAKE CHARLES, LA. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	14.2	12.9	12	1.0
1000	30	134	16.6	12.8	16	2.2
950	30	571	14.5	9.5	18	4.3
900	30	1,027	12.9	3.0	19	4.6
850	30	1,507	11.8	-3.6	21	5.3
800	29	2,014	9.7	-7.8	23	5.3
750	29	2,547	6.7	-11.4	25	6.7
700	29	3,110	3.8	-16.4	27	7.9
650	29	3,708	.2	-18.5	27	9.4
600	29	4,344	-4.3	-21.5	27	11.1
550	29	5,023	-9.2	-26.7	27	12.5
500	29	5,753	-14.5	-30.7	27	13.0
450	29	6,542	-20.4	-34.7	27	16.3
400	29	7,402	-27.2	-40.4	27	18.2
350	29	8,353	-34.3	-45.4	27	21.4
300	29	9,411	-42.0	-51.1	27	25.7
250	29	10,624	-50.2		27	29.9
200	29	12,058	-56.5		27	34.6
175	29	12,902	-58.4		27	33.0
150	29	13,868	-60.0		27	30.2
125	29	14,998	-63.2		27	27.1
100	28	16,361	-66.8		27	19.5
80	28	17,701	-69.0		27	12.9
70	28	18,502	-68.2		27	7.8
60	27	19,437	-64.4		28	4.2
50	27	20,564	-60.1		29	3.0
40	26	21,967	-57.4		33	1.1
30	25	23,797	-54.1		06	2.4
25	25	24,973	-51.6		07	3.4
20	24	26,431	-48.0		08	2.8
15	23	28,343	-45.6		05	.3
10	14	31,071	-40.2			
7						
5						

LANDER, WYO. 827 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,697	.2	-6.3	22	1.0
1000	30	142				
950	30	566				
900	30	1,008				
850	30	1,471				
800	30	1,960	1.7	-8.3	28	.9
750	30	2,478	-1.1	-10.2	28	1.4
700	30	3,025	-4.0	-13.5	27	3.3
650	30	3,606	-7.6	-16.8	27	5.1
600	30	4,225	-11.6	-20.9	27	6.3
550	30	4,886	-16.0	-26.8	27	7.3
500	30	5,597	-21.1	-32.7	27	8.4
450	30	6,366	-26.7	-37.7	27	9.4
400	30	7,206	-33.2	-42.7	27	10.2
350	30	8,133	-40.5	-46.2	27	11.7
300	30	9,162	-48.5		27	12.4
250	30	10,342	-55.7		26	13.5
200	30	11,752	-58.1		26	15.5
175	30	12,595	-57.4		27	15.0
150	30	13,571	-56.9		27	14.1
125	30	14,723	-57.8		27	12.6
100	29	16,129	-58.3		27	10.9
80	28	17,531	-59.3		27	7.9
70	26	18,372	-59.0		27	6.4
60	26	19,340	-58.5		28	5.7
50	26	20,488	-58.0		28	3.5
40	24	21,900	-57.4		31	2.5
30	23	23,726	-56.3		33	2.2
25	21	24,889	-54.3		32	2.8
20	21	26,327	-52.3		31	2.9
15	19	28,198	-49.9		29	3.7
10	11	30,882	-44.7			
7						
5						

LIHUE KAUAI, HAWAII 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	23.2	15.4	07	5.1
1000	30	166	21.5	13.6	07	6.4
950	30	608	17.7	8.7	08	7.5
900	30	1,068	14.5	5.5	08	7.1
850	30	1,548	11.6	3.0	08	6.2
800	30	2,054	9.4	2.6	09	5.8
750	30	2,588	7.4	1.8	10	4.6
700	30	3,153	4.0	-1.5	13	2.3
650	30	3,752	.3	-4.9	12	1.5
600	30	4,390	-3.5	-8.7	14	1.0
550	30	5,073	-7.9	-12.4	20	.5
500	30	5,807	-12.9	-17.6	25	1.3
450	30	6,603	-18.3	-23.1	26	1.7
400	30	7,472	-24.5	-29.0	26	4.0
350	30	8,432	-32.3	-36.7	25	5.0
300	30	9,496	-41.2	-43.7	26	6.8
250	30	10,708	-51.1		27	10.2
200	29	12,132	-59.5		27	16.1
175	28	12,961	-61.5		27	15.5
150	28	13,915	-62.8		27	12.9
125	27	15,030	-66.8		28	10.7
100	27	16,367	-70.0		28	7.4
80	27	17,693	-70.1		27	3.0
70	27	18,490	-69.0		24	1.2
60	27	19,417	-66.4		23	1.2
50	26	20,534	-63.4		12	.5
40	24	21,913	-60.7		09	2.4
30	23	23,724	-55.5		08	5.3
25	23	24,893	-53.1		08	6.2
20	22	26,347	-49.4		09	6.0
15	20	28,258	-45.6		09	3.8
10	15	30,993	-40.8		10	3.9
7	10	33,477	-36.6			
5						

LITTLE ROCK, ARK. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	9.4	6.8	20	.7
1000	30	136			23	1.2
950	30	568	12.7	3.4	23	2.8
900	30	1,021	10.9	-.5	23	3.7
850	30	1,496	9.0	-4.5	25	4.6
800	30	1,996	6.5	-6.8	26	6.0
750	30	2,523	3.6	-9.7	27	7.2
700	30	3,079	.3	-13.4	28	8.8
650	30	3,670	-3.2	-17.9	27	9.5
600	30	4,298	-7.6	-21.4	27	10.7
550	30	4,969	-12.3	-25.6	27	12.4
500	30	5,690	-17.8	-31.5	27	13.7
450	30	6,470	-23.1	-36.0	27	16.4
400	30	7,323	-29.1	-41.4	27	18.1
350	30	8,267	-35.7	-45.6	27	19.0
300	30	9,318	-43.8	-47.8	27	21.7
250	30	10,521	-51.7		28	25.7
200	29	11,938	-58.3		28	26.0
175	29	12,777	-58.3		28	25.4
150	29	13,748	-58.1		28	24.1
125	29	14,891	-60.6		28	21.3
100	28	16,269	-63.5		28	18.7
80	28	17,636	-64.5		28	13.0
70	27	18,452	-63.7		29	8.8
60	27	19,401	-62.0		29	5.7
50	27	20,536	-59.4		31	2.7
40	27	21,942	-56.9		35	1.0
30	27	23,779	-53.6		01	1.3
25	26	24,958	-52.1		07	.4
20	26	26,409	-50.4		29	2.5
15	22	28,288	-47.8		29	5.1
10	13	30,984	-43.4			
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MCGRATH, ALASKA 993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	25	103	-6.0	-10.0	32	1.1
1000	25	42				
950	25	445	-5.8	-12.9	03	2.7
900	25	868	-7.6	-14.4	06	2.8
850	25	1,311	-9.1	-15.6	08	2.4
800	25	1,779	-11.3	-17.8	10	1.9
750	25	2,272	-13.7	-20.5	14	2.2
700	25	2,793	-17.1	-23.8	17	3.4
650	25	3,345	-20.5	-27.5	17	2.9
600	25	3,933	-24.2	-31.7	17	2.2
550	25	4,562	-28.4	-35.7	15	2.9
500	25	5,239	-33.1	-40.7	16	2.9
450	25	5,972	-38.1	-43.2	18	1.9
400	25	6,773	-43.7	-41.2	17	1.5
350	25	7,662	-49.3		14	1.6
300	25	8,661	-52.5		16	2.5
250	25	9,843	-50.4		23	2.8
200	24	11,297	-49.2		24	2.3
175	24	12,173	-49.0		22	2.4
150	24	13,184	-49.6		20	1.3
125	24	14,376	-50.4		21	1.5
100	24	15,830	-50.9		20	1.2
80	23	17,284	-51.6		17	1.8
70	23	18,150	-51.8		17	1.3
60	23	19,149	-52.2		16	.9
50	22	20,327	-52.8		15	1.0
40	20	21,786	-52.9		06	1.4
30	18	23,660	-53.6		05	1.0
25	16	24,834	-53.8		03	1.4
20	13	26,310	-53.7		04	2.9
15	8	28,203	-53.3			
10						
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MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	27.3	23.8	09	5.4
1000	30	97	25.6	20.3	09	6.6
950	30	548	22.7	18.4	09	8.0
900	30	1,018	20.2	15.7	10	8.2
850	30	1,510	17.3	13.0	10	7.7
800	30	2,026	14.9	10.1	10	7.0
750	30	2,571	12.3	6.8	10	6.2
700	30	3,147	9.4	3.2	10	5.6
650	30	3,760	6.3	-.2	10	4.6
600	30	4,413	2.8	-4.1	10	3.1
550	29	5,112	-.8	-9.0	09	2.4
500	28	5,869	-4.8	-14.4	09	.7
450	28	6,691	-9.5	-20.4	15	.2
400	28	7,592	-14.9	-26.4	27	1.6
350	28	8,592	-21.6	-34.1	28	3.5
300	28	9,707	-30.1	-42.7	28	5.6
250	28	10,977	-40.4	-51.2	28	8.1
200	28	12,457	-53.0		27	11.5
175	28	13,304	-60.2		27	12.6
150	28	14,247	-68.4		28	13.4
125	28	15,322	-75.3		28	11.2
100	28	16,596	-80.7		32	4.5
80	28	17,859	-77.2		07	5.0
70	28	18,637	-71.4		09	8.1
60	28	19,555	-67.7		09	13.3
50	28	20,667	-61.6		09	13.4
40	28	22,067	-56.3		10	3.7
30	27	23,920	-50.8		27	5.6
25	24	25,117	-48.1		27	8.7
20	24	26,599	-44.7		28	9.5
15	23	28,537	-42.0		27	9.2
10	17	31,293	-39.4		28	7.6
7	7	33,764	-35.5			
5						

MEDFORD, OREG. 970 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	401	4.4	1.5	26	.3
1000	29	152				
950	29	572	5.1	.3	28	.7
900	29	1,014	4.0	-2.3	21	1.0
850	29	1,477	1.6	-5.6	21	1.8
800	29	1,963	-.9	-9.9	24	3.3
750	29	2,476	-3.7	-12.2	25	4.4
700	29	3,018	-6.5	-16.8	25	5.6
650	29	3,594	-9.7	-21.6	26	7.0
600	29	4,208	-13.3	-24.9	26	8.6
550	29	4,865	-17.4	-29.8	26	9.7
500	29	5,572	-22.1	-33.7	27	10.9
450	29	6,339	-27.4	-38.6	26	11.7
400	29	7,177	-33.4	-42.6	27	13.6
350	29	8,104	-40.1	-45.8	28	15.3
300	29	9,137	-47.3		28	17.2
250	29	10,323	-54.8		28	19.0
200	29	11,730	-59.4		27	18.8
175	29	12,569	-57.8		27	18.9
150	29	13,544	-57.2		27	17.0
125	29	14,695	-58.4		27	14.4
100	29	16,098	-58.6		26	12.8
80	29	17,500	-58.6		26	10.5
70	29	18,340	-58.3		26	7.8
60	29	19,310	-58.2		25	5.7
50	29	20,460	-57.6		25	5.0
40	29	21,871	-57.1		26	3.2
30	28	23,700	-55.9		25	3.2
25	27	24,861	-55.2		28	2.9
20	26	26,290	-53.6		28	3.2
15	25	28,157	-50.8		28	5.7
10	22	30,830	-45.4		28	10.2
7	12	33,244	-40.0		29	12.5
5	7	35,633	-33.4			

MERIDA, MEXICO 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	20.4	17.7	10	.9
1000	30	116	21.7	17.0	10	4.0
950	30	561	19.7	15.4	12	8.5
900	30	1,028	19.3	7.3	12	6.2
850	30	1,518	16.8	2.9	12	2.5
800	30	2,032	14.0	-1.5	21	.5
750	30	2,573	10.9	-6.2	25	.7
700	30	3,145	8.1	-13.2	24	1.3
650	30	3,753	4.8	-16.4	29	2.3
600	30	4,401	1.1	-20.4	29	3.8
550	30	5,094	-3.4	-24.4	30	5.2
500	30	5,840	-8.4	-29.3	29	6.8
450	30	6,649	-13.8	-33.7	28	10.0
400	30	7,533	-20.1	-38.7	28	13.2
350	30	8,512	-27.3	-43.9	27	17.4
300	30	9,601	-35.5	-50.1	27	20.3
250	30	10,845	-44.9		27	24.1
200	30	12,303	-55.4		27	23.5
175	30	13,145	-60.0		26	23.6
150	29	14,098	-64.7		26	21.6
125	28	15,197	-68.5		27	17.6
100	27	16,519	-73.9		27	11.3
80	27	17,812	-75.8		29	4.6
70	27	18,591	-72.2		32	1.6
60	27	19,512	-65.9		05	1.1
50	25	20,632	-61.2		06	2.7
40	24	22,020	-59.5		07	5.1
30	21	23,836	-54.1		07	7.4
25	20	25,020	-50.4		08	7.1
20	18	26,487	-45.9		09	5.2
15	17	28,422	-42.9		09	5.7
10	10	31,148	-37.6			

MIAMI, FLA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	19.6	16.3	18	.5
1000	30	150	20.5	14.7	15	1.0
950	30	592	17.8	11.8	18	2.2
900	30	1,053	14.9	8.0	18	1.4
850	30	1,534	12.1	3.3	22	.9
800	30	2,041	10.3	-4.4	25	.6
750	30	2,576	8.2	-10.3	29	2.0
700	30	3,143	5.5	-13.7	29	4.0
650	30	3,745	2.3	-17.2	29	5.8
600	30	4,386	-1.9	-20.6	29	7.5
550	30	5,072	-6.6	-24.0	29	9.7
500	30	5,809	-12.0	-27.6	29	11.5
450	30	6,606	-17.5	-32.0	29	13.8
400	30	7,478	-23.6	-38.1	28	16.7
350	30	8,443	-30.6	-44.3	28	19.8
300	30	9,517	-38.6	-50.3	28	23.1
250	30	10,747	-47.2		28	28.7
200	30	12,199	-53.9		28	32.9
175	30	13,049	-57.7		28	32.4
150	30	14,013	-61.5		28	30.0
125	30	15,134	-65.2		28	26.1
100	30	16,479	-69.5		28	20.1
80	30	17,803	-70.7		29	12.5
70	28	18,598	-68.4		29	7.4
60	28	19,533	-64.2		30	3.9
50	28	20,661	-59.8		32	2.5
40	28	22,063	-57.7		07	2.9
30	28	23,894	-53.7		08	5.5
25	27	25,078	-50.1		08	6.1
20	25	26,553	-46.1		09	5.4
15	24	28,480	-42.7		09	1.6
10	18	31,247	-37.2		05	.9

MIDLAND, TEXAS 914 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	874	10.9	1.8	13	.9
1000	30	117				
950	30	551				
900	30	1,005	12.3	1.6	16	2.2
850	30	1,485	12.9	-3.2	23	3.7
800	30	1,993	10.8	-6.4	26	5.4
750	30	2,528	7.3	-9.7	26	6.8
700	30	3,091	3.4	-14.2	26	8.7
650	30	3,688	-.3	-17.6	26	10.6
600	30	4,323	-5.0	-21.0	26	12.6
550	30	5,000	-9.8	-26.2	26	13.7
500	30	5,728	-15.1	-31.7	26	16.2
450	30	6,516	-21.0	-36.8	26	17.8
400	30	7,374	-27.7	-42.0	26	20.6
350	30	8,323	-34.9	-48.0	26	23.5
300	30	9,378	-42.9		26	27.0
250	30	10,585	-51.1		26	30.7
200	30	12,011	-57.8		26	35.5
175	30	12,852	-58.5		26	35.5
150	30	13,820	-59.7		27	31.0
125	30	14,952	-62.8		27	27.0
100	29	16,316	-65.8		27	21.7
80	29	17,668	-67.2		27	13.3
70	29	18,474	-66.7		28	7.8
60	29	19,412	-64.2		29	4.1
50	29	20,536	-61.3		29	3.2
40	29	21,932	-58.1		31	2.0
30	29	23,762	-54.0		05	1.3
25	29	24,938	-52.0		06	1.2
20	27	26,389	-49.8		17	.6
15	27	28,285	-46.7		25	5.3
10	20	30,997	-42.1		27	10.4

MONTERREY, MEXICO 961 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	423	17.2	13.3	36	.7
1000	30	105				
950	30	546	17.1	12.8	07	1.1
900	30	1,008	16.1	11.1	13	2.1
850	30	1,494	15.6	5.6	16	4.3
800	30	2,009	14.6	-.4	20	3.7
750	30	2,552	12.0	-4.8	24	3.2
700	30	3,126	8.6	-10.0	26	4.9
650	30	3,734	4.3	-13.9	27	6.2
600	30	4,380	-.5	-17.7	26	7.5
550	30	5,068	-5.8	-21.0	25	10.3
500	30	5,807	-11.4	-27.4	25	12.6
450	30	6,606	-17.1	-32.9	26	15.3
400	30	7,478	-23.7	-38.4	26	18.3
350	30	8,444	-30.4	-44.0	26	22.6
300	30	9,519	-38.6	-49.9	26	26.6
250	30	10,747	-47.6		26	32.1
200	30	12,190	-57.0		26	34.3
175	30	13,029	-60.5		26	32.9
150	30	13,983	-63.1		26	29.5
125	30	15,094	-67.3		26	25.2
100	28	16,426	-71.4		26	17.2
80	27	17,740	-73.3		27	8.5
70	26	18,521	-72.2		27	4.9
60	22	19,436	-66.8		26	2.4
50	21	20,548	-62.9		26	2.1
40	20	21,933	-59.9		08	1.4
30	20	23,745	-56.5		08	5.1
25	19	24,911	-53.1		08	6.1
20	19	26,364	-49.0		08	5.6
15	16	28,259	-45.8		09	3.2
10	6	30,956	-42.4			

MONETT, MO. 965 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	438	9.2	4.4	15	1.1
1000	29	135				
950	29	563	10.9	3.0	19	1.4
900	29	1,014	10.2	-.6	24	6.0
850	29	1,488	8.0	-3.1	26	6.4
800	29	1,986	5.2	-6.4	27	6.1
750	28	2,511	2.3	-10.5	27	7.4
700	28	3,065	-1.1	-14.6	27	8.3
650	28	3,651	-5.1	-17.6	28	9.3
600	28	4,275	-9.4	-21.7	27	10.5
550	28	4,942	-14.0	-26.9	27	12.1
500	28	5,659	-18.9	-32.0	27	13.7
450	28	6,435	-24.3	-38.3	27	15.0
400	28	7,283	-30.8	-43.3	27	16.6
350	28	8,219	-37.9	-47.9	27	18.1
300	28	9,262	-45.5		27	23.1
250	28	10,457	-53.0		27	26.6
200	28	11,879	-57.8		27	25.0
175	28	12,719	-58.6		27	24.8
150	28	13,689	-58.5		28	25.0
125	28	14,832	-60.0		28	21.1
100	28	16,218	-62.2		28	15.4
80	28	17,593	-63.1		28	12.3
70	28	18,416	-62.2		28	9.4
60	28	19,371	-61.4		29	6.8
50	28	20,508	-58.9		29	3.7
40	27	21,918	-56.8		30	3.1
30	27	23,755	-53.9		27	2.8
25	26	24,930	-52.2		27	4.8
20	25	26,378	-50.4		27	5.0
15	21	28,298	-48.6		27	7.9
10	13	30,916	-43.8			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	57	10.7	8.7	30	.9
1000	30	145	13.6	6.3	33	1.7
950	30	579	14.2	4.7	30	1.9
900	30	1,035	11.8	1.7	27	2.4
850	30	1,511	9.9	-1.8	27	4.0
800	30	2,013	7.7	-5.8	27	5.2
750	30	2,543	5.3	-10.4	27	6.5
700	30	3,103	2.0	-14.5	27	9.1
650	30	3,697	-1.9	-17.3	27	9.5
600	30	4,328	-6.1	-21.1	28	11.2
550	30	5,004	-10.6	-25.4	28	14.2
500	30	5,730	-15.8	-29.8	27	15.6
450	30	6,516	-21.0	-34.5	28	17.2
400	30	7,375	-27.3	-40.4	28	19.0
350	30	8,326	-34.3	-45.3	28	21.3
300	30	9,383	-42.4	-50.3	28	23.5
250	30	10,593	-50.9		28	28.5
200	30	12,023	-57.5		28	33.0
175	29	12,863	-58.1		28	33.3
150	29	13,832	-59.1		28	29.5
125	29	14,970	-61.5		28	26.5
100	29	16,342	-64.5		28	22.0
80	29	17,702	-65.9		28	15.3
70	29	18,513	-65.3		28	11.2
60	27	19,459	-62.5		29	6.2
50	25	20,599	-58.7		30	2.2
40	24	22,011	-56.1		33	2.1
30	24	23,854	-52.8		05	2.3
25	23	25,039	-51.0		06	3.7
20	21	26,501	-48.5		06	4.0
15	20	28,404	-45.1		33	2.0
10	14	31,144	-40.8			
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NASHVILLE, TENN. 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	8.9	3.7	05	.3
1000	30	145			15	.5
950	30	573	11.6	-.9	26	2.0
900	30	1,024	9.5	-3.5	28	4.2
850	30	1,496	7.3	-7.7	28	5.8
800	30	1,993	4.4	-10.3	28	6.8
750	30	2,516	1.7	-13.1	28	8.0
700	30	3,068	-1.6	-17.4	28	9.8
650	30	3,655	-4.7	-20.0	28	11.4
600	30	4,280	-8.5	-23.5	27	12.6
550	30	4,949	-13.2	-26.1	27	13.8
500	30	5,668	-18.1	-31.1	28	15.2
450	30	6,447	-23.7	-37.2	27	17.4
400	30	7,297	-30.0	-43.3	27	19.2
350	30	8,237	-36.9	-46.5	28	21.8
300	30	9,283	-45.0		28	25.8
250	30	10,478	-53.3		28	29.4
200	30	11,895	-58.5		28	31.3
175	30	12,734	-58.3		28	28.6
150	30	13,705	-58.4		28	26.9
125	30	14,848	-59.9		28	24.1
100	30	16,234	-61.8		28	19.7
80	29	17,613	-63.3		28	14.0
70	29	18,437	-62.0		29	10.7
60	29	19,392	-60.9		29	6.7
50	29	20,531	-58.9		29	3.6
40	29	21,941	-56.2		29	2.3
30	27	23,782	-53.3		34	.9
25	27	24,960	-52.0		34	1.7
20	27	26,412	-49.9		32	1.7
15	26	28,303	-47.6		28	4.6
10	26	31,013	-42.0		27	13.3
7	12	33,440	-38.6			

* NOME, ALASKA 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	-12.3	-18.0	03	3.7
1000	29	71			04	4.7
950	29	467	-10.2	-16.8	06	4.2
900	29	883	-11.6	-19.0	06	4.2
850	29	1,320	-12.3	-21.4	05	4.5
800	29	1,782	-13.9	-23.5	05	4.4
750	29	2,270	-16.1	-25.9	05	4.3
700	29	2,787	-18.8	-29.0	04	2.8
650	29	3,336	-22.1	-31.4	03	3.0
600	29	3,920	-25.5	-34.1	03	3.1
550	29	4,546	-29.7	-37.6	02	3.3
500	29	5,219	-34.1	-41.7	36	3.6
450	29	5,950	-38.9	-41.6	35	4.4
400	29	6,748	-44.5	-45.0	35	4.4
350	29	7,636	-49.0		35	5.4
300	29	8,638	-51.8		34	6.4
250	29	9,822	-51.1		34	5.9
200	29	11,275	-50.4		33	3.4
175	29	12,147	-50.1		34	2.2
150	29	13,154	-50.4		32	1.7
125	29	14,343	-51.0		23	.4
100	29	15,795	-51.0		20	.8
80	29	17,246	-51.4		17	1.1
70	29	18,114	-51.3		21	.7
60	29	19,114	-51.7		27	.2
50	29	20,296	-52.0		32	.7
40	29	21,741	-52.4		33	1.8
30	29	23,597	-53.4		34	2.6
25	29	24,770	-53.6		34	3.7
20	29	26,203	-54.2		34	5.1
15	23	28,040	-54.1		33	5.8
10	18	30,699	-52.3		33	6.3
7	12	32,981	-49.6			

NORTH PLATTE, NEBR. 917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	847	3.5	-1.2	06	.9
1000	30	133				
950	30	555				
900	30	997	5.3	-1.8	05	.8
850	30	1,464	4.9	-3.3	32	1.1
800	30	1,957	2.8	-5.9	28	2.9
750	30	2,478	.5	-10.3	28	4.1
700	30	3,029	-2.7	-14.6	28	4.7
650	30	3,612	-6.7	-17.9	28	5.5
600	30	4,232	-11.2	-22.2	29	8.3
550	30	4,893	-16.1	-27.0	28	8.8
500	30	5,604	-21.4	-32.2	28	8.9
450	30	6,372	-27.0	-36.9	28	10.1
400	30	7,211	-33.4	-43.2	27	12.9
350	30	8,138	-39.9	-47.2	27	15.1
300	30	9,173	-47.0		27	16.6
250	30	10,361	-53.8		27	19.5
200	30	11,782	-56.8		27	21.1
175	30	12,628	-56.9		27	19.9
150	30	13,605	-57.0		27	18.3
125	30	14,757	-57.9		27	17.3
100	30	16,160	-59.3		27	14.1
80	30	17,556	-59.7		27	10.1
70	30	18,392	-59.7		28	8.3
60	29	19,360	-59.0		28	6.7
50	29	20,506	-58.3		30	4.2
40	29	21,913	-57.5		30	3.4
30	28	23,740	-55.1		28	3.2
25	27	24,908	-53.8		28	4.2
20	27	26,349	-52.0		27	4.5
15	24	28,223	-49.2		27	6.6
10	18	30,927	-43.8			
7						

OAKLAND, CALIF. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	8.8	6.1	27	1.9
1000	30	145	8.8	4.9	28	2.2
950	30	569	7.9	.1	30	3.3
900	30	1,015	6.8	-6.0	30	3.5
850	30	1,483	5.1	-11.0	29	3.3
800	30	1,976	2.8	-14.0	28	3.8
750	30	2,496	.3	-16.9	28	4.6
700	30	3,045	-2.9	-19.0	28	5.8
650	30	3,629	-6.2	-21.8	28	7.1
600	30	4,251	-9.9	-25.7	29	8.8
550	30	4,916	-14.3	-28.9	29	10.2
500	30	5,632	-19.2	-33.0	29	12.8
450	30	6,407	-24.8	-37.8	29	14.7
400	30	7,254	-31.0	-42.7	29	15.2
350	30	8,189	-38.1	-48.2	29	17.1
300	30	9,231	-45.8		29	20.2
250	30	10,424	-53.6		29	23.0
200	30	11,839	-58.6		29	24.7
175	30	12,678	-58.4		28	23.9
150	30	13,648	-58.5		28	21.6
125	30	14,792	-59.7		27	20.1
100	30	16,182	-60.8		27	16.4
80	30	17,567	-61.4		26	12.6
70	30	18,397	-60.6		26	9.3
60	30	19,358	-60.0		26	7.1
50	29	20,504	-58.0		25	4.7
40	28	21,911	-57.8		25	2.6
30	27	23,732	-55.8		27	2.0
25	26	24,897	-54.0		28	1.4
20	26	26,337	-51.8		29	3.4
15	20	28,212	-48.3		29	5.6
10	11	30,928	-43.1			
7						

OMAHA, NEBR. 968 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	6.4	.2	14	.8
1000	30	130				
950	30	554	7.6	-1.3	16	1.7
900	30	999	6.8	-3.7	22	3.6
850	30	1,468	5.1	-5.4	26	4.6
800	30	1,961	2.8	-6.9	28	5.9
750	30	2,481	-.2	-10.7	27	7.1
700	30	3,030	-3.3	-16.3	28	8.1
650	30	3,613	-6.7	-20.0	28	7.9
600	30	4,233	-10.9	-25.3	27	9.4
550	30	4,895	-15.7	-29.4	27	11.1
500	30	5,607	-20.8	-34.5	27	12.4
450	30	6,377	-26.4	-39.3	27	12.5
400	30	7,217	-32.7	-44.6	26	14.3
350	30	8,147	-39.5	-48.8	26	16.7
300	30	9,183	-46.9		26	18.9
250	29	10,372	-53.2		26	20.9
200	28	11,790	-57.2		26	20.8
175	27	12,629	-56.4		27	20.3
150	26	13,609	-56.4		28	18.1
125	25	14,764	-57.5		28	16.9
100	25	16,170	-58.2		28	13.8
80	25	17,569	-59.4		29	10.8
70	25	18,407	-58.9		29	7.7
60	25	19,375	-58.3		30	6.3
50	25	20,525	-57.5		31	4.3
40	25	21,936	-56.8		33	2.5
30	24	23,773	-54.1		28	2.6
25	24	24,947	-52.7		27	2.7
20	24	26,392	-51.7		25	4.8
15	23	28,270	-48.7		26	6.7
10	13	30,944	-43.9			
7						
5						
4						

PAGO PAGO, AMERICAN SAMOA + 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	28.8	23.8	07	3.2
1000	30	102	27.5	21.1	07	3.5
950	30	556	24.0	18.3	05	4.5
900	30	1,027	20.7	14.9	05	4.8
850	30	1,519	17.5	10.7	06	5.0
800	30	2,036	14.9	7.0	06	4.5
750	30	2,580	12.0	3.2	06	4.1
700	30	3,155	8.9	-1.6	06	4.4
650	30	3,765	5.6	-4.6	06	4.5
600	30	4,416	2.2	-9.6	08	4.8
550	30	5,114	-1.7	-14.8	09	4.0
500	30	5,867	-6.1	-20.6	10	4.2
450	30	6,685	-10.7	-26.7	11	4.6
400	30	7,580	-16.7	-32.9	14	5.0
350	30	8,573	-23.6	-39.8	15	5.9
300	30	9,678	-32.3	-47.2	16	7.4
250	30	10,937	-42.6		17	10.6
200	30	12,403	-54.8		17	14.4
175	30	13,244	-61.4		18	15.5
150	30	14,186	-67.6		19	14.9
125	30	15,268	-73.4		18	11.8
100	29	16,558	-77.0		17	5.9
80	29	17,852	-73.2		10	5.5
70	29	18,639	-70.7		10	8.5
60	29	19,561	-67.2		09	11.3
50	28	20,673	-62.6		09	13.3
40	28	22,061	-59.0		08	12.7
30	26	23,890	-52.2		09	8.9
25	25	25,076	-49.8		09	7.2
20	23	26,540	-45.9		09	5.7
15	19	28,473	-41.8		09	4.0
10	11	31,253	-37.1			
7						
5						
4						

* PEORIA, ILL. 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	5.3	-2.3	34	.7
1000	30	136				
950	30	558	7.2	-2.2	31	2.0
900	30	1,002	5.4	-3.8	30	4.3
850	30	1,467	3.3	-7.7	30	6.3
800	30	1,957	1.1	-10.4	30	8.2
750	30	2,474	-1.2	-13.0	29	9.3
700	30	3,021	-4.1	-15.7	29	10.5
650	30	3,603	-7.1	-19.5	29	12.3
600	30	4,223	-11.0	-23.2	29	13.8
550	30	4,885	-15.6	-28.2	29	14.6
500	30	5,598	-20.6	-33.7	28	15.3
450	30	6,369	-26.1	-39.3	28	15.7
400	30	7,210	-32.6	-44.0	28	17.7
350	30	8,140	-39.8	-47.7	28	19.7
300	30	9,173	-47.4		28	21.7
250	30	10,359	-54.5		28	23.3
200	30	11,772	-58.4		28	25.2
175	30	12,614	-57.4		28	23.3
150	30	13,589	-57.5		28	20.0
125	30	14,738	-58.7		28	19.3
100	29	16,133	-59.6		29	14.7
80	29	17,526	-60.3		28	11.7
70	29	18,359	-59.8		29	9.2
60	29	19,325	-58.8		30	5.7
50	29	20,472	-58.3		29	3.8
40	29	21,881	-56.7		28	2.5
30	29	23,716	-54.1		26	3.5
25	26	24,890	-53.0		26	5.2
20	26	26,334	-51.8		26	5.7
15	25	28,208	-49.3		26	6.6
10	25	30,899	-43.4		26	9.9
7	22	33,311	-37.5		27	14.0
5	13	35,725	-30.4			
4	5	37,293	-27.4			

* PITTSBURGH, PA. 973 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	3.0	-2.3	25	1.3
1000	30	135				
950	30	553	4.4	-4.5	27	2.7
900	30	992	3.1	-7.2	29	6.6
850	30	1,454	1.0	-9.5	30	9.5
800	30	1,939	-1.0	-13.8	30	10.8
750	30	2,452	-3.9	-15.9	30	12.2
700	30	2,994	-6.6	-20.4	30	13.4
650	30	3,570	-9.6	-24.7	30	15.4
600	30	4,184	-13.1	-28.8	30	17.8
550	30	4,841	-17.4	-33.2	30	19.4
500	30	5,549	-22.0	-37.5	30	20.7
450	30	6,316	-27.2	-41.6	29	22.2
400	30	7,154	-33.1	-47.1	29	24.3
350	30	8,083	-39.9	-52.1	29	27.3
300	30	9,116	-47.4		29	29.5
250	30	10,304	-53.6		29	29.2
200	30	11,731	-55.7		29	26.3
175	30	12,582	-55.7		29	24.0
150	30	13,563	-56.2		29	21.5
125	30	14,720	-56.9		29	18.5
100	30	16,130	-58.0		28	13.8
80	30	17,537	-58.0		28	8.9
70	30	18,379	-57.4		28	6.6
60	30	19,353	-57.4		28	5.9
50	28	20,505	-56.3		27	5.0
40	27	21,929	-54.8		26	4.5
30	26	23,774	-53.2		26	3.3
25	25	24,951	-52.3		26	2.5
20	25	26,400	-50.3		27	3.0
15	22	28,281	-48.6		27	4.9
10	20	30,972	-42.8		26	9.7
7	18	33,417	-36.2		27	14.4
5	6	35,758	-31.6			
4						

PONAPE, CAROLINE IS. + 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	39	28.2	24.0	11	1.8
1000	29	73	26.6	20.7	11	2.1
950	29	525	23.5	18.4	13	3.6
900	29	996	20.5	15.4	13	4.4
850	29	1,488	17.6	12.4	13	4.6
800	29	2,006	15.2	8.7	13	3.8
750	29	2,551	12.3	5.1	13	3.3
700	29	3,126	9.0	1.6	13	3.2
650	29	3,738	6.0	-1.4	12	3.7
600	29	4,390	2.5	-5.2	13	3.5
550	29	5,088	-1.4	-10.2	11	2.7
500	29	5,843	-5.1	-16.0	10	2.8
450	29	6,664	-9.7	-22.0	10	3.1
400	29	7,565	-14.8	-29.3	09	3.1
350	29	8,566	-21.6	-36.2	10	2.8
300	29	9,680	-29.9	-45.0	12	2.8
250	29	10,951	-40.4	-53.6	13	2.6
200	28	12,433	-53.0		15	1.8
175	28	13,280	-60.0		23	.7
150	28	14,225	-67.9		32	1.1
125	28	15,300	-75.9		04	2.4
100	28	16,563	-82.9		06	8.6
80	28	17,811	-79.7		08	9.9
70	28	18,579	-74.0		09	10.5
60	28	19,490	-68.3		09	14.1
50	28	20,599	-62.9		10	14.2
40	28	21,992	-57.5		10	2.9
30	27	23,838	-51.8		27	5.1
25	27	25,027	-49.0		27	8.3
20	25	26,508	-46.6		27	9.3
15	20	28,437	-43.8		27	8.2
10	17	31,177	-39.5		26	7.2
7						
5						
4						

PORTLAND, MAINE 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	2.6	-2.4	33	2.5
1000	30	89			34	3.1
950	30	504	2.0	-4.1	35	4.0
900	30	939	.2	-6.3	36	3.8
850	30	1,396	-1.8	-9.4	35	3.6
800	30	1,876	-4.1	-11.6	34	3.5
750	30	2,383	-6.7	-14.7	31	3.7
700	30	2,919	-9.3	-17.9	30	4.7
650	30	3,489	-12.2	-21.4	30	5.7
600	30	4,097	-15.9	-26.3	29	6.3
550	30	4,748	-20.1	-32.0	29	6.6
500	30	5,448	-24.8	-36.7	29	7.5
450	30	6,206	-30.2	-42.2	29	8.2
400	30	7,034	-35.8	-47.8	28	9.8
350	30	7,954	-41.5	-50.0	29	12.3
300	30	8,986	-46.5		29	14.0
250	30	10,186	-50.0		29	16.9
200	29	11,630	-50.7		27	13.8
175	29	12,500	-50.6		27	13.4
150	29	13,503	-51.5		27	12.7
125	28	14,688	-52.6		27	10.7
100	28	16,125	-53.3		27	8.3
80	26	17,560	-54.7		25	6.5
70	26	18,414	-55.1		26	5.3
60	26	19,398	-54.9		25	3.6
50	26	20,566	-54.1		24	2.4
40	26	22,000	-53.5		23	2.4
30	25	23,852	-53.3		25	1.7
25	25	25,028	-52.7		27	1.4
20	25	26,473	-51.2		27	2.9
15	20	28,359	-48.6		27	5.1
10	16	31,070	-43.0		25	8.2
7						

* QUILLAYUTE, WASH. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	4.5	2.9	11	1.1
1000	30	135	5.3	2.3	14	1.5
950	30	554	4.1	-.2	17	3.8
900	30	992	1.4	-2.5	19	5.2
850	30	1,450	-1.3	-7.1	20	5.5
800	30	1,932	-3.5	-12.7	20	6.0
750	30	2,439	-6.3	-15.9	21	6.8
700	30	2,976	-9.4	-19.5	22	7.2
650	30	3,545	-12.8	-24.4	22	8.3
600	30	4,151	-16.2	-27.2	22	8.7
550	30	4,801	-20.4	-30.1	23	10.4
500	30	5,500	-25.1	-35.4	23	11.5
450	30	6,257	-30.6	-38.8	22	13.5
400	30	7,083	-37.0	-44.1	23	14.1
350	30	7,997	-43.5	-49.6	23	14.8
300	30	9,016	-50.4		24	16.1
250	30	10,189	-56.2		25	15.3
200	30	11,601	-57.1		26	13.8
175	30	12,447	-56.2		26	13.2
150	30	13,428	-55.9		26	12.5
125	30	14,587	-56.6		26	9.5
100	30	16,001	-57.0		25	9.2
80	29	17,420	-57.2		25	7.5
70	29	18,266	-56.6		24	6.4
60	29	19,264	-56.5		24	6.1
50	28	20,404	-56.8		24	3.7
40	27	21,820	-57.1		23	3.2
30	25	23,644	-56.3		24	3.8
25	25	24,803	-55.8		25	3.1
20	24	26,222	-54.9		25	3.5
15	19	28,100	-52.0		28	5.8
10	16	30,749	-46.5		28	12.0
7	14	33,142	-41.1		27	18.4

RAPID CITY, S. DAK. 904 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	2.3	-3.0	34	2.1
1000	30	135				
950	30	556				
900	30	996			31	3.1
850	30	1,462	4.0	-3.9	30	3.6
800	30	1,953	1.6	-6.5	29	5.1
750	30	2,471	-1.1	-9.5	30	5.5
700	30	3,018	-4.2	-14.2	29	5.9
650	30	3,599	-8.0	-18.6	29	7.3
600	30	4,216	-12.3	-22.5	28	8.4
550	30	4,875	-16.9	-27.7	27	8.6
500	30	5,583	-22.1	-32.4	27	8.5
450	30	6,349	-27.8	-37.4	27	8.5
400	30	7,186	-33.9	-42.9	27	9.3
350	30	8,111	-40.7	-46.4	27	10.0
300	30	9,140	-48.6		27	11.3
250	30	10,321	-55.1		27	13.7
200	30	11,735	-57.5		27	14.6
175	30	12,579	-56.6		27	15.0
150	30	13,557	-56.7		27	14.8
125	28	14,719	-57.9		27	12.7
100	27	16,127	-58.7		27	10.4
80	27	17,526	-58.9		27	8.4
70	24	18,363	-58.5		28	6.5
60	24	19,333	-58.1		28	5.3
50	24	20,483	-57.3		29	3.8
40	23	21,893	-57.9		31	2.2
30	22	23,719	-55.5		32	2.1
25	22	24,884	-54.3		34	2.0
20	19	26,315	-52.7		33	1.9
15	18	28,179	-50.4		31	3.5
10	11	30,873	-45.2			
7						

ST CLOUD, MINN. 978 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	1.9	-2.2	27	.3
1000	30	135				
950	30	551	3.7	-3.4	27	1.3
900	30	990	2.6	-5.9	28	3.0
850	30	1,452	1.5	-8.3	30	4.6
800	30	1,939	-.6	-11.1	30	5.4
750	30	2,453	-2.7	-14.3	30	6.5
700	30	2,997	-5.4	-17.0	30	7.5
650	30	3,575	-8.8	-19.5	30	8.5
600	30	4,191	-12.5	-23.8	30	9.2
550	30	4,850	-16.9	-27.5	29	10.1
500	30	5,559	-21.8	-32.4	30	10.8
450	30	6,326	-27.5	-38.1	30	11.3
400	30	7,162	-34.1	-42.5	29	11.6
350	30	8,086	-41.2	-47.3	29	12.6
300	30	9,113	-48.8		29	14.3
250	30	10,294	-54.9		29	15.9
200	30	11,711	-57.2		28	17.4
175	30	12,556	-56.4		28	15.1
150	30	13,539	-55.4		29	14.8
125	30	14,699	-56.1		28	13.0
100	28	16,107	-57.2		29	10.3
80	28	17,516	-57.4		29	8.8
70	28	18,362	-56.6		29	6.9
60	27	19,339	-56.5		30	5.0
50	25	20,494	-56.5		31	3.6
40	23	21,911	-56.3		32	1.7
30	23	23,745	-54.9		28	.7
25	22	24,911	-53.9		27	1.8
20	20	26,343	-53.0		28	2.5
15	18	28,205	-50.7		27	3.9
10	14	30,866	-47.1			
7						

* ST PAUL IS., ALASKA 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	-6.2	-7.7	01	5.0
1000	30	57			02	6.1
950	30	458	-7.4	-10.3	01	3.9
900	30	878	-8.6	-13.0	36	3.1
850	30	1,320	-10.0	-15.0	35	3.3
800	30	1,787	-11.7	-17.8	33	3.4
750	30	2,279	-14.0	-20.9	32	3.3
700	30	2,800	-17.0	-24.0	31	3.8
650	30	3,352	-20.3	-27.7	32	4.6
600	30	3,941	-23.8	-32.2	31	4.5
550	30	4,572	-27.6	-36.2	31	4.7
500	30	5,251	-32.0	-40.4	31	4.6
450	30	5,988	-36.7	-43.3	30	3.4
400	30	6,795	-42.1	-44.7	29	4.3
350	30	7,691	-47.2		29	5.5
300	30	8,699	-50.3		27	6.2
250	30	9,889	-50.5		27	6.5
200	30	11,346	-49.9		28	7.0
175	30	12,218	-50.3		27	7.6
150	30	13,224	-50.6		27	7.1
125	30	14,412	-50.9		28	7.3
100	30	15,863	-51.4		28	6.2
80	30	17,311	-51.6		28	6.1
70	30	18,179	-51.4		29	4.9
60	30	19,180	-51.4		28	4.5
50	30	20,364	-52.0		29	4.1
40	30	21,809	-52.1		31	3.7
30	30	23,672	-51.9		32	4.9
25	30	24,852	-52.4		32	6.6
20	30	26,296	-52.2		33	7.6
15	27	28,152	-51.7		33	8.6
10	23	30,824	-49.7		32	10.3
7	13	33,220	-45.0		33	9.1

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	SALEM, ILL. 995 MB				Resultant Wind		SALEM, OREG. 1011 MB				Resultant Wind		SALT LAKE CITY, UTAH 869 MB				Resultant Wind		SAN DIEGO, CALIF. 1000 MB				Resultant Wind		SAN JUAN, P. R. 1015 MB				Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	M.p.h. Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	M.p.h. Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	M.p.h. Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	M.p.h. Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	M.p.h. Speed
SURFACE	30	174	7.2	1.5	14	.3	30	61	4.4	-3.7	19	1.0	30	1,288	4.3	-2.6	16	2.6	30	124	10.8	7.3	20	.7	30	8	24.6	19.5	11	1.4
1000	30	332					30	146	6.4	-1.1	21	1.0	30	126					30	125			30	.4	30	140	23.2	18.4	09	3.3
950	30	558	10.2	-3.5	27	1.7	30	367	5.2	-1.9	21	1.9	30	553					30	555	11.4	3.0	26	1.6	30	587	20.2	15.7	09	5.1
900	30	1,006	7.8	-4.7	28	4.5	30	1,006	3.0	-4.2	20	3.0	30	999					30	1,005	9.7	-2.1	29	2.1	30	1,051	17.1	12.2	10	4.9
850	30	1,476	6.0	-6.9	28	7.6	30	1,468	.5	-6.4	22	4.6	30	1,468	6.7	-4.6	16	2.7	30	1,478	8.4	-6.9	29	4.2	30	1,537	14.1	8.4	10	4.5
800	30	1,970	3.5	-8.8	28	8.3	30	1,932	-1.8	-7.7	23	5.3	30	1,964	4.2	-7.8	18	2.7	29	1,978	6.4	-11.8	29	5.1	30	2,047	11.3	3.9	10	3.5
750	30	2,491	.7	-13.7	28	9.2	30	2,463	-4.7	-10.6	23	6.8	30	2,486	.7	-10.0	21	3.2	29	2,505	4.0	-15.0	28	6.0	30	2,584	8.8	-1.7	09	2.1
700	30	3,042	-2.4	-15.9	28	9.9	30	3,004	-7.3	-12.3	23	7.5	30	3,036	-3.3	-12.6	24	4.0	29	3,062	1.2	-19.0	28	7.4	30	3,152	5.7	-8.6	16	.2
650	30	3,626	-8.0	-19.9	28	10.6	30	3,579	-10.3	-14.8	24	8.1	30	3,618	-7.2	-16.8	26	5.7	29	3,634	-2.1	-22.0	28	8.9	30	3,757	3.2	-14.5	26	1.1
600	30	4,248	-10.0	-24.7	28	11.6	30	4,191	-14.2	-18.4	25	8.9	30	4,237	-11.3	-21.8	25	6.4	29	4,286	-5.9	-24.1	27	10.2	30	4,402	-.2	-20.9	27	3.4
550	30	4,914	-14.2	-29.7	28	12.9	30	4,846	-18.4	-22.3	25	9.4	30	4,899	-15.7	-27.0	25	7.2	29	4,961	-10.7	-28.4	27	11.8	30	5,094	-3.7	-24.1	28	5.5
500	30	5,630	-19.1	-35.3	28	14.4	30	5,550	-23.3	-27.4	25	10.3	30	5,611	-20.6	-31.3	26	8.2	29	5,686	-16.0	-33.2	28	13.8	30	5,840	-8.3	-28.6	26	7.1
450	30	6,406	-24.6	-40.2	28	17.0	30	6,313	-28.6	-32.6	25	11.3	30	6,381	-26.2	-36.0	26	9.9	29	6,470	-21.7	-37.1	28	16.0	30	6,649	-13.8	-33.3	27	10.2
400	30	7,252	-31.1	-44.6	27	18.4	30	7,147	-34.8	-38.2	25	12.8	30	7,222	-32.9	-41.3	26	11.0	29	7,326	-28.3	-41.6	28	18.5	29	7,535	-19.7	-38.5	27	13.5
350	30	8,187	-38.5	-49.0	27	20.2	30	8,069	-41.4	-43.3	26	15.0	30	8,151	-39.9	-45.8	26	11.2	29	8,274	-35.2	-48.4	28	20.5	29	8,516	-26.3	-44.3	27	19.1
300	30	9,227	-46.2		27	21.1	30	9,097	-48.0		26	16.7	30	9,183	-48.0		26	12.7	28	9,324	-43.3		28	23.5	29	9,611	-34.2	-51.0	27	23.5
250	30	10,418	-53.6		28	24.5	30	10,281	-55.0		27	18.1	30	10,365	-55.3		26	14.5	28	10,530	-51.4		28	27.7	29	10,861	-44.0		27	26.8
200	29	11,835	-58.4		28	26.7	30	11,690	-58.1		26	15.4	30	11,776	-57.7		26	15.9	28	11,957	-57.3		28	27.8	27	12,322	-55.3		27	29.7
175	29	12,676	-57.9		28	24.5	30	12,535	-56.6		26	12.4	30	12,620	-57.5		26	16.6	28	12,799	-58.6		26	29.1	26	13,164	-61.0		27	31.3
150	29	13,648	-57.6		28	22.4	30	13,515	-56.2		26	11.7	30	13,596	-56.8		26	16.3	27	13,767	-59.7		26	28.8	25	14,108	-66.9		27	26.6
125	29	14,795	-59.3		28	21.0	30	14,670	-57.1		26	11.2	30	14,748	-58.1		26	14.9	27	14,902	-61.5		26	24.8	24	15,200	-71.6		27	19.3
100	29	16,190	-60.3		28	18.9	30	16,081	-57.0		26	10.0	30	16,150	-59.0		26	13.3	27	16,276	-64.1		26	19.2	24	16,501	-76.0		28	13.6
80	29	17,578	-60.8		28	13.3	30	17,494	-57.2		25	8.4	30	17,568	-59.6		26	9.9	27	17,638	-65.3		26	12.9	20	17,790	-75.7		31	3.3
70	29	18,409	-60.5		29	9.1	30	18,338	-57.3		25	7.6	29	18,381	-59.6		26	7.9	27	18,450	-65.2		26	9.9	20	18,569	-71.8		04	2.1
60	29	19,371	-59.6		29	5.3	29	19,315	-56.9		25	5.9	29	19,347	-59.3		26	7.0	27	19,395	-63.1		26	5.5	17	19,501	-65.5		07	3.8
50	29	20,516	-58.1		29	3.8	27	20,479	-57.0		25	4.5	28	20,494	-58.3		27	3.6	27	20,524	-60.6		27	3.5	16	20,622	-62.4		08	7.9
40	29	21,928	-56.3		28	3.7	27	21,893	-56.6		25	3.5	28	21,898	-58.1		29	3.6	26	21,920	-58.5		29	.9	13	22,012	-59.9		09	9.9
30	29	23,768	-53.6		26	2.9	26	23,725	-55.7		26	3.5	25	23,723	-55.9		32	3.1	25	23,741	-55.7		28	1.3	10	23,838	-53.4			
25	29	24,945	-52.5		27	4.0	25	24,884	-55.3		26	3.6	24	24,887	-54.7		32	3.6	25	24,910	-53.2		30	.9	9	25,023	-49.6			
20	29	26,392	-50.8		26	4.5	24	26,308	-53.5		28	5.6	23	26,322	-52.1		31	3.6	25	26,358	-50.2		27	2.8	8	26,492	-45.6			
15	29	28,277	-48.4		27	8.9	20	28,179	-50.8		27	6.9	22	28,193	-49.5		29	5.7	22	28,255	-47.1		26	3.9	5	28,410	-42.5			
10	22	30,978	-43.2		27	11.7	14	30,854	-44.9				18	30,897	-43.1		28	10.4	17	30,976	-40.6		29	8.1	5	31,175	-38.4			
7	8	33,385	-37.3										8	33,347	-38.5				10	33,393	-37.2									

Standard pressure surface (mb)	* SAULT STE MARIE, MICH. 988 MB						* SHEMYA, ALASKA 1005 MB						* SHREVEPORT, LA. 1007 MB						SPOKANE, WASH. 931 MB						* SWAN ISLAND, W. I. 1013 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	30	221	-1.4	-5.0	36	.9	30	38	.8	-4.4	30	1.9	30	79	12.6	10.6	14	1.1	30	720	3.0	-2.2	19	1.7	30	10	25.1	20.9	10	5.2
1000	30	126					30	80			05	1.0	30	132			18	1.6	30	132					30	118	24.3	19.4	10	5.8
950	30	537	.2	-6.3	34	1.5	30	488	-3.6	-6.5	27	1.6	30	566	13.5	7.1	19	4.7	30	552					30	566	20.5	17.3	10	6.8
900	30	970	-1.0	-8.1	31	3.1	30	913	-6.9	-9.3	27	2.3	30	1,021	12.0	2.3	21	4.6	30	993	4.5	-3.0	20	2.7	30	1,032	17.6	11.9	11	5.9
850	30	1,425	-2.6	-11.4	31	4.7	30	1,357	-8.8	-13.8	28	3.6	30	1,499	10.5	-3.7	23	4.9	30	1,457	2.1	-6.2	23	3.7	30	1,519	15.1	6.9	11	4.1
800	30	1,904	-4.8	-13.7	31	5.7	30	1,825	-10.8	-16.9	28	4.3	30	2,002	8.4	-7.0	25	5.6	30	1,944	-.9	-8.9	23	3.5	30	2,032	12.8	1.8	09	1.7
750	30	2,410	-7.2	-16.7	31	6.7	30	2,320	-12.8	-20.2	27	4.8	30	2,533	5.2	-11.6	26	7.4	30	2,456	-4.2	-12.3	24	3.2	30	2,572	10.4	-4.5	04	.5
700	30	2,945	-9.9	-18.6	31	7.8	30	2,844	-15.0	-23.8	28	6.0	30	3,092	1.9	-13.8	27	8.1	30	2,997	-7.3	-15.8	24	4.7	30	3,143	7.5	-9.5	24	.7
650	30	3,514	-12.6	-22.5	31	8.6	30	3,402	-17.8	-26.5	28	7.7	30	3,686	-2.0	-17.8	27	9.4	30	3,571	-10.5	-20.1	24	5.9	30	3,750	4.7	-14.6	25	.4
600	30	4,121	-15.9	-26.4	31	10.4	30	3,996	-21.6	-30.9	28	8.6	30	4,317	-6.1	-21.7	26	11.2	30	4,182	-14.5	-23.2	24	6.7	30	4,399	1.6	-18.3	29	1.2
550	30	4,772	-20.0	-30.6	31	12.0	30	4,633	-25.4	-34.1	27	9.4	30	4,992	-10.8	-26.4	26	12.8	30	4,836	-18.9	-27.9	24	7.7	30	5,094	-2.5	-21.7	30	3.0
500	30	5,473	-24.1	-34.7	31	13.3	30	5,318	-29.3	-38.7	28	11.2	30	5,718	-15.8	-32.9	26	15.7	30	5,539	-23.7	-32.5	24	7.6	30	5,844	-7.1	-25.9	31	5.8
450	30	6,233	-29.4	-39.1	31	13.5	30	6,064	-34.1	-42.2	27	13.1	30	6,504	-21.4	-36.9	27	18.3	30	6,301	-29.1	-36.0	24	8.7	30	6,658	-12.3	-31.1	30	7.9
400	30	7,064	-35.3	-43.8	31	15.1	30	6,879	-39.7	-43.4	28	14.1	30	7,361	-28.1	-43.0	27	20.3	30	7,132	-35.4	-41.5	25	9.5	30	7,546	-18.8	-36.4	29	10.4
350	30	7,985	-41.7	-48.0	31	16.2	30	7,784	-45.2		28	14.8	30	8,308	-35.4	-46.1	27	22.3	30	8,051	-42.5	-47.1	25	12.2	30	8,531	-25.9	-42.9	29	13.0
300	30	9,012	-48.2		30	17.2	30	8,799	-50.1		28	17.9	30	9,360	-43.4	-47.9	27	25.2	30	9,072	-49.9		25	14.0	30	9,625	-34.4	-49.8	28	15.8
250	30	10,199	-53.5		30	18.3	30	9,982	-52.4		28	17.5	30	10,565	-51.3		27	29.3	30	10,247	-56.2		26	14.4	30	10,874	-44.1		27	19.9
200	30	11,631	-54.4		30	18.2	30	11,414	-51.8		28	17.3	30	11,992	-57.8		27	34.4	29	11,665	-57.5		26	12.6	30	12,233	-53.7		27	21.8
175	29	12,491	-53.9		30	17.7	29	12,293	-51.8		27	17.4	30	12,833	-57.9		27	34.6	29	12,512	-56.0		26	11.4	30	13,172	-61.6		26	21.6
150	29	13,481	-54.0		30	15.4	29	13,292	-51.8		28	16.2	30	13,802	-59.3		27	31.5	29	13,493	-55.5		25	10.0	30	14,114	-66.9		27	20.4
125	29	14,680	-54.7		30	13.2	29	14,471	-53.1		28	14.4	30	14,937	-62.2		27	25.1	29	14,653	-56.5		25	9.5	29	15,202	-71.7		28	14.9
100	28	16,081	-54.9		29	11.2	29	15,907	-53.9		27	13.2	30	16,305	-65.1		27	19.6	29	16,068	-56.5		25	9.1	28	16,502	-75.9		30	7.4
80	27	17,504	-55.3		30	7.9	29	17,339	-53.8		28	10.8	30	17,687	-67.0		28	14.6	28	17,483	-56.6		24	7.1	28	17,786	-76.5		05	2.6
70	27	18,387	-55.2		30	5.9	26	18,204	-52.9		28	9.3	30	18,465	-65.6		28	10.3	28	18,330	-57.0		25	6.3	28	18,559	-73.8		07	3.6
60	27	19,340	-55.5		30	4.1	25	19,201	-52.8		27	7.9	29	19,407	-63.2		28	5.6	28	19,308	-56.5		25	4.8	28	19,476	-66.9		08	4.0
50	27	20,503	-55.5		30	2.1	25	20,380	-52.0		29	5.9	29	20,540	-59.4		28	3.4	28	20,464	-56.8		24	3.5	28	20,589	-63.7		08	3.6
40	27	21,929	-54.8		33	1.2	24	21,824	-51.7		29	5.1	29	21,946	-56.5		30	.9	28	21,879	-56.4		24	1.8	27	21,965	-60.7		08	8.1
30	27	23,775	-53.5		24	1.6	24	23,693	-50.9		30	5.7	28	23,790	-53.0		31	.9	28	23,709	-55.8		27	1.0	27	23,781	-54.9		09	7.9
25	25	24,950	-52.7		21	1.8	24	24,881	-50.8		31	5.6	28	24,969	-51.5		34	.8	26	24,867	-55.4		27	2.0	27	24,956	-51.0		08	5.9
20	24	26,394	-51.9		24	3.0	24	26,334	-50.9		32	5.6	27	26,428	-48.0		08	.8	24	26,293	-53.9		26	2.6	27	26,424	-46.6		09	5.4
15	23	28,274	-49.3		25	3.4	22	28,203	-50.3		33	7.5	26	28,332	-45.5		25	2.4	20	28,155	-51.7		29	5.0	24	28,346	-43.4		11	4.4
10	22	30,961	-44.8		26	6.4	18	30,864	-48.3		32	9.4	25	31,070	-40.4		27	9.4	13	30,824	-46.7		29	6.3	23	31,102	-38.5		11	4.6
7	22	33,381	-38.0		26	9.6	15	33,222	-46.4		32	12.5	24	33,531	-34.0		27	13.9	5	33,211	-42.3				15	33,598	-33.8		12	5.2
5	18	35,733	-32.6		27	11.1	6	35,415	-43.1				16	35,895	-28.8															
4	8	37,310	-27.7										6	37,515	-27.9															

Standard pressure surface (mb)	TAMPA, FLA. 1017 MB						TOPEKA, KANS. 984 MB						* TRUK, CAROLINE IS. 1009 MB						* TUCSON, ARIZ. 922 MB						* VANDENBERG AFB, CALIF. 1003 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed
SURFACE	30	8	16.5	14.4	33	.3	30	268	7.8	3.8	05	.5	30	2	28.9	24.1	07	2.7	30	789	10.1	-5.2	15	3.1	29	100	8.0	6.8	35	1.4
1000	30	147	18.3	13.4	25	.4	30	134					30	79	27.9	22.1	07	2.9	30	109					29	142	8.7	6.3	36	1.9
950	30	587	16.9	9.6	24	2.4	30	560	9.5	.1	18	1.2	30	533	24.3	19.4	09	3.9	30	541					29	567	9.1	.7	34	5.8
900	30	1,047	13.9	5.5	24	3.1	30	1,008	8.2	-1.4	23	2.3	30	1,005	21.3	16.1	09	3.9	30	995	14.4	-4.1	17	2.7	29	1,015	8.3	-2.2	34	5.7
850	30	1,527	11.5	-.9	24	3.5	30	1,479	6.3	-3.5	27	4.2	30	1,499	18.3	12.2	10	3.3	30	1,475	11.8	-5.8	21	2.0	29	1,486	6.5	-7.6	33	5.3
800	30	2,032	9.5	-5.5	25	3.3	30	1,975	3.7	-5.7	28	4.7	30	2,018	16.0	9.0	10	3.2	30	1,979	8.4	-8.5	21	3.5	29	1,981	4.4	-11.3	32	5.7
750	30	2,565	6.6	-8.8	27	3.9	30	2,496	1.0	-9.2	27	6.2	30	2,564	13.3	5.1	10	3.3	30	2,508	4.8	-11.7	22	6.1	29	2,505	2.3	-14.2	31	6.8
700	30	3,128	3.4	-13.7	28	6.2	30	3,047	-2.3	-12.9	26	7.5	30	3,142	10.1	1.6	09	2.9	30	3,066	1.1	-16.4	23	7.1	29	3,058	-1.1	-17.8	31	7.6
650	30	3,726	.5	-18.7	28	8.0	30	3,632	-6.1	-15.9	26	8.8	30	3,736	6.8	-1.7	09	3.7	30	3,658	-2.6	-20.3	23	8.4	29	3,646	-4.3	-22.3	30	8.7
600	30	4,363	-3.7	-21.6	28	9.5	30	4,254	-10.3	-21.3	26	10.6	30	4,409	3.1	-5.7	09	3.9	30	4,288	-6.6	-23.7	24	9.0	29	4,272	-7.9	-25.3	30	10.9
550	30	5,044	-8.5	-24.3	28	12.2	30	4,918	-16.9	-26.8	27	11.2	30	5,110	-.6	-10.6	08	3.9	30	4,962	-11.0	-27.7	25	11.3	29	4,943	-12.5	-29.8	29	12.5
500	30	5,775	-13.9	-28.9	28	14.1	30	5,632	-20.0	-31.8	27	11.7	30	5,866	-4.5	-17.3	08	5.0	30	5,687	-16.1	-32.1	26	13.7	29	5,663	-17.7	-34.5	29	14.6
450	30	6,567	-19.4	-34.3	28	15.5	30	6,405	-25.6	-37.6	27	13.3	30	6,689	-9.3	-22.1	08	5.3	30	6,471	-21.8	-37.0	26	17.1	29	6,443	-23.4	-38.7	29	16.0
400	30	7,432	-25.7	-40.4	29	18.3	30	7,248	-32.0	-43.1	27	14.9	30	7,591	-14.6	-28.7	09	5.1	30	7,327	-28.6	-41.5	26	19.6	29	7,293	-29.8	-44.3	30	17.0
350	30	8,389	-32.7	-46.5	29	20.3	30	8,181	-38.8	-47.6	27	18.3	30	8,592	-21.3	-35.6	10	4.6	30	8,273	-35.6	-47.4	26	21.5	29	8,234	-36.7	-49.9	30	19.6
300	30	9,453	-40.6	-52.2	29	24.4	30	9,219	-46.2		27	19.0	30	9,708	-29.7	-43.9	11	4.9	30	9,325	-43.2		26	24.1	29	9,282	-44.2		29	22.7
250	30	10,672	-49.3		28	29.5	30	10,412	-52.7		27	20.6	30	10,980	-40.1	-53.6	11	5.1	30	10,531	-51.3		26	26.2	29	10,484	-51.8		29	23.0
200	30	12,111	-55.7		29	31.3	30	11,837	-57.7		27	21.9	30	12,462	-52.8		11	5.8	29	11,960	-56.7		26	28.2	29	11,910	-56.9		28	27.1
175	29	12,957	-58.5		28	32.7	30	12,679	-57.4		27	22.2	30	13,310	-60.0		11	6.2	29	12,805	-57.9		26	28.8	28	12,753	-57.5		27	26.8
150	29	13,920	-61.4		28	29.5	30	13,655	-57.0		28	20.1	30	14,254	-67.9		09	6.1	29	13,774	-58.8		27	27.4	28	13,726	-58.3		27	25.6
125	29	15,042	-64.9		28	25.7	29	14,807	-59.1		28	18.2	30	15,329	-76.2		07	6.9	29	14,912	-61.9		26	24.5	28	14,867	-60.5		27	24.0
100	29	16,391	-68.6		28	20.0	29	16,202	-60.5		28	13.7	30	16,592	-82.2		08	11.9	28	16,277	-65.5		26	19.0	28	16,249	-62.5		27	19.0
80	29	17,719	-70.5		29	13.0	28	17,590	-60.5		28	10.7	29	17,840	-80.1		08	12.0	28	17,631	-65.8		26	13.4	28	17,622	-63.2		26	13.4
70	29	18,514	-69.1		29	9.2	28	18,422	-60.5		28	8.0	28	18,607	-73.2		09	12.1	28	18,444	-65.2		26	9.1	28	18,446	-62.3		26	10.2
60	29	19,446	-64.5		29	4.7	27	19,388	-59.8		28	6.1	28	19,522	-68.3		09	14.1	27	19,386	-64.2		27	5.1	27	19,402	-61.3		26	5.6
50	27	20,371	-60.8		31	1.6	27	20,531	-58.4		29	4.2	28	20,632	-62.9		10	14.5	26	20,510	-61.6		30	1.2	27	20,538	-59.6		26	4.1
40	27	21,968	-58.2		05	2.7	27	21,939	-57.1		30	2.9	28	22,022	-57.4		09	4.9	26	21,901	-59.0		31	.8	27	21,940	-58.0		10	1.6
30	27	23,796	-54.5		07	5.8	25	23,776	-53.9		28	3.2	28	23,869	-51.5		27	4.9	26	23,724	-55.0		03	.2	26	23,766	-55.5		30	.9
25	27	26,972	-51.3		08	5.8	24	24,952	-53.0		27	3.1	28	25,058	-49.6		27	6.9	25	24,895	-52.8		30	.5	26	26,934	-53.2		36	1.1
20	26	26,436	-47.5		09	5.2	24	26,398	-51.1		27	4.7	25	26,526	-46.2		27	8.1	24	26,346	-50.2		27	1.8	24	26,386	-50.6		01	1.2
15	22	28,351	-43.4		07	2.5	21	28,284	-48.2		27	6.3	28	28,446	-43.8		27	7.6	23	28,240	-47.2		27	3.7	23	28,277	-46.6		32	5.1
10	13	31,120	-37.3				14	30,996	-42.1				19	31,197	-39.2		24	4.1	22	30,952	-40.9		28	8.5	20	31,000	-40.1		31	9.2
7													7	33,699	-33.1				17	33,416	-34.7		30	6.7	13	33,462	-34.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	VICTORIA, TEXAS 1010 MB						* WAKE IS., PACIFIC AREA 1014 MB						* WALLOPS IS., VA. NASA 1015 MB						WASHINGTON DULLES INT. AP 1006 MB						WAYCROSS, GA. 1011 MB					
	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	33	16.1	13.8	10	1.6	30	5	25.8	21.1	09	6.4	30	4	8.1	4.3	30	2.1	30	85	3.0	-2.4	30	1.7	30	44	11.5	9.7	25	1.1
1000	30	120	17.7	13.9	11	2.4	30	128	24.7	21.3	09	8.0	30	125	9.3	-1.9	31	2.9	30	130			32	2.7	30	136	15.5	9.1	26	1.5
950	30	559	15.8	10.7	15	5.2	30	577	21.0	19.3	10	9.1	30	550	7.9	-4.2	32	6.1	30	552	6.6	-5.7	31	4.7	30	573	15.5	4.5	27	3.6
900	30	1,017	14.2	4.3	17	5.4	30	1,044	18.0	15.5	11	8.6	30	994	5.7	-6.3	31	7.8	30	994	4.6	-8.0	31	6.5	30	1,030	13.0	1.5	28	4.4
850	30	1,499	13.1	-4.1	19	5.4	30	1,532	15.3	10.5	10	8.4	30	1,459	3.2	-8.4	30	9.2	30	1,458	2.1	-9.9	31	9.0	30	1,508	10.3	-2.1	28	5.6
800	30	2,008	12.2	-8.7	22	5.3	30	2,045	13.1	5.8	10	7.6	30	1,949	.8	-11.3	30	10.3	30	1,945	-.4	-12.0	31	11.5	30	2,010	7.6	-5.6	27	6.2
750	30	2,546	9.2	-12.2	24	5.7	30	2,586	10.6	.2	10	7.0	30	2,465	-1.5	-14.3	29	12.1	30	2,459	-2.8	-15.9	30	12.9	30	2,539	5.0	-11.6	27	7.4
700	30	3,113	5.7	-15.7	26	6.0	30	3,158	7.1	-4.5	09	5.7	30	3,011	-4.2	-18.1	29	13.3	30	3,003	-5.3	-20.0	30	13.7	30	3,099	1.8	-16.5	27	8.5
650	30	3,715	1.9	-18.8	27	7.9	30	3,765	4.1	-7.7	08	4.8	30	3,593	-7.3	-19.7	29	15.0	30	3,582	-8.0	-23.0	30	14.4	30	3,693	-1.4	-20.7	28	10.4
600	30	4,355	-2.9	-22.5	26	10.0	30	4,412	.6	-11.2	07	3.6	30	4,212	-10.8	-23.4	29	17.1	30	4,200	-11.5	-26.5	29	15.4	30	4,326	-5.3	-23.4	28	12.1
550	30	5,037	-8.1	-25.8	27	12.4	30	5,106	-3.3	-16.1	05	2.4	30	4,876	-15.0	-28.7	29	18.7	30	4,862	-15.6	-30.1	29	17.8	30	5,003	-10.0	-26.4	28	14.2
500	30	5,789	-13.9	-30.8	26	14.2	30	5,854	-7.7	-21.3	36	2.5	30	5,589	-20.1	-33.9	29	20.7	30	5,574	-20.3	-35.1	29	18.9	30	5,730	-15.2	-30.3	28	16.0
450	30	6,580	-19.5	-35.8	26	16.8	30	6,666	-12.7	-27.0	33	4.1	30	6,362	-25.5	-38.5	29	23.1	30	6,346	-25.7	-39.9	29	20.6	30	6,518	-20.9	-34.5	28	17.7
400	30	7,425	-25.8	-39.4	27	20.5	30	7,554	-18.6	-32.1	31	6.7	30	7,206	-31.6	-44.7	29	25.7	30	7,189	-32.0	-45.3	29	23.0	30	7,378	-27.0	-40.7	28	19.6
350	30	8,381	-33.0	-45.6	27	24.5	30	8,538	-26.2	-37.7	30	8.5	30	8,141	-38.4	-49.3	29	28.7	30	8,122	-38.9	-50.3	29	25.1	30	8,330	-33.9	-47.3	28	20.7
300	30	9,445	-40.7	-51.4	27	29.3	30	9,632	-34.4	-46.3	30	12.5	30	9,181	-46.0		29	28.9	30	9,159	-46.6		29	27.1	30	9,389	-41.9	-52.7	28	24.1
250	30	10,663	-49.6		27	33.1	30	10,880	-44.2		30	16.1	30	10,374	-53.2		28	29.8	30	10,351	-53.2		29	30.8	30	10,602	-50.0		28	29.0
200	30	12,099	-57.2		27	36.9	30	12,343	-54.4		31	18.0	29	11,799	-55.8		29	28.8	30	11,775	-56.0		29	29.3	30	12,036	-56.7		28	34.0
175	30	12,940	-59.2		27	35.3	30	13,187	-60.4		31	16.6	29	12,650	-55.3		28	23.7	30	12,626	-54.9		29	26.3	30	12,881	-57.3		28	34.2
150	29	13,897	-61.3		27	31.9	30	14,133	-66.4		32	14.1	29	13,633	-55.7		28	22.2	29	13,617	-55.2		29	24.7	30	13,853	-58.7		28	31.2
125	29	15,019	-64.9		27	27.3	30	15,221	-72.6		33	10.8	29	14,790	-57.5		27	20.1	29	14,778	-56.6		28	22.5	30	14,990	-62.1		28	26.2
100	29	16,369	-68.0		27	20.2	30	16,513	-77.8		36	7.5	29	16,194	-59.0		27	16.0	28	16,182	-58.6		28	18.6	29	16,338	-64.7		28	22.9
80	28	17,697	-70.8		27	12.4	30	17,786	-78.1		06	7.2	28	17,589	-58.7		27	11.2	28	17,583	-58.4		28	12.9	29	17,717	-65.8		28	15.1
70	28	18,491	-69.7		28	8.5	29	18,555	-74.5		07	7.4	27	18,427	-58.7		27	7.8	28	18,425	-57.7		27	10.0	29	18,529	-64.9		28	11.6
60	28	19,417	-65.9		28	5.2	29	19,464	-69.0		08	6.5	27	19,397	-58.1		26	5.2	26	19,397	-57.7		27	7.1	28	19,473	-62.0		29	7.0
50	28	20,537	-60.7		29	2.5	29	20,570	-63.6		09	6.6	27	20,549	-56.7		26	3.6	28	20,551	-56.5		27	4.3	28	20,611	-58.5		28	3.6
40	26	21,937	-58.2		02	1.3	29	21,951	-60.5		10	7.6	26	21,973	-54.8		27	2.3	28	21,973	-54.7		27	2.9	27	22,020	-56.0		35	1.9
30	26	23,763	-54.5		07	4.0	27	23,763	-55.7		08	6.9	26	23,822	-52.9		33	1.8	27	23,822	-53.3		30	1.5	27	23,862	-53.1		07	4.1
25	24	24,936	-51.7		07	4.5	26	24,933	-52.2		07	5.3	26	25,001	-51.6		34	1.9	26	25,000	-52.1		30	3.1	27	25,046	-50.3		07	5.3
20	24	26,396	-48.1		09	3.9	24	26,390	-48.5		07	5.4	26	26,456	-49.4		30	2.6	24	26,456	-50.1		29	3.5	26	26,507	-47.8		05	2.8
15	24	28,308	-45.0		09	.8	23	28,294	-45.5		07	5.6	25	28,351	-47.1		27	6.2	21	28,345	-47.5		28	5.4	24	28,421	-44.1		31	2.1
10	21	31,041	-39.5		26	5.1	18	31,037	-39.7		10	5.6	23	31,060	-41.5		27	11.3	19	31,046	-42.5		27	13.3	17	31,177	-38.9			
7													14	33,509	-35.8				9	33,486	-38.3				6	33,628	-36.3			
5							5	33,523	-35.2				5	35,926	-31.2															

Standard pressure surface (mb)	WINNEMUCCA, NEV. 868 MB						WINSLOW, ARIZ. 849 MB						YAKUTAT, ALASKA 1006 MB						+ YAP, CAROLINE IS. 1006 MB						YUCCA FLAT, NEV. 877 MB					
	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	1,312	.5	-4.8	20	.9	30	1,487	3.2	-10.6	20	2.4	30	12	-1.1	-2.1	12	2.5	30	14	28.3	24.6	09	.9	30	1,198	4.2	-6.1	24	1.0
1000	30	156					30	138					30	57			12	3.6	30	67	27.4	22.3	09	1.0	30	118				
950	30	576					30	565					30	470	-.1	-3.1	14	6.5	30	521	24.1	19.5	10	1.2	30	544				
900	30	1,016					30	1,011					30	901	-3.0	-5.6	15	7.6	30	993	21.1	16.0	11	1.4	30	989				
850	30	1,479	4.7	-5.0	27	.4	30	1,478	4.8	-13.1	16	1.5	30	1,351	-6.0	-8.5	15	8.2	30	1,487	18.1	12.5	10	1.2	30	1,460	9.3	-7.2	28	1.2
800	30	1,971	2.4	-7.6	26	1.8	30	1,977	7.0	-8.1	23	4.6	30	1,823	-8.9	-11.1	16	8.3	30	2,005	15.8	8.4	09	1.5	30	1,960	6.3	-9.4	23	1.7
750	30	2,490	-1.1	-10.0	27	3.5	30	2,504	3.7	-10.4	24	5.3	30	2,320	-12.2	-15.7	17	8.3	30	2,552	13.3	4.5	10	1.9	30	2,485	2.7	-11.7	23	2.3
700	30	3,036	-4.7	-12.8	27	5.0	30	3,060	-.1	-14.3	24	7.0	30	2,844	-15.8	-20.5	17	8.3	30	3,130	10.4	.4	10	2.0	30	3,039	-1.1	-14.9	23	3.1
650	29	3,616	-8.6	-16.8	27	6.3	30	3,650	-3.7	-18.0	24	7.8	30	3,399	-19.3	-23.3	18	8.4	30	3,746	7.2	-4.3	11	2.4	30	3,626	-5.1	-17.9	24	4.0
600	29	4,232	-12.2	-22.3	27	7.2	30	4,277	-8.0	-21.9	24	8.9	30	3,990	-23.2	-27.7	18	8.9	30	4,399	3.5	-8.7	10	3.4	30	4,249	-9.3	-23.7	26	5.7
550	29	4,891	-16.8	-27.2	27	7.7	30	4,947	-12.8	-26.9	25	9.5	30	4,622	-27.5	-32.9	18	10.0	29	5,101	-.5	-13.3	10	4.4	30	4,916	-14.2	-28.5	26	8.1
500	29	5,601	-21.6	-32.6	26	8.4	30	5,666	-18.4	-31.2	25	11.2	30	5,301	-32.4	-39.0	19	9.2	29	5,857	-4.7	-18.2	11	5.7	30	5,632	-19.3	-32.7	26	9.8
450	29	6,368	-27.3	-37.4	26	8.5	30	6,444	-23.9	-36.7	25	13.0	30	6,036	-37.3	-40.6	20	9.5	29	6,679	-9.3	-23.5	11	6.4	30	6,407	-25.0	-38.0	27	11.2
400	29	7,206	-33.7	-42.7	27	8.9	30	7,292	-30.4	-41.5	26	15.4	30	6,840	-43.0	-41.6	20	9.6	29	7,580	-15.0	-30.4	10	6.0	30	7,252	-31.3	-43.2	27	13.5
350	29	8,131	-40.5	-45.3	27	9.7	30	8,231	-37.2	-47.1	26	19.6	30	7,732	-48.6		21	9.9	29	8,580	-21.9	-36.4	10	5.9	30	8,187	-38.1	-48.2	28	15.4
300	29	9,162	-48.1		29	11.4	30	9,277	-44.7		26	22.6	30	8,733	-52.5		21	10.4	29	9,693	-30.2	-44.3	10	6.8	30	9,228	-45.6		27	17.3
250	29	10,346	-54.7		29	13.1	30	10,476	-52.4		26	24.1	30	9,912	-51.4		21	9.4	29	10,964	-40.3	-51.6	10	6.9	30	10,424	-52.6		28	20.4
200	29	11,759	-58.0		28	13.9	30	11,902	-56.8		27	26.7	29	11,372	-49.8		22	7.7	29	12,445	-52.8		09	7.7	30	11,848	-56.6		27	23.3
175	29	12,602	-57.2		27	15.0	29	12,749	-56.6		27	26.6	29	12,245	-50.2		22	8.0	29	13,294	-59.7		09	7.4	30	12,693	-57.3		27	24.8
150	29	13,578	-57.1		27	14.2	29	13,723	-58.1		27	25.3	29	13,250	-51.0		22	7.5	29	14,240	-67.6		08	8.0	30	13,668	-57.2		27	23.3
125	29	14,730	-57.8		27	13.4	29	14,867	-60.3		27	22.0	29	14,437	-50.8		21	6.7	29	15,316	-75.6		08	9.8	30	14,818	-58.8		27	21.4
100	28	16,133	-58.7		26	12.1	29	16,251	-62.2		27	17.3	29	15,888	-51.8		21	5.8	26	16,583	-81.9		08	12.2	29	16,209	-60.8		26	17.5
80	28	17,532	-59.1		26	9.1	29	17,625	-63.8		27	12.5	29	17,333	-52.3		20	4.7	28	17,832	-79.9		09	13.1	27	17,391	-61.2		26	12.0
70	26	18,365	-58.9		26	7.3	29	18,443	-64.1		27	9.4	29	18,195	-52.9		20	5.4	28	18,600	-74.0		08	11.0	26	18,418	-61.5		27	8.7
60	25	19,333	-58.6		26	5.0	29	19,391	-62.7		27	6.4	29	19,190	-52.9		20	4.8	28	19,511	-68.6		08	12.9	26	19,377	-60.1		26	6.9
50	24	20,479	-57.7		26	4.6	29	20,522	-60.4		29	2.3	28	20,367	-53.3		20	4.2	28	20,620	-62.7		09	14.6	26	20,519	-58.8		27	4.2
40	23	21,890	-57.2		27	3.7	28	21,916	-59.2		30	2.2	28	21,802	-54.0		20	3.2	27	22,007	-58.9		09	10.0	24	21,919	-58.2		27	2.2
30	21	23,718	-55.6		28	3.6	26	23,733	-55.6		30	1.9	28	23,646	-54.7		21	2.6	26	23,842	-52.7		23	.7	23	23,740	-56.0		28	2.6
25	21	24,884	-54.2		30	2.9	24	24,899	-53.4		28	3.1	27	24,819	-54.9		21	2.6	26	25,028	-49.5		27	4.0	22	24,907	-54.1		29	2.8
20	21	26,323	-51.7		28	3.9	21	26,349	-51.0		27	3.8	27	26,246	-54.9		22	2.2	24	26,501	-46.4		26	4.1	20	26,348	-51.6		29	3.0
15	15	28,187	-49.5		31	4.6	18	28,232	-48.0		27	5.2	24	28,092	-54.5		26	1.4	22	28,425	-43.2		24	4.2	14	28,231	-48.8		28	5.2
10	5	30,895	-41.5				8	30,948	-42.2				17	30,757	-52.0		21	.8	21	31,182	-38.2		24	3.7	7	30,923	-43.2			
7																			16	33,651	-34.2									

Standard pressure surface (mb)	YUMA, ARIZ. 997 MB					
	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	21	131	14.4	-1.6	01	.5
1000	21	105				
950	21	542	17.1	-.5	30	3.6
900	21	1,001	14.7	-3.1	29	3.8
850	21	1,481	11.5	-5.6	27	2.9
800	21	1,985	8.5	-8.7	24	2.8
750	21	2,515	5.1	-12.8	24	2.8
700	21	3,074	1.9	-17.5	26	3.9
650	21	3,668	-1.4	-19.9	27	6.5
600	21	4,301	-5.8	-23.6	27	8.3
550	21	4,976	-10.9	-26.7	27	9.7
500	21	5,700	-16.4	-31.0	27	11.9
450	21	6,484	-22.3	-36.6	27	14.5
400	21	7,337	-29.0	-41.7	27	17.5
350	21	8,281	-36.0	-48.0	27	20.2
300	21	9,332	-43.6		27	22.8
250	21	10,538	-51.1		27	25.4
200	19	11,975	-56.5			

floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.78	3.86	2.51	1.87	*	1.87	2.51	3.35	4.19
Apr.									
1-----	.69	0.80	0.96	1.14	1.30	1.07	0.88	0.74	0.62
2-----	.71	.79	.94	1.09	1.30	1.11	.92	.78	.67
3-----	.67	.80	.95	1.14	1.34	----	----	----	----
4-----	.70	.81	.95	1.16	1.36	1.10	.93	.77	.67
5-----	H .71	H .83	H .96	H 1.14	H 1.37	H 1.20	H 1.00	H .86	H .76
6-----	H (.62)	H (.75	H (.89)	H(1.07)	H(1.27)	----	H (.88)	----	H (.62)
7-----	H (.53)	H (.69)	H (.84)	H(1.02)	----	----	H (.69)	H (.59)	H (.49)
8-----	.76	.88	1.03	1.19	1.34	1.16	1.02	.89	.79
9-----	.65	.76	.88	1.07	1.31	1.12	.97	.81	.70
10----	H .60	H .73	H .87	H 1.06	H 1.29	H .80	H .64	----	----
11----	.73	.84	.99	1.17	1.38	1.19	1.04	(.95)	(.80)
12----	.93	1.04	1.15	1.27	1.39	(1.21)	1.05	.96	.85
13----	HD(.67)	HD(.78)	HD(.90)	HD(1.10)	HD(1.27)	HD(1.02)	HD(.80)	HD(.67)	HD(.55)
16----	----	----	----	----	1.18	.96	.80	.66	.49
17----	H (.59)	H (.72)	H (.86)	H(1.06)	----	----	----	----	----
18----	.72	.82	.97	1.13	----	----	----	----	----
23----	.55	.72	.91	----	----	----	----	----	----
24----	.72	.82	.97	1.16	1.36	1.21	.96	.79	.70
25----	.88	.97	1.11	1.26	1.43	----	----	.86	.72
26----	.87	.96	1.08	1.24	1.42	1.20	1.06	.91	.82
27----	----	----	----	----	(1.45)	1.26	1.10	.96	.87
28----	.86	.96	1.09	1.25	1.43	----	----	----	----
29----	.84	.93	1.06	1.21	(1.41)	(1.11)	----	----	----
30----	.71	.82	.96	1.14	(1.36)	(1.06)	(.92)	(.78)	(.69)
Averages	0.74	0.84	0.99	1.16	1.40	1.12	0.95	0.83	0.71

TUCSON, ARIZ.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.56	3.65	2.71	1.83	*	1.83	2.74	3.65	4.56
Apr.									
1-----	0.59	0.71	0.87	1.07	1.24	0.86	0.64	0.50	0.39
2-----	.72	.84	1.00	1.17	----	----	.76	.58	.48
3-----	.76	.87	1.01	1.19	1.35	1.09	.87	.69	.56
4-----	.91	1.02	1.14	1.30	1.41	1.11	.93	.78	.69
5-6---				Recorder inoperative					
7-----	----	----	----	----	1.37	1.16	.98	.86	.73
8-----	.81	.91	1.04	1.20	1.40	1.19	.98	.85	.72
9-----	.77	.87	1.01	1.19	1.37	1.18	1.03	.93	.83
10----	.87	.97	1.08	1.23	1.43	1.16	.97	.84	.72
11----	.84	.93	1.05	1.22	1.40	1.19	.99	.88	.76
12----	.79	.88	1.00	1.16	1.37	1.19	.96	.84	.77
13----	.77	.88	1.01	1.13	1.34	1.08	.89	.78	.68
15----	----	----	----	----	----	1.19	1.03	.91	.82
16----	D .44	D .55	D .70	D .88	D 1.17	D .95	D .73	D .59	D .48
17----	.71	----	----	1.12	1.31	1.09	.92	.77	.65
18----	----	----	----	----	----	----	----	.77	----
19----	----	----	----	1.11	1.32	----	----	.81	.71
20----	.78	.88	1.01	1.18	----	1.18	1.01	.80	.79
21----	----	----	----	----	1.37	1.13	1.00	.84	.68
22----	.55	.70	.81	1.03	1.21	.99	.64	.47	.33
23----	.49	----	.80	1.00	1.24	----	----	----	.51
24----	.71	.83	.97	1.16	1.33	1.12	.89	.78	.72
25----	.82	.93	1.08	1.20	1.35	1.15	.95	.82	.75
26----	.63	.76	.92	1.11	1.33	1.12	.95	.82	.72
27----	.79	.89	1.02	1.16	1.40	1.23	1.05	.93	.83
28----	.78	.91	1.03	1.18	1.37	1.18	1.03	.90	.80
29----	.74	.86	.99	1.13	1.32	1.05	.86	.72	.62
30----	.70	----	----	1.10	1.35	1.15	1.01	.90	.84
Averages	0.73	0.85	0.98	1.14	1.34	1.12	0.92	0.78	0.68

OMAHA, NEBR.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Apr.									
2-----	0.85	0.95	1.10	----	1.40	1.21	1.04	0.90	0.79
3-----	----	----	.95	1.12	----	----	----	----	----
6-----	HM .74	HM .85	HM .99	HM1.13	HM1.25	HM1.13	----	----	----
7-----	HM .74	HM .88	HS1.03	HS1.22	1.36	HM1.17	HM .95	HM .75	HM .69
9-----	----	----	1.10	1.22	1.28	HS1.04	HM .73	HM .55	HM .48
10----	HI .63	HM .78	HM .94	HS1.12	1.27	HS1.02	----	----	----
11----	----	----	----	----	HM .86	----	----	----	----
13----	----	----	----	----	HS1.36	1.01	----	HS .72	HS .60
14----	----	----	----	----	HM1.21	----	----	----	----
15----	----	----	----	----	HM1.11	----	----	----	----
23----	----	----	----	----	1.32	HM .92	HM .74	HM .44	----
24----	HM .70	HM .82	HS .92	HS1.08	----	----	----	----	----
28----	----	----	----	----	----	----	.96	.82	.72
Averages	0.75	0.81	1.00	1.15	1.24	1.09	0.88	0.70	0.66

MADISON, WIS.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Apr.									
6-----	----	----	M 0.73	M 0.96	M 1.22	----	----	----	----
7-----	----	----	----	----	----	S 1.60	----	----	----
8-----	----	----	----	S 1.08	M 1.15	M .86	----	----	----
9-----	----	----	----	----	S 1.34	S 1.18	S 1.03	S 0.91	S 0.79
10----	----	M 0.66	M .82	M 1.01	M 1.18	M .95	----	----	----
14----	----	S .85	S .98	----	----	----	----	----	----
17----	----	----	----	----	----	----	S .84	S .61	S .60
22----	S 0.80	S .92	S 1.05	S 1.20	S 1.39	S 1.14	S .97	S .83	S .73
23----	S .81	S .91	S 1.03	S 1.20	S 1.37	----	----	----	----
24----	S .79	S .93	S 1.06	S 1.22	S 1.40	1.20	1.03	.90	.81
25----	S .81	S .91	S 1.03	S 1.20	----	----	----	----	----
29----	----	M .73	M .88	M 1.13	----	----	----	----	----
Averages	0.80	0.84	0.95	1.13	1.29	1.16	0.97	0.81	0.73

H Haze
HI Haze and dust
HS Slight haze
HM Moderate haze
HI Intense haze

( ) Clouds present
S Slight haze - indeterminable
M Moderate haze - indeterminable
* Values corresponding to true solar noon

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol 8, No 2, page 63, of this publication

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. APRIL 1971

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	671	665	628	660	663	655	488	674	665	614	683	699	681	514	228	652	584	542	462	464	400	484	572	731	744	735	754	622	658	752		611
AMES IOWA	210	431	622	650	533	618	619	425	648	627	349	284	618	628	604	349	637	236	433	441	517	668	685	667	657	421	168	253	645	332		499
ANNETTE ALASKA	64	341	41	150	75	86	264	---	353	258	485	387	116	372	337	461	356	114	96	379	173	208	598	603	592	569	545	190	392	251		305
APALACHICOLA FLORIDA	523	79	645	84	122	637	626	628	632	613	611	624	646	525	629	635	632	552	613	569	560	574	492	642	656	212	445	409	515	201		511
ARGONNE NAT. LAB.	74	318	533	514	459	582	543	563	457	581	468	475	237	523	572	272	513	558	476	347	193	645	620	657	596	638	117	78	340	624		452
ASTORIA OREGON	394	490	511	554	413	256	448	100	64	264	525	518	449	242	---	---	---	506	570	406	---	465	569	271	624	638	297	409	213	275		403
ATLANTA GEORGIA	504	414	643	617	231	215	553	644	645	654	636	616	614	677	640	630	608	394	595	535	288	594	40	712	601	571	320	563	---	---		527
BARROW ALASKA	293	322	314	321	315	333	326	332	382	396	371	375	300	314	267	442	438	359	419	327	320	429	501	483	417	484	402	456	397	387		374
BETHEL ALASKA	455	435	472	477	406	487	428	480	490	431	424	384	522	336	429	343	473	498	517	601	603	569	586	552	552	555	563	616	553	477		491
BISMARCK N.DAK.	450	608	399	255	---	628	611	455	633	603	605	462	645	642	601	557	156	232	113	176	359	586	664	491	341	123	176	264	575	319		439
BLUE HILL MASS.	442	361	147	---	289	134	163	565	525	401	51	512	467	171	595	187	587	131	294	340	407	322	334	585	60	268	253	232	76	206		314
BOISE IDAHO	573	527	575	601	607	367	371	564	252	461	453	594	570	406	533	472	296	608	682	521	465	---	---	366	410	428	669	672	644	496		507
BROOKINGS SOUTH DAKO	361	501	535	528	536	522	549	398	547	452	405	375	532	545	533	314	508	235	303	389	226	572	590	472	618	177	104	207	507	556		437
BROWNSVILLE TEXAS	188	583	93	126	654	678	694	---	545	591	---	592	647	264	487	300	---	670	612	359	321	406	579	658	480	463	541	566	577	456		486
BURLINGTON VERMONT	432	133	573	406	620	---	361	---	491	17	711	668	165	101	719	159	665	309	677	621	116	159	109	594	180	359	343	408	119	346		377
CARIBOU MAINE	525	206	97	255	552	550	132	408	536	227	532	---	434	91	278	448	258*	365	454*	334	200	224	225	235	358	263	354	376	322	402		333
CAPE HATTERAS N.C.	603	457	533	626	208	339*	446	623	616	555	660	642	602	559	654	625	635	614	658	502	535	541*	371	483	688	652	677	340	647	122		540
CHARLESTON S.C.	593	384	611	601	62	288	295	585	523	456	547	604	596	589	652	558	605	540	609	500	413	585	288	499	608	641	590	256	477	106		489
CLEVELAND OHIO	146	396	---	501	382	503	567	555	409	627	611	500	197	568	487	541	131	---	606	581	276	313	633	244	408	228	277	294	244	618		423
COLUMBIA MISSOURI	195	628	465	236	374	629	633	578	642	639	577	581	306	634	635	535	375	372	610	281	658	548	403	648	393	580	461	716	706	692		524
DODGE CITY KANSAS	640	631	500	340	349	661	635	616	648	631	616	640	585	674	530	476	341	303	122	499	524	227	423	682	663	291	725	686	166	644		516
E. LANSING MICHIGAN	91	299	417	359	590	620	580	573	302	610	572	285	106	642	576	516	254	380	615	561	417	651	650	345	344	513	122	125	144	540		427
EL CENTRO CALIF. NPF	577	581	579	589	581	580	605	588	580	581	609	604	602	171	586	587	619	501	625	619	645	631	629	644	645	649	633	633	636	631		591
EL PASO TEXAS	637	601	598	629	625	633	601	654	650	629	609	606	597	387	405	662	617	553	570	696	556	712	691	657	688	667	698*	631	728	703		623
ELY NEVADA	586	549	605	599	586	510	418	478	577	606	---	616	504	431	621	617	287	359	309	523	258	496	342	531	470	411	628	415	627	700		505
EPPLEY NEWPORT R.I.	516	409	190	536	426	82	203	---	554	527	126	537	537	206	---	291	593	300	396	---	385	431	489	579	291	313	367	276	109	302		369
FAIRBANKS ALASKA	361	381	261	378	399	191	---	443	445	437	281	230	288	324	407	324	366	447	356	536	525	386	467	488	471	397	514	471	305	507		393
FLAMING GORGE UTAH	636	550	639	627	658	657	487	593	720	625	524	588	677	440	361	607	468	528	165	201	582	454	399	572	508	789	420	570	666	664		546
FORT WORTH TEXAS	573	614	607	453	608	635	639	627	358	563	611	608	298	296	535	92	155	376	326	468	662*	489	597	661	496	369	650	482	178	373		480
FRESNO CALIFORNIA	574	591	595	607	590	176	541	623	569	634	644	630	259	306	527	647	346	501	651	344	679	625	594	571	666	625	675	582	671	651		560
GAINESVILLE FLORIDA	645	430	520	219	54	516	634	760	780	742	751	706	748	685	619	545	629	524	692	538	548	522	604	618	792	731	305	388	488	268		567
GENEVA NEW YORK	243	34	300	313	414	314	447	496	347	322	501	442	282	336	467	300	480	532	515	356	216	240	528	202	188	186	427	62	112	160		325
GLASGOW MONTANA	547	313	528	568	525	644	366	539	554	486	572	459	574	531	337	559	244	204	148	115	91	416	612	590	221	394	178	660	603	607		439
GRAND JUNCTION COLO.	612	5 0	612	621	632	628	365	588	601	573	639	632	652	455	483	584	252	359	242	355	400	305	348	511	527	290	630	623	713	711		517
GREAT FALLS MONTANA	573	4 7	390	570	568	490	258	560	499	250	583	592	578	529	253	530	100	212	647	201	321	375	545	368	275	227	537	478	609	526		437
GREENSBORO N.C.	583	71	632	603	320	64	379	582	621	668	605	620	600	672	601	641	621	616	668	593	340	660	65	674	674	469	569	566	514	455		525
INDIANAPOLIS INDIANA	32	436	595	262	139	360	572	595	398	592	613	557	141	450	609	519	340	531	455	543	383	647	399	662	621	643	316	542	203	---		454
INYOKERN CALIFORNIA	589	579	592	593	580	475	601	596	597	614	613	625	411	268	619	627	645	548	647	469	584	658	---	667	675	662	662	592	592	653		587
ITHACA NEW YORK	290	71	454	634	405	320	619	683	543	302	683	623	466	350	609	368	654	706	704	528	529	163	727	257	155	162	520	58	29	114		423
LAKE CHARLES LA.	215	648	641	459	612	627	626	639	590	612	633	612	607	400	606	515	212	348	407	328	173	214	611	621	574	345	173	267	411	382		470
LAKELAND FLORIDA	611	487	463	302	135	471	534	639	625	627	594	---	---	---	---	---	---	---	514	528	558	554	601	251	356	421	399	599	558	561		495
LANDER WYOMING	610	576	414	607	603	585	413	591	468	564	557	522	615	563	526	558	488	232	171	277	456	523	596	446	144	512	675	637	674	669		509
LARAMIE WYOMING	571	495	298	390	584	630	297	570	600	609	498	475	632	532	325	468	502	424	359	550	335	174	635	494	363	295	554	585	483	672		480
LAS VEGAS NEVADA	614	624	625	630	598	598	638	626	634	640	649	650	584	238	638	635	615	501	644	526	662	669	643	670	632	597	673	642	685	691		616
LEXINGTON KENTUCKY	---	454	572	554	498	79	608	599	---	623	620	568	482	554	604	663	516	560	540	555	351	608	183	538	618	309	296	637	511	513		508
LITTLE ROCK ARKANSAS	---	631	592	547	261	---	---	---	---	546	549	555	207	632	510	516	350	350	560	212	556	489	167	653	567	578	307	590	251	386		463
LOS ANGELES CALIF.	557	592	605	636	604	510	619	595	595	622	623	620	474	227	613	257	605	679	567	525	620	649	649	617	634	591	676	377	498	662		570
MADISON WISCONSIN	99	---	---	600	613	589	580	569	559	601	434	93	---	637	604	295	625	611	273	515	242	670	574	680	602	---	73	129	409	465		467
MANHATTAN KANSAS	413	548	248	464	370	580	593	534	608	583	530	545	560	618	---	376	160	263	364	209	619	333	579	580	167	204	682	690	451	519		462
MATANUSKA ALASKA	398	385	326	226	273	266	400	478	436	---	---	152	233	115	277	336	414	339	368	537	439	341	371	282	182	476	522	394	368	485		338
MEDFORD OREGON	518	525	566	563	514	383	458	---	202	476	369	368	168	379	577	166	203	451	571	157	523	246	387	363	440	635	615	609	544	444		428
MIDLAND TEXAS	529	637	647	211	650	668	682	641	634	631	621	547	465	582	476	297	408	675	364	701	691	695	679	706	695	740	761	---	729	678		601
MIAMI FLORIDA	484	466	365	455	270	556	527	540	573	546	584	592	604	544	553	554	593	603	582	517	571	543	499	477	461	474	418	545	561	512		519
NASHVILLE TENNESSEE	84	593	585	597	417	64	620	622	543	652	646	577	560	638	638	596	528	428	547	434	459	602	132	658	586	602	259	684	403	372		504
NEW YORK CENTRAL PRK	376	245	555	561	208	60	446	651	540	340	610	518	532	541	640	274	618	516	642	633	294	245	691	494	342	311	516	77	188	246		430

SOLAR RADIATION TOTALS-Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys. APRIL 1971

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
NORTH OMAHA NEBRASKA	360	610	573	429	481	605	604	412	621	587	493	497	632	581	552	203	411	279	467	256	490	490	646	614	490	225	499	598	557	417		489
OAK RIDGE TENNESSEE	321	459	564	551	444	79	573	581	563	626	604	547	533	614	587	577	563	437	519	274	281	588	73	625	572	463	394	641	493	317		482
OKLAHOMA CITY OKLA.	599	606	582	177	437	612	629	581	561	441	541	575	470	636	493	245	345	306	306	551	642	262	195	601	442	488	635	326	100	424		460
PHOENIX ARIZONA	---	569	574	585	564	548	530	581	589	597	599	594	598	202	285	577	595	567	433	604	537	601	600	629	631	633	646	635	622	640		564
PORTLAND MAINE	497	335	138	539	543	489	185	486	523	418	316	537	395	80	555	208	340	144	431	472	346	201	455	575	248	168	411	459	224	328		368
PROSSER WASHINGTON	379	498	462	512	507	455	511	245	320	485	---	530	424	381	529	296	237	575	603	330	479	442	466	137	515	618	505	568	543	429		448
RAPID CITY S.DAK.	552	471	440	281	484	574	492	548	563	548	424	420	574	571	472	457	393	229	92	235	252	70	602	286	111	206	543	454	422	510		409
RENO NEVADA	543	455	562	559	505	130	393	565	446	461	549	568	208	422	550	608	480	440	606	450	447	302	565	320	184	361	479	578	618	557		464
RICHLAND 25 NW WASH.	401	539	517	557	536	---	512	265	374	598	457	611	475	439	---	349	307	---	---	329	620	473	458	153	626	681	472	623	625	542		482
RIVERSIDE CALIFORNIA	673	660	665	682	658	663	665	593	630	656	688	683	584	150	670	248	388	647	434	312	373	715	692	337	547	588	694	561	526	689		569
RUSTON LOUISIANA	117	585	614	602	576	297	618	589	547	536	604	551	542	266	383	584	182	329	506	273	541	333	610	655	620	235	361	629	78	---		461
SAINT CLOUD MINN.	362	393	568	582	580	532	576	414	584	555	418	357	388	607	565	295	563	122	368	476	351	645	555	669	295	603	38	306	280	549		453
SALT LAKE CITY	625	548	624	633	614	561	404	341	607	590	508	651	655	424	604	623	379	320	196	401	345	379	244	407	234	391	585	511	697	709		494
SAN ANTONIO TEXAS	469	599	621	62	726	673	674	641	346	522	613	594	404	577	373	136	459	530	364	313	610	432	704	674	227	325	507	418	384	521		483
SANTA MARIA CALIF.	595	594	607	617	594	233	613	632	629	633	640	644	397	313	607	532	503	664	586	411	684	640	666	685	544	556	665	160	491	519		555
SAULT STE MARIE MICH	319	385	404	433	607	532	594	584	282	604	482	455	578	648	587	632	109	635	583	256	379	653	322	369	285	672	375	113	513	394		460
SEATTLE TACOMA WASH.	385	444	465	540	456	196	380	80	59	322	484	562	421	346	450	190	461	325	550	234	378	330	567	211	624	629	145	370	509	447		385
SEATTLE WASH. UNIV.	373	419	410	468	379	179	381	102	97	329	460	500	353	308	380	222	462	271	490	128	335	282	444	241	536	535	185	244	431	373		344
SPOKANE WASHINGTON	397	483	490	511	474	370	468	407	299	496	399	483	515	337	437	340	151	491	586	430	347	154	185	192	621	518	354	333	458	484		407
STATE COLLEGE PENNA	311	74	465	399	290	148	576	593	467	371	587	547	448	349	584	569	304	578	565	454	280	244	586	262	176	262	532	151	151	243		386
STERLING VIRGINIA	506	59	609	567	528	57	630	671	607	587*	656	664	602	674	680	647	435	687	693	---	470	568	537	495	542	541	648	190	196	577		528*
SWAN ISLAND W.I.	535	575	543	579	595	467	434	517	531	---	---	---	---	548	584	564	512	529	557	598	587	592	544	543	600	607	608	608	589	629		561
TALLAHASSEE FLA	523	56	599	99	92	495	425	584	578	550	558	563	586	511	554	554	577	529	568	505	308	366	362	599	611	482	300	310	164	89		437
TAMPA FLORIDA	618	554	444	286	156	639	520	656	635	658	598	657	648	654	488	588	600	611	600	583	605	579	647	229	354	352	547	630	632	577		545
TUCSON ARIZONA	602	601	607	609	592	578	549	621	621	626	631	624	621	264	441	609	567	392	492	637	541	649	625	654	661	669	673	617	661	661		590
WAKE ISLAND PACIFIC	590	656	514	649	636	640	660	585	630	263	256	506	680	587	695	609	590	658	341	683	713	713	703	706	705	672	670	687	703	650		612

Note.--Langley is the unit used to denote one gram calorie per square centimeter. Values with an asterisk are interpolated.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska. APRIL 1971

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	-40	12	2	20	113	2	13	53	106	41	23	-3	86	-1	-25	121	162	171	153	188	207	124	117	68	69	181	185	162	117	145		86

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (λ 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	8.42	13.26	19.18	19.29	15.86	18.23	17.99	13.02	19.41	17.99	11.48	9.47	19.18	18.35	17.87	11.72	19.06	9.35	14.32	13.85	17.04	19.89	20.72	21.31	20.69	13.14	6.98	10.41	20.18	21.93		15.66

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															Mean O_3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
BISMARCK, N. DAK.	05402	00405	00443	05456	00402	00346	00333	00364	00330	00338	00428	00471	00429	00403	00404	00376	01237	05396	05360	-	05372	00376	00352	00352	03400	-	-	03385	00382	[illegible]		.87
BOULDER, COLO.	00375	00360	-	-	00374	00346	00315	03353	00330	-	-	00352	00355	00365	00404	00348	-	-	04413	03452	00382	-	01378	-	-	-	[illegible]	[illegible]	-	-		.80
FAIRBANKS, ALASKA	-	-	03454	03470	00472	05488	04522	00456	00503	05520	04469	05476	05406	05431	00476	03495	05404	03404	-	03437	00467	04460	00320	00491	03416	04429	00454	[illegible]	[illegible]	[illegible]		1.1
GREEN BAY, WIS.	04354	00421	00421	00413	00484	02472	00406	00377	00401	00350	00353	04391	00481	00447	00454	00438	00387	00356	04356	00359	00375	00386	00391	00432	04407	00475	-	[illegible]	[illegible]	[illegible]		109
HUANCAYO, PERU	00276	00270	00257	05262	00269	00273	00273	00266	00276	00275	00264	00262	00260	00262	00260	00263	00269	00279	00270	00271	00275	00273	00268	00260	00264	00262	00265	[illegible]	[illegible]	[illegible]		267
KAUAI IOA, HAWAII	-	-	-	-	-	-	04283	-	-	-	-	00297	-	00296	-	00307	-	-	00297	-	05303	-	00296	-	-	00301	-	05272	-	04285			294
NASHVILLE, TENN.	-	00353	00373	00389	00428	35546	00433	00392	00379	00391	00371	00389	00393	00429	00415	00434	00416	00383	00399	00405	00427	00453	-	00456	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		111
WALLOPS ISLAND, VA.	00338	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	00417	00363	00355	00359	00412	00564	00407	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		385

[illegible] total amount of ozone in the atmosphere, i.e., the amount contained in a vertical [illegible] ground level to the top of the atmosphere in the vicinity of the station. The amount of [illegible] is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure [illegible] code [illegible] designated for [illegible] data.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), April.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), April 1971.

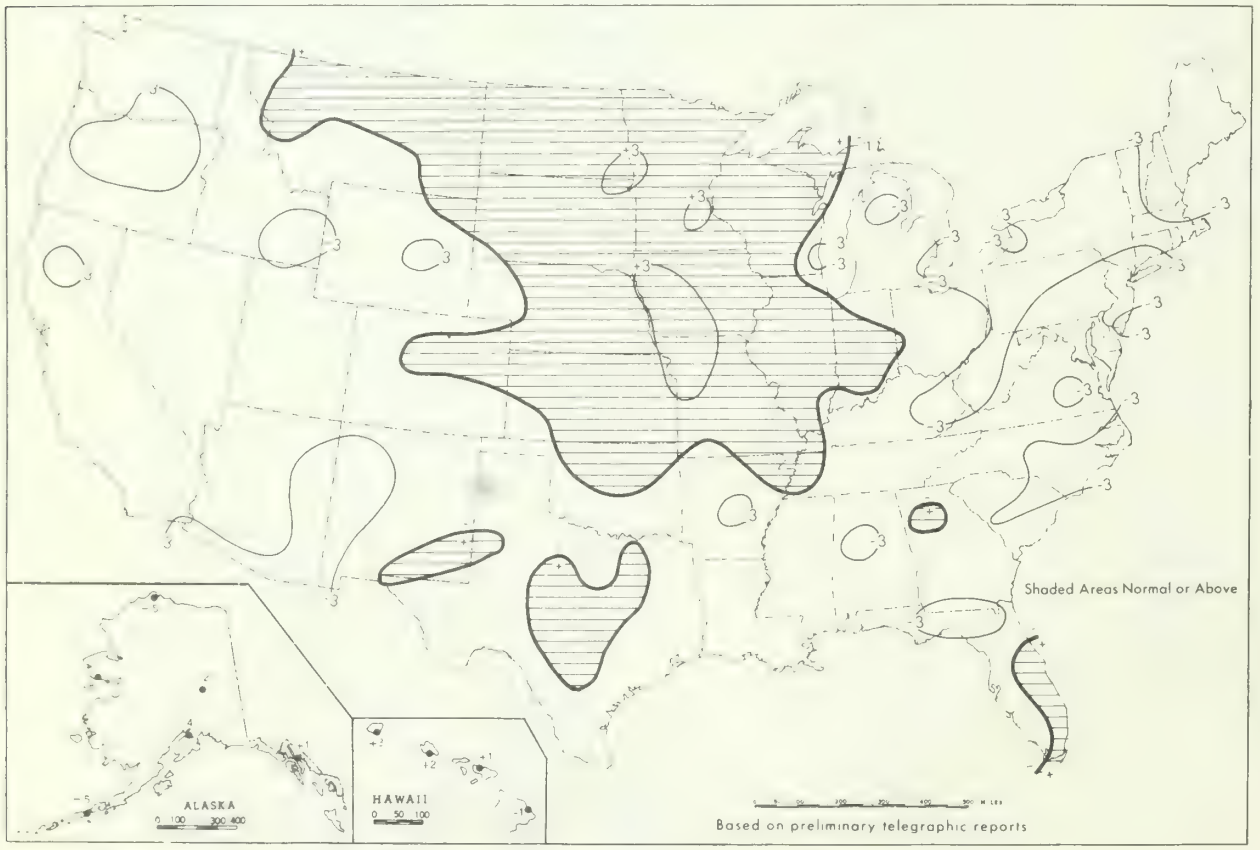


Chart II. Total Precipitation (Inches), April 1971.

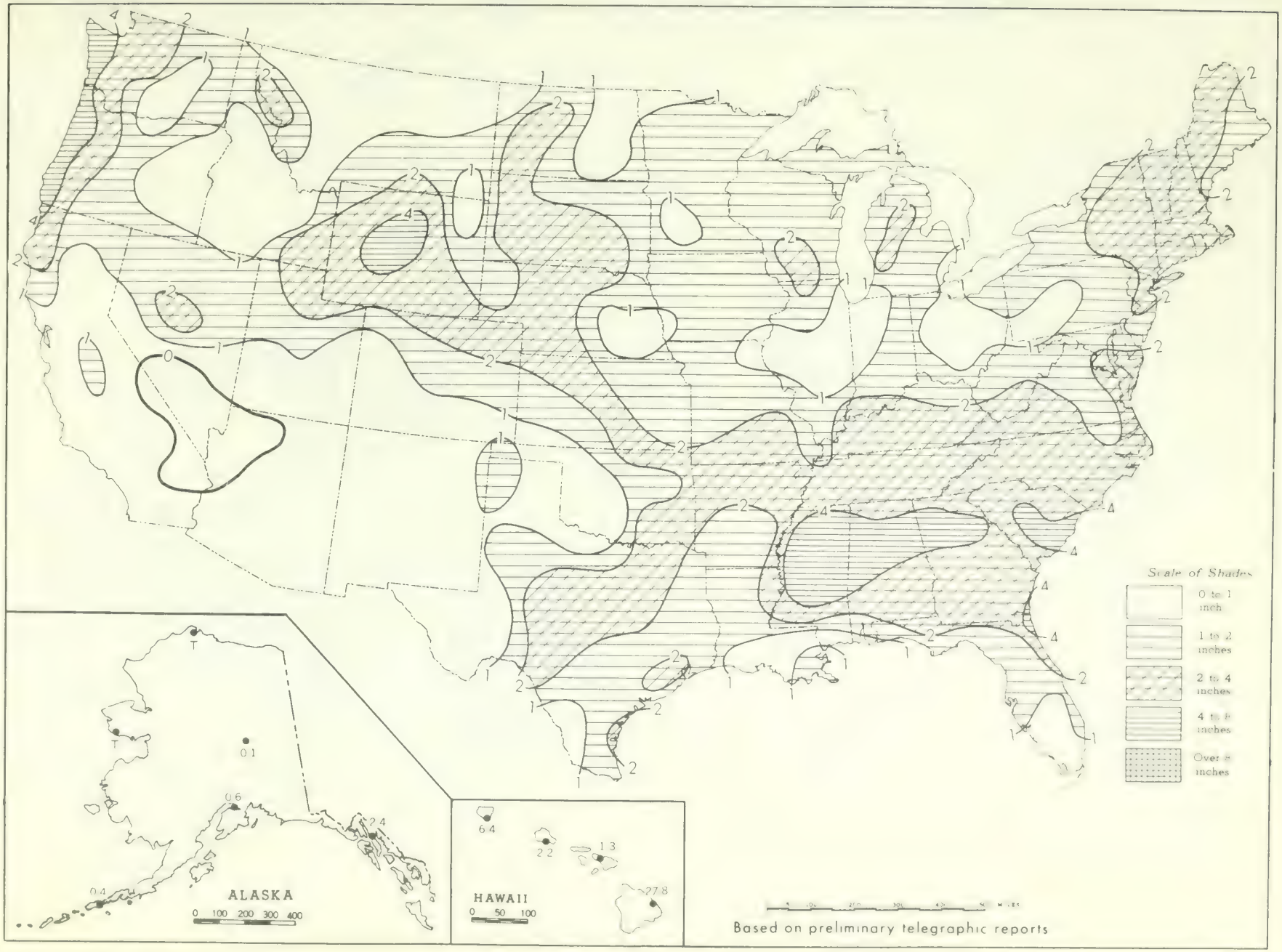


Chart III. Percentage of Normal Precipitation, April 1971.

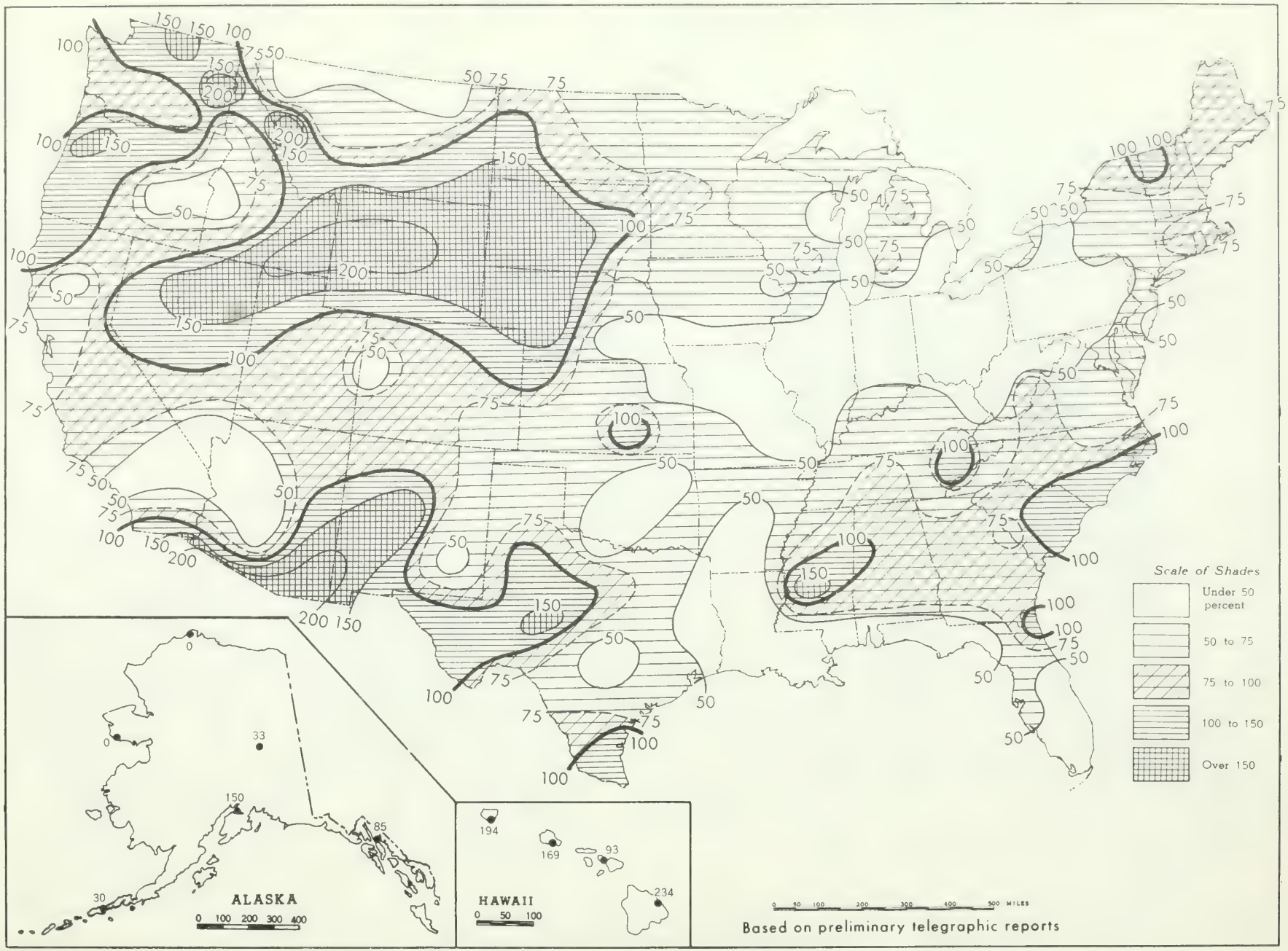
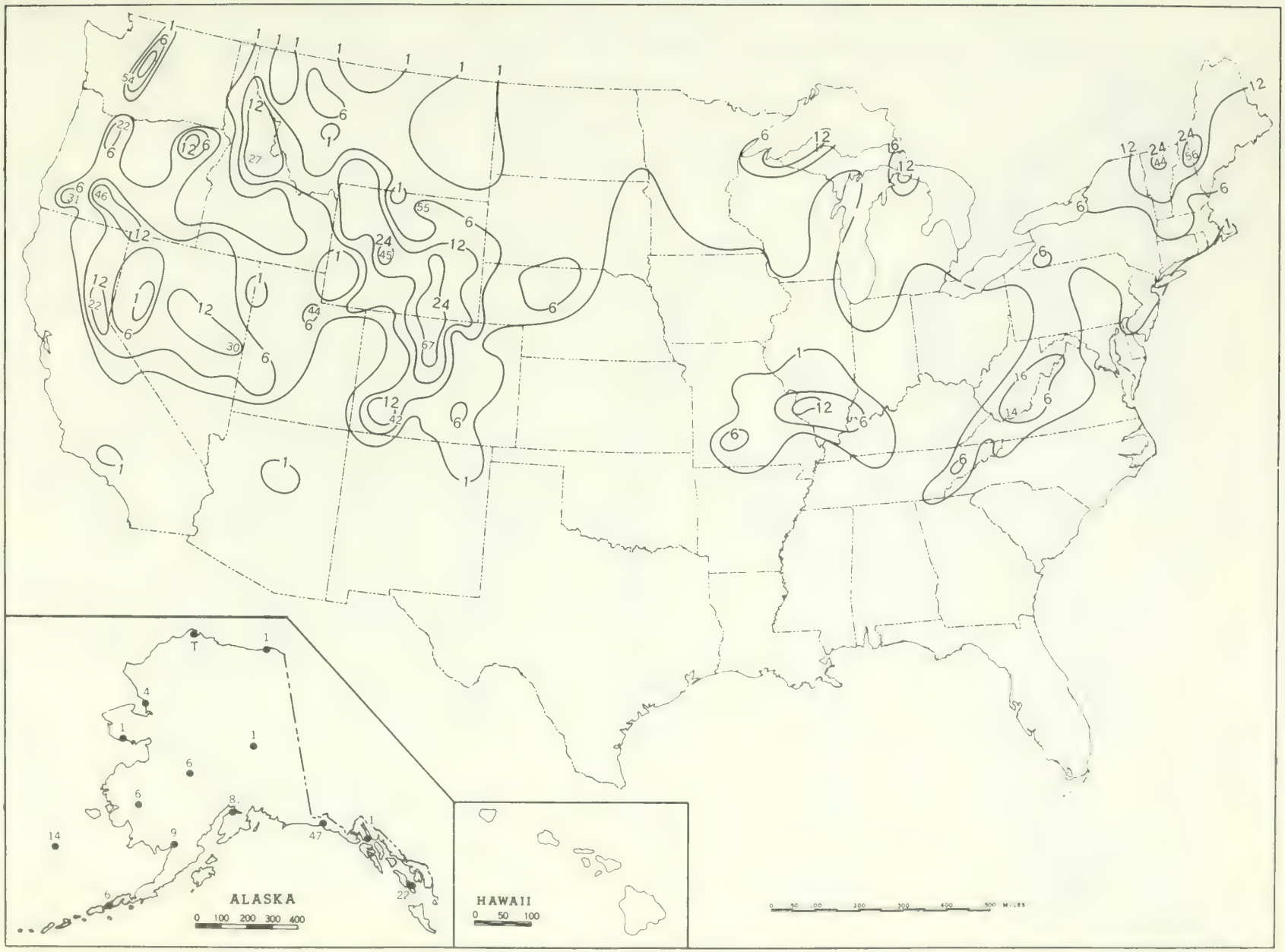
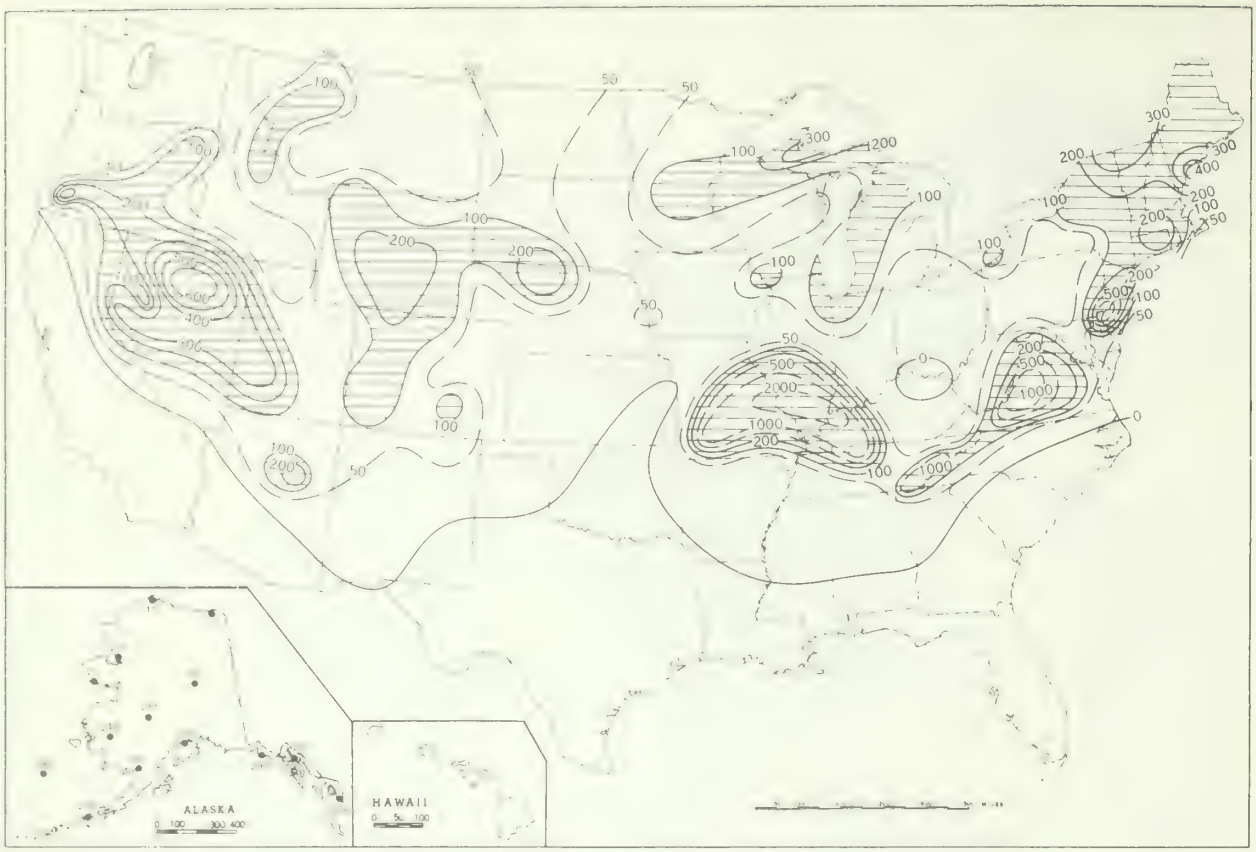


Chart IV. Total Snowfall (Inches), April 1971.



This is the total of unmelted snowfall recorded during the month at Weather Bureau and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the far West, earlier and later in the year.

Chart V-A Percentage of Mean Monthly Snowfall, April 1971.



B. Depth of Snow on Ground (Inches), 7:00 a.m. e.s.t., April ,1971.

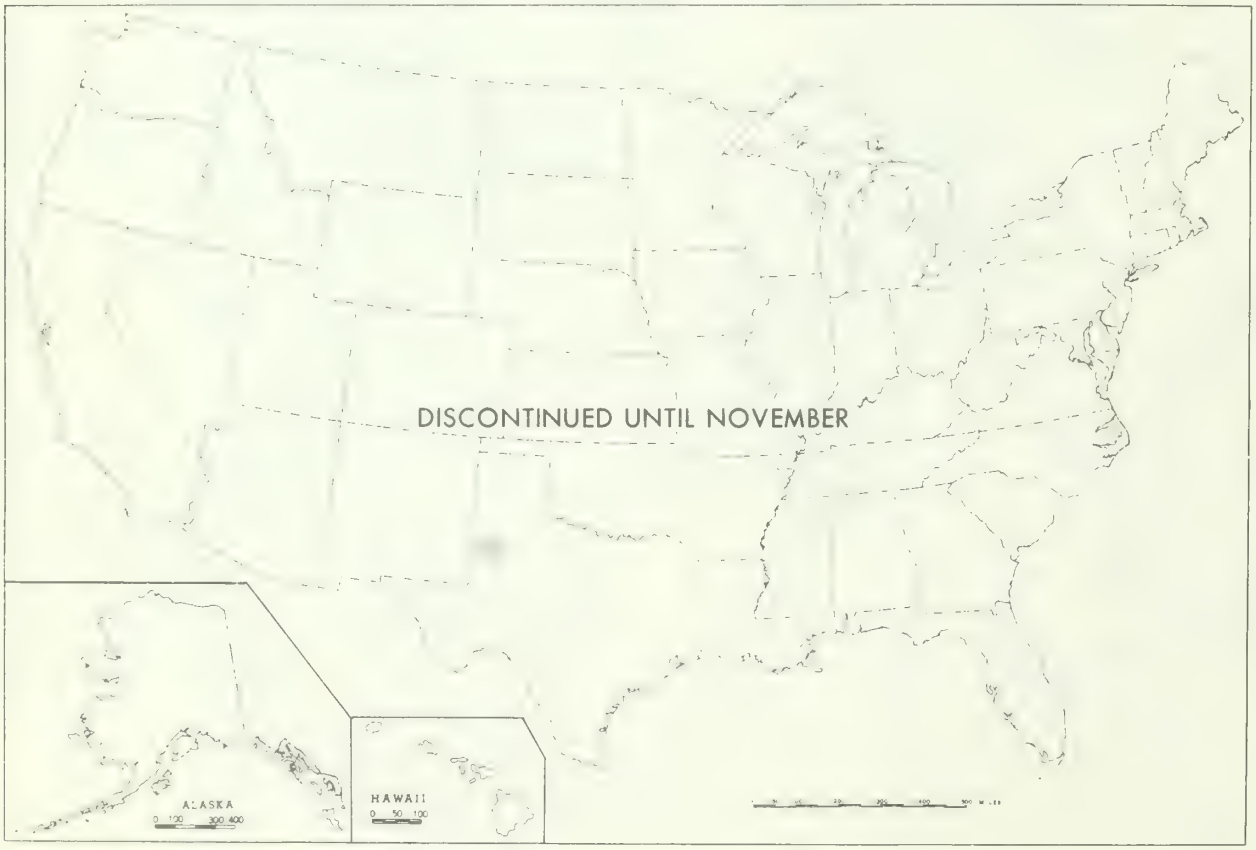
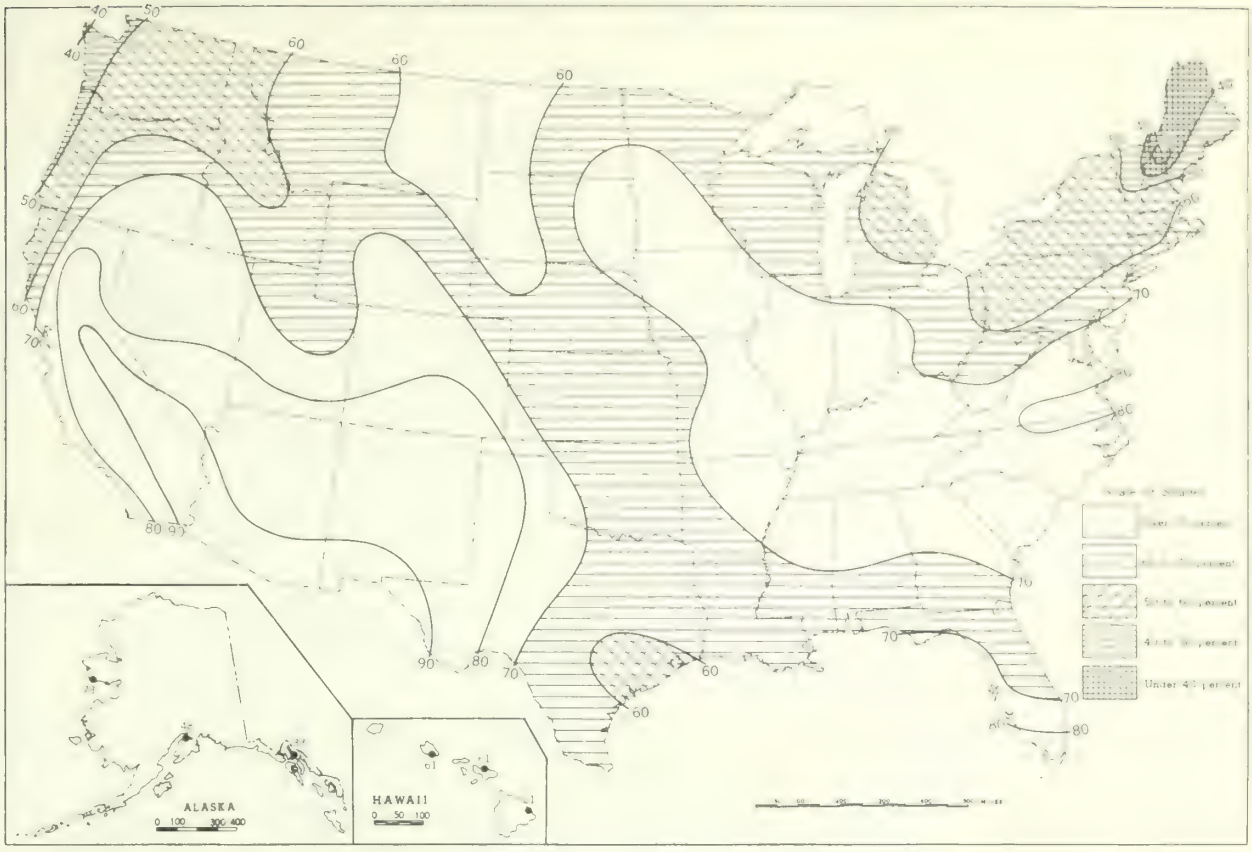
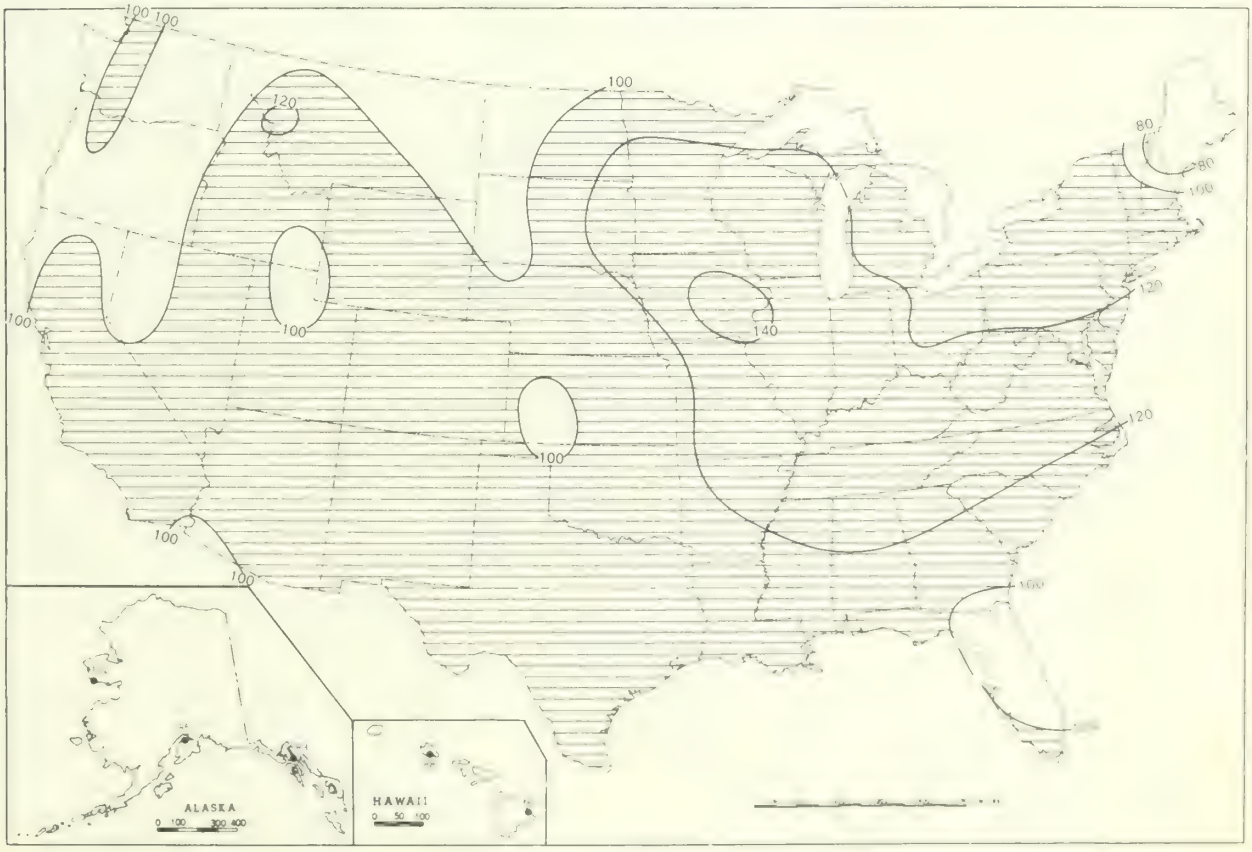


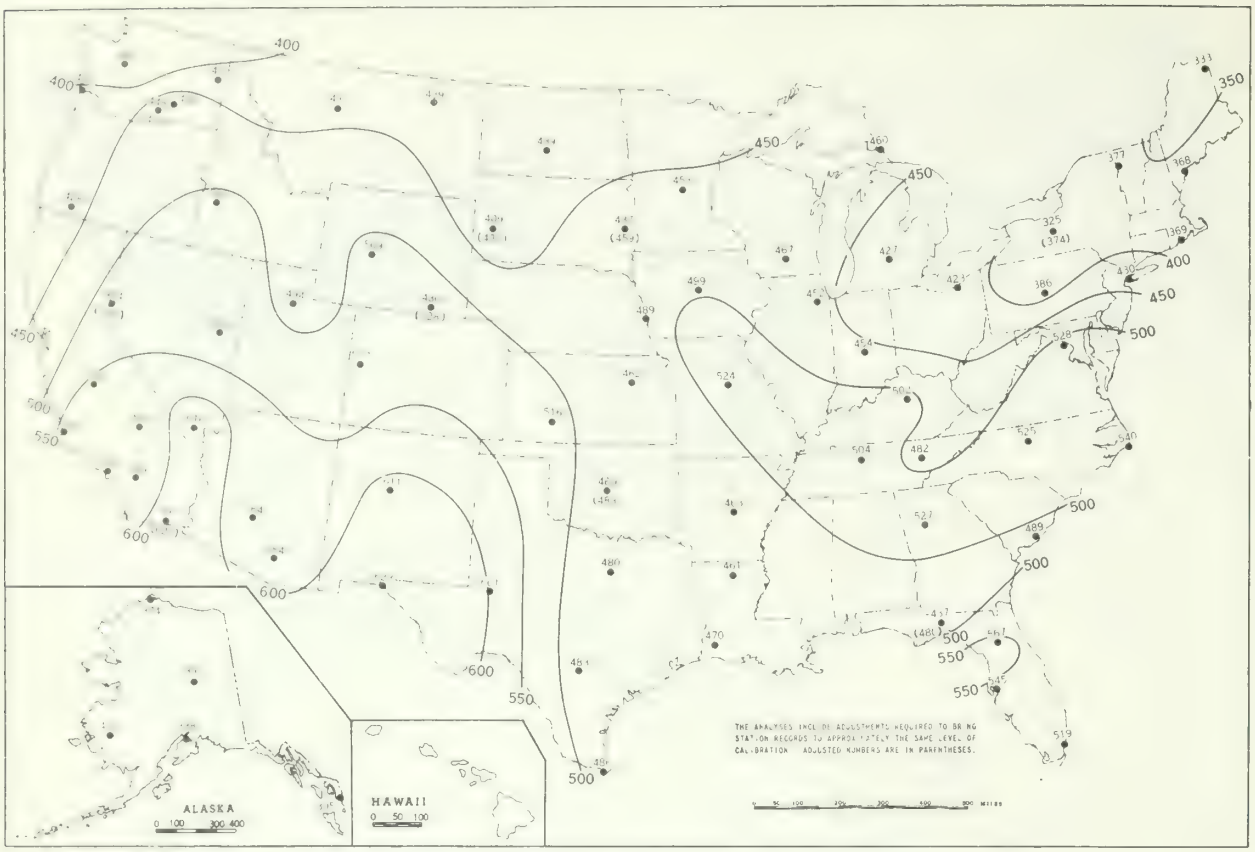
Chart VI. A. Percentage of Possible Sunshine, April 1971.



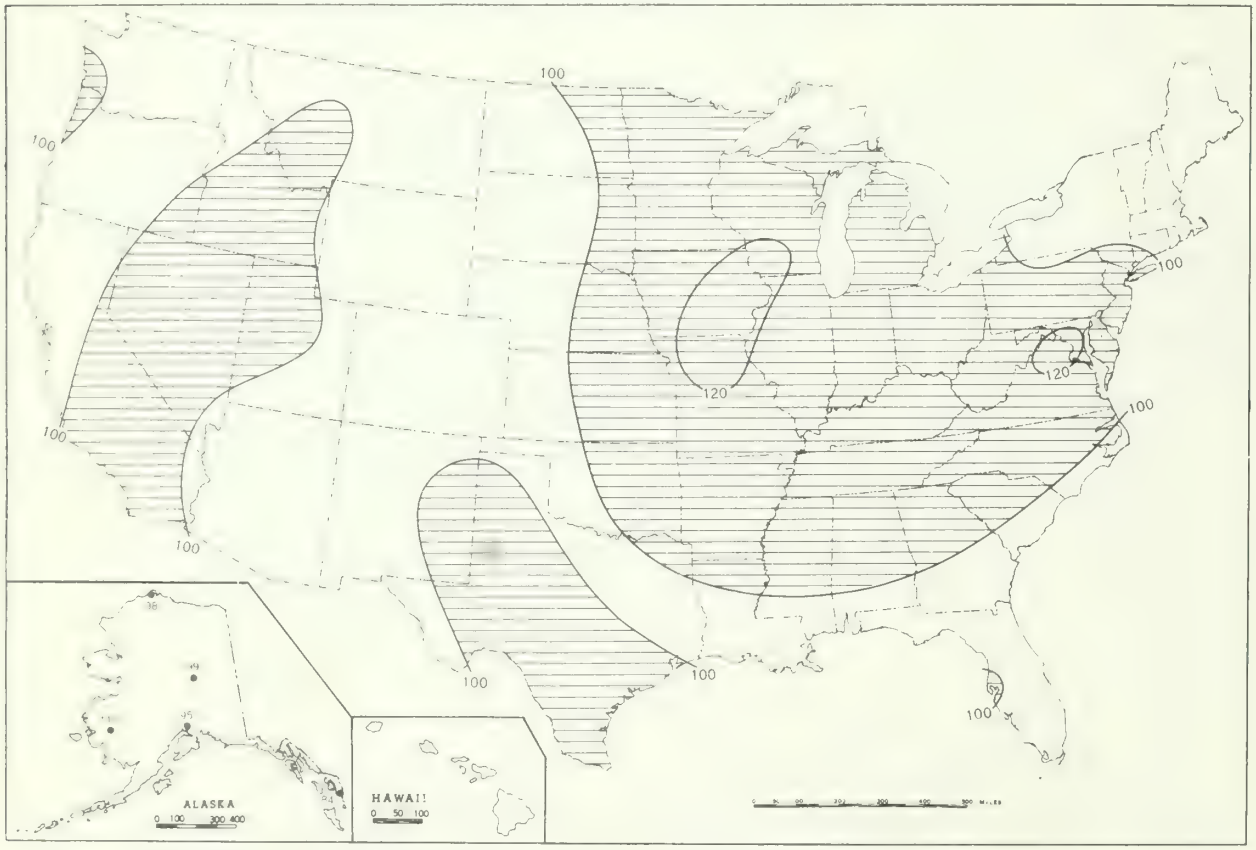
B. Percentage of Mean Monthly Sunshine, April 1971.



A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

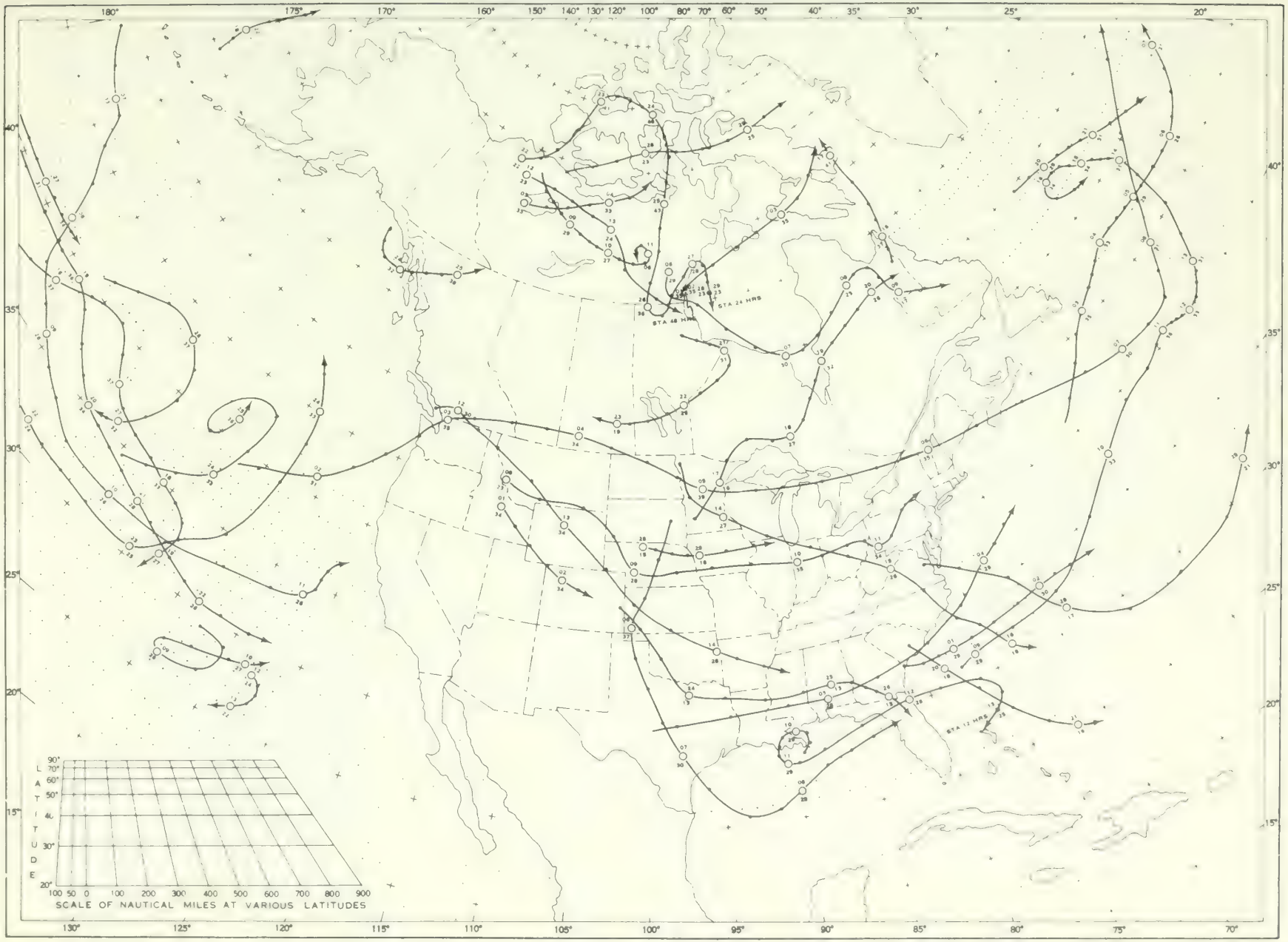


B. Percentage of Mean Daily Solar Radiation, April 1971.



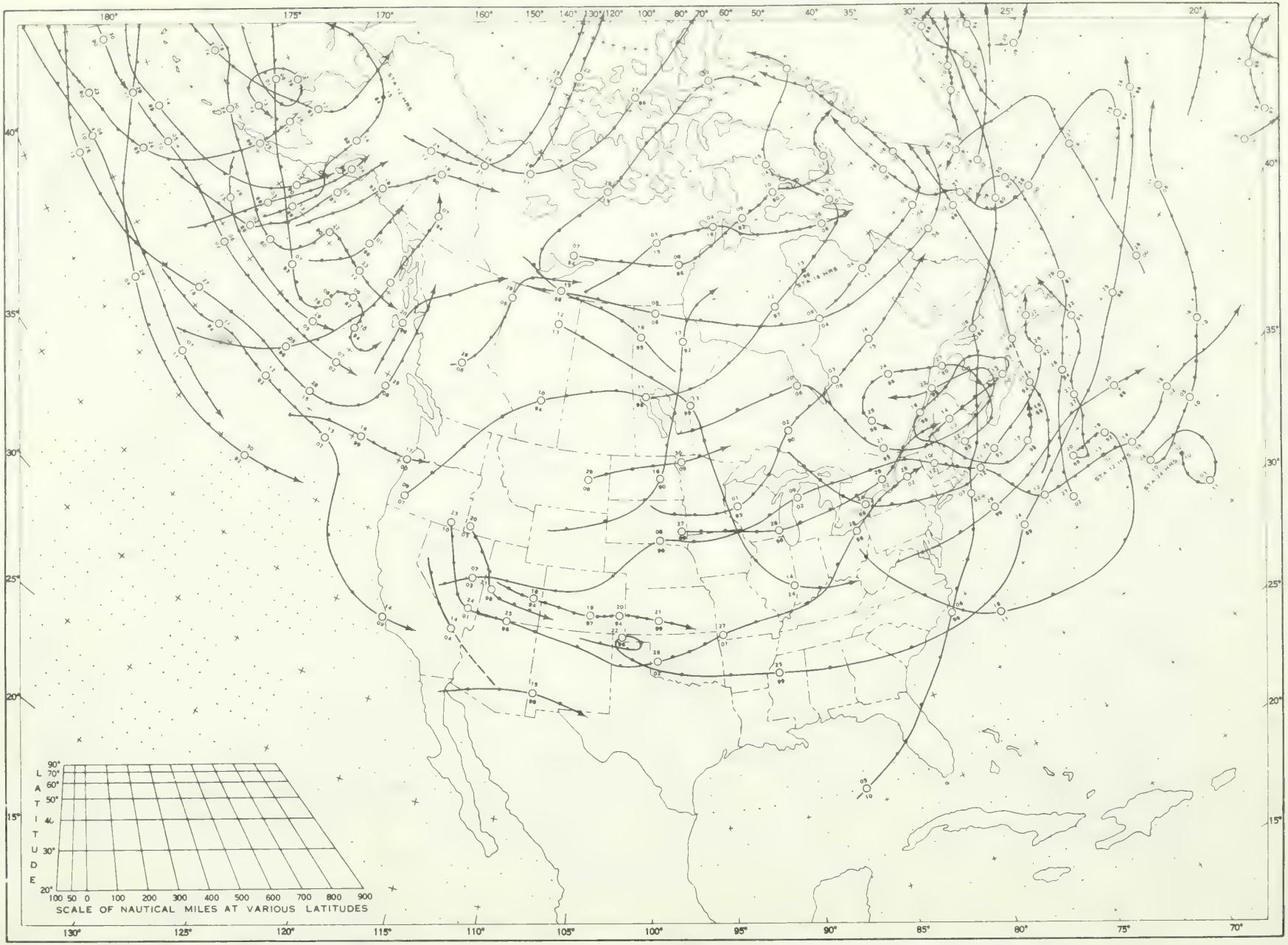
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, April 1971.



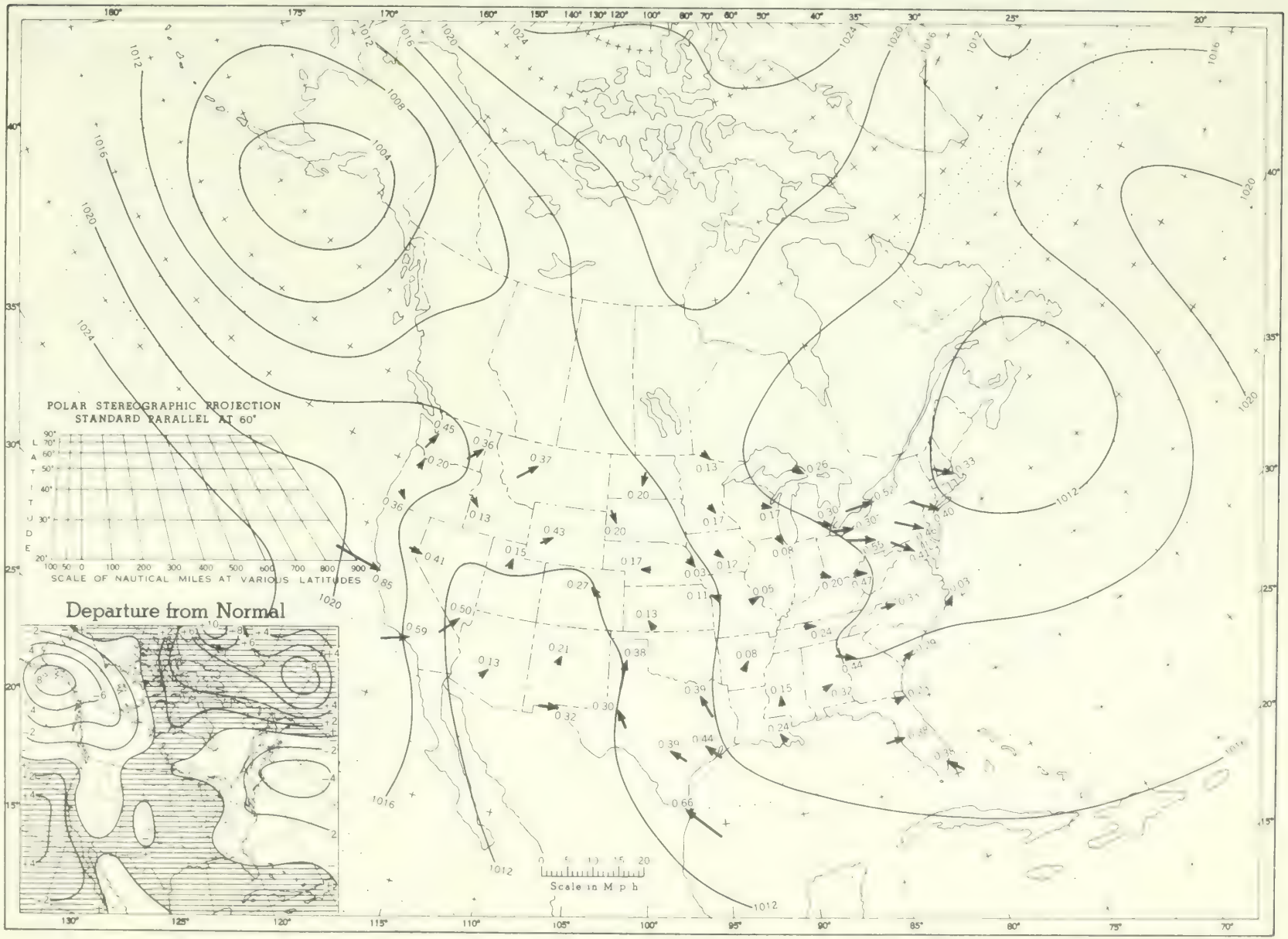
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, April 1971.



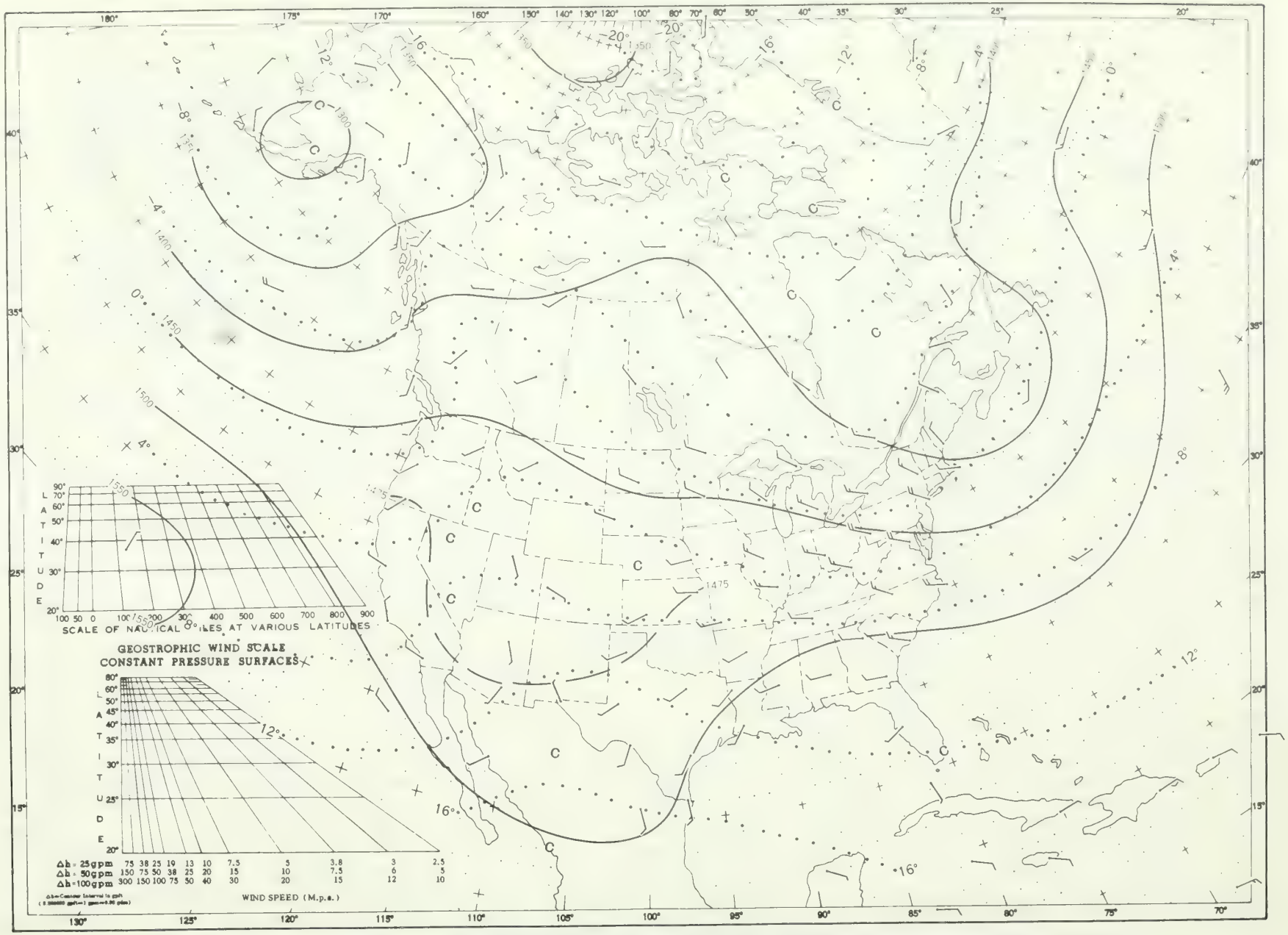
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, **April 1971**. Inset Departure of Average Pressure (mb) from Normal, **April 1971**.



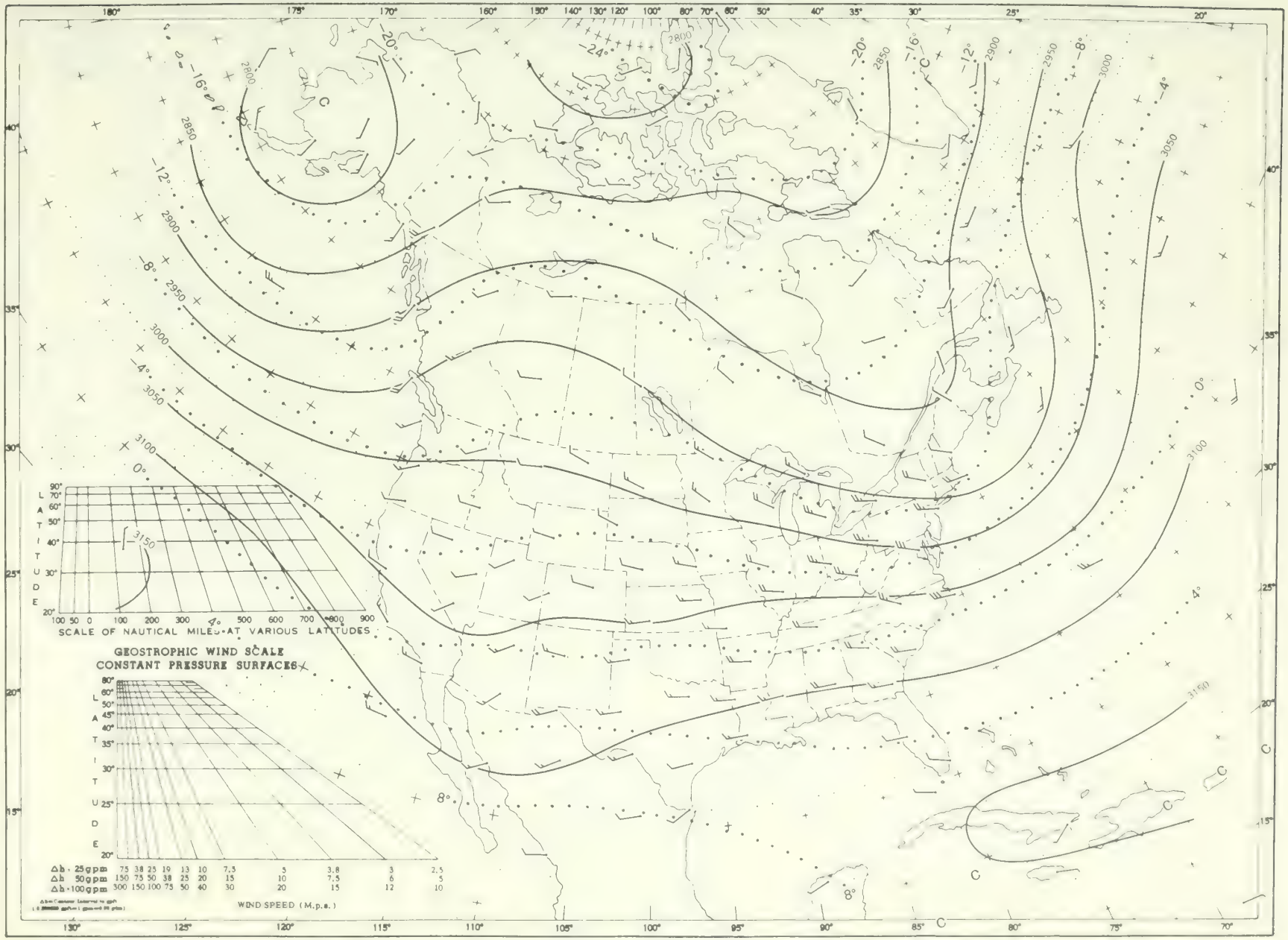
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed ÷ average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI 850-mb Surface, 1200 G.m.t., April 1971. Average Height and Temperature, and Resultant Winds



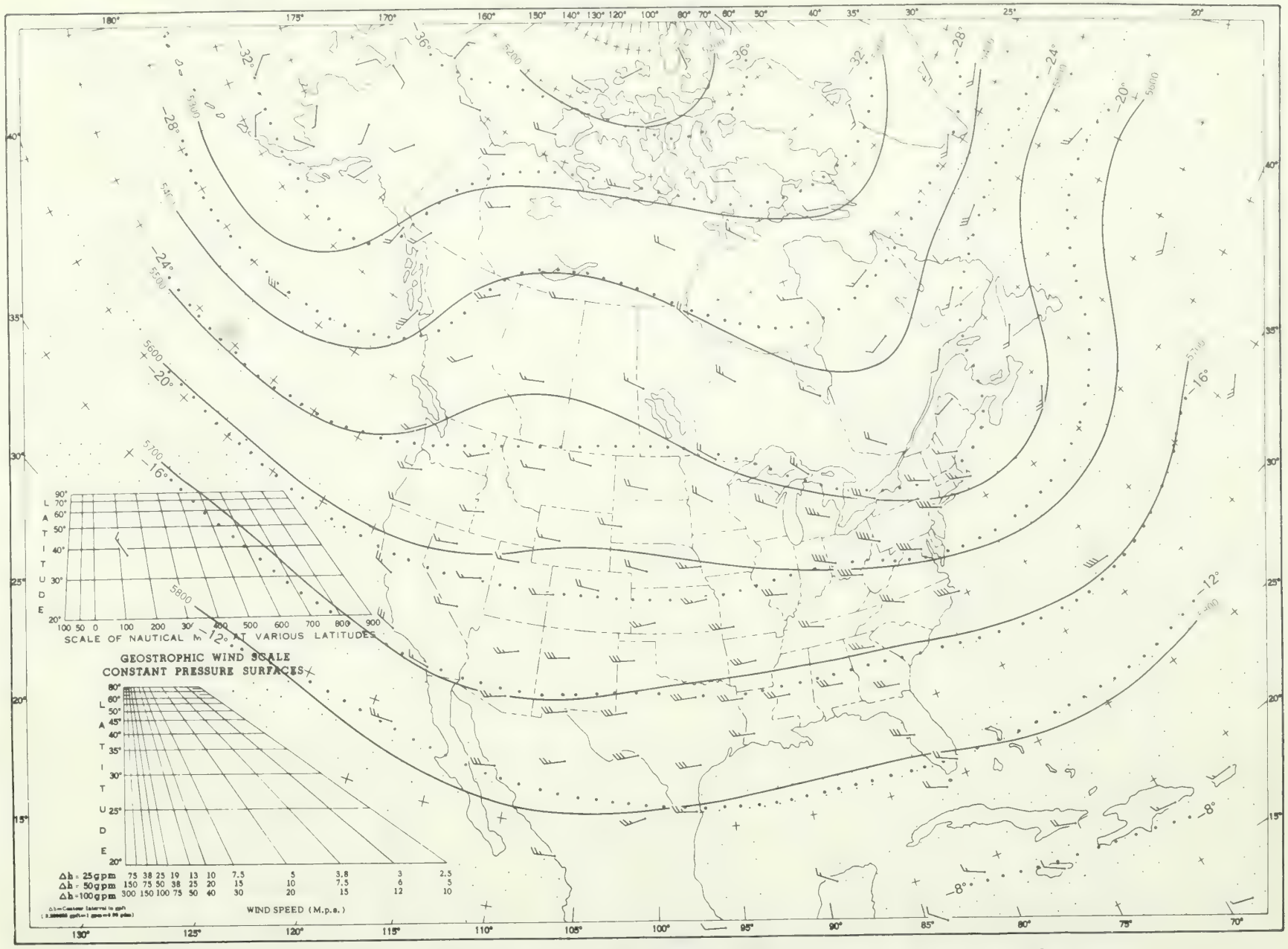
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 G.m.t., April 1971. Average Height and Temperature, and Resultant Winds



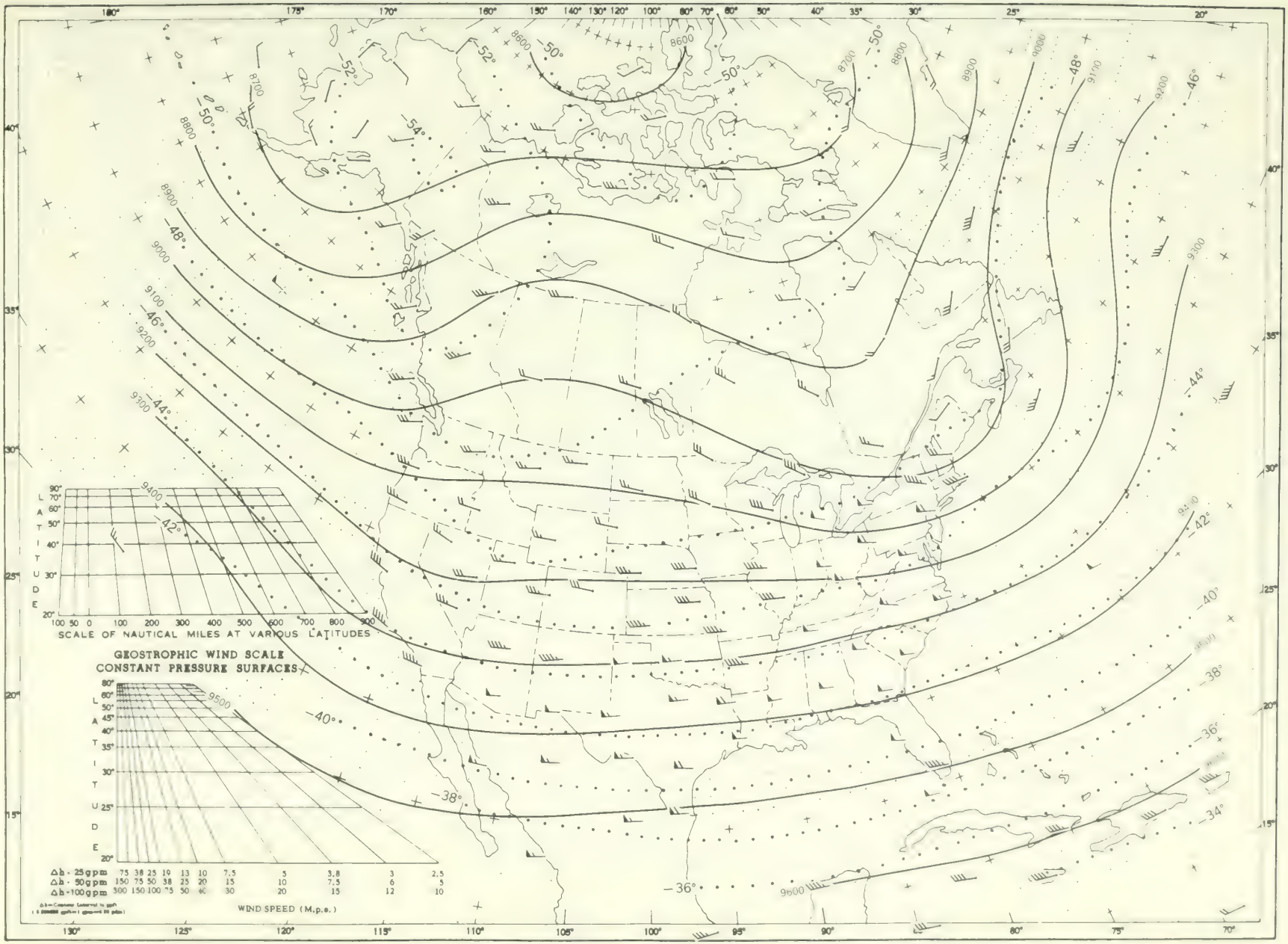
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 G.m.t., April 1971. Average Height and Temperature, and Resultant Winds



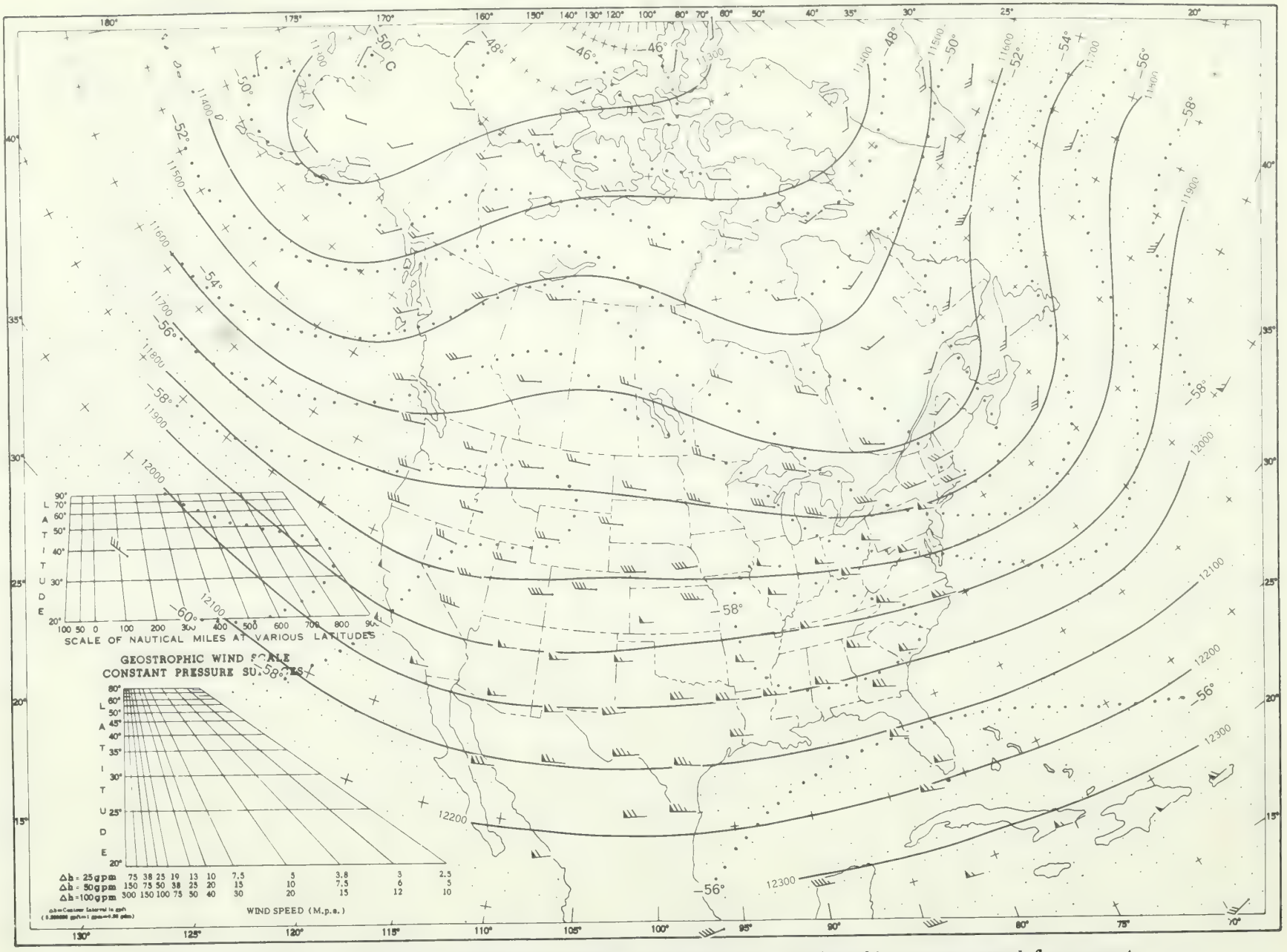
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 G.m.t., April 1971. Average Height and Temperature, and Resultant Winds.



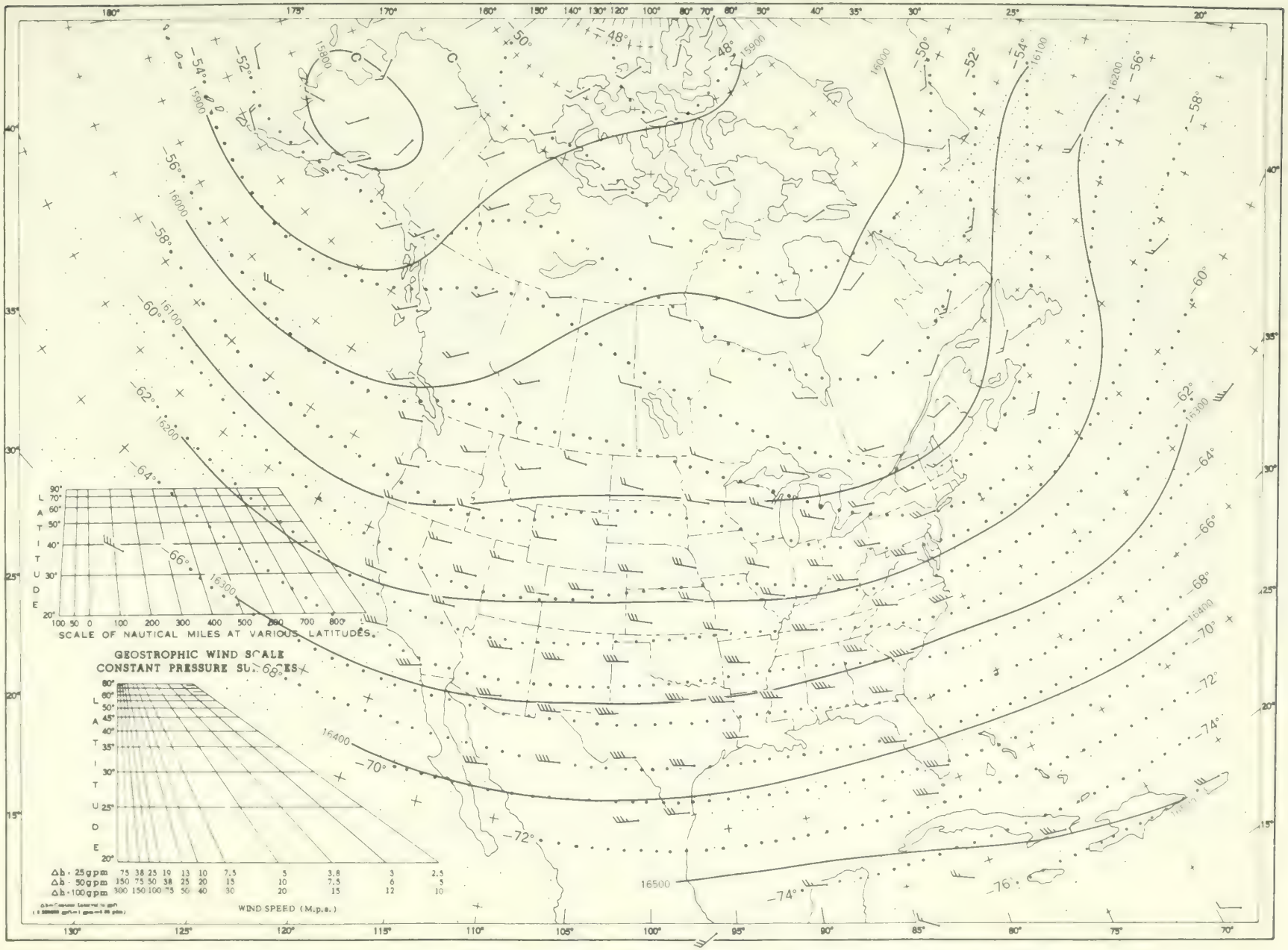
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb. Surface, 1200 G.m.t., April 1971. Average Height and Temperature, and Resultant Winds



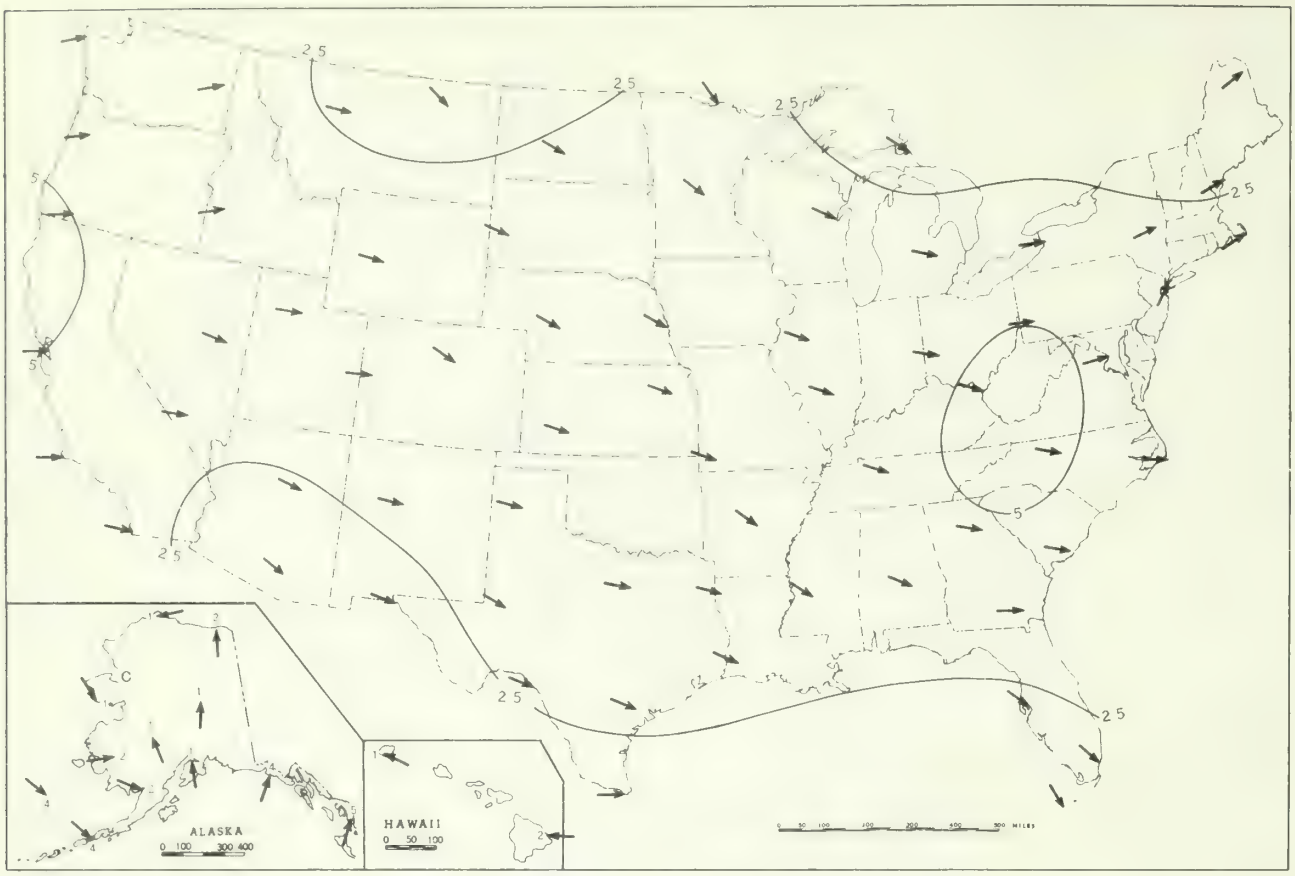
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 G.m.t., April 1971. Average Height and Temperature, and Resultant Winds

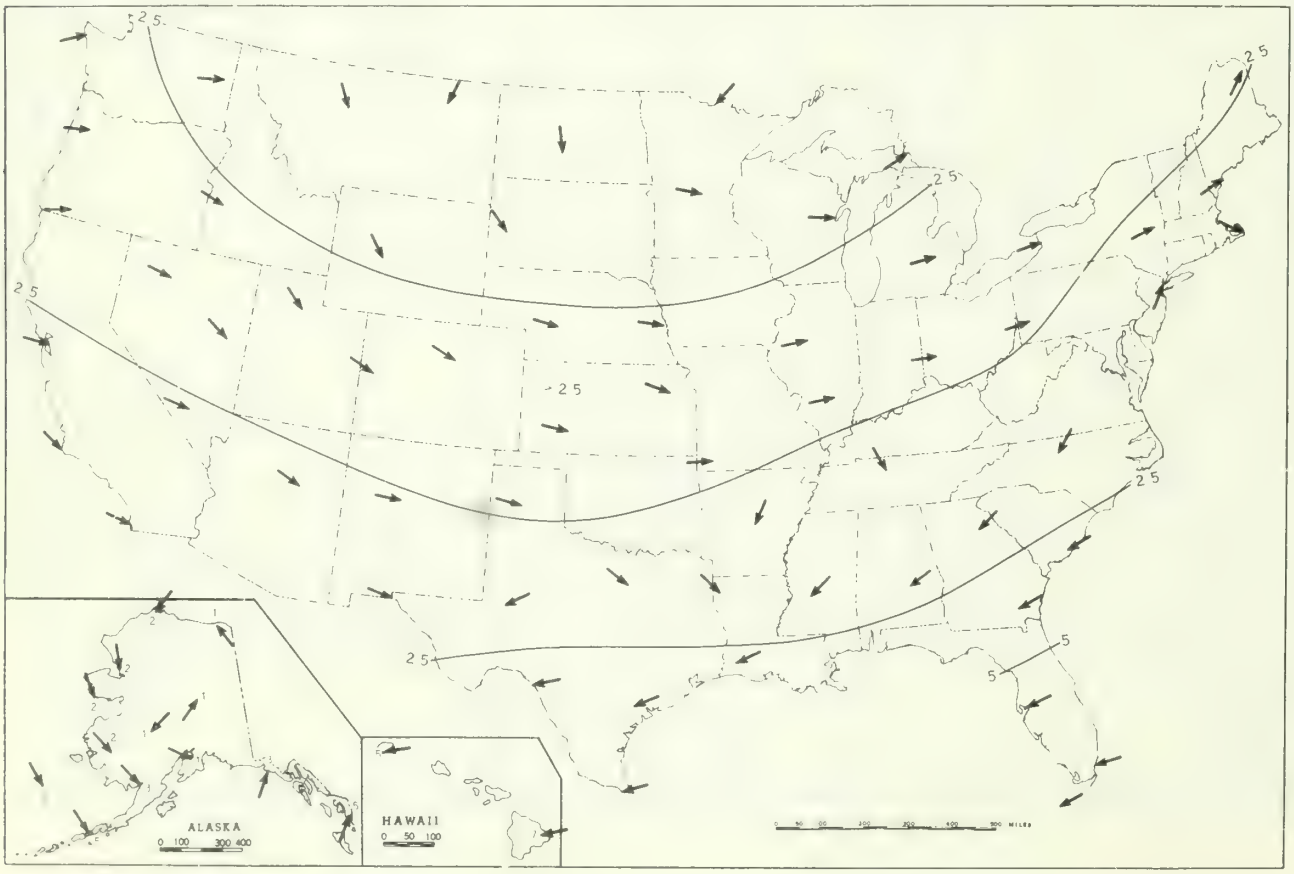


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., April 1971. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., April 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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Climatological Data

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
ENVIRONMENTAL DATA SERVICE



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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 5 MAY 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:
1. Cool weather predominated over most of the Nation.
2. Heavy late snows fell at some western locations.
3. Severe weather frequented the Central and East.

TEMPERATURE--May temperatures averaged below normal over most of the Nation. The main exceptions included an area from central Washington to the Montana-North Dakota border; western, central, and southern Texas; and southern Florida. May 1971, was the second coolest May in 40 years at San Francisco, Calif., the third coolest in 100 years at Nashville, Tenn., and the coolest at Tallahassee, Fla., where the record began 88 years ago.

Cool weather prevailed over the Southwest and the East early in May. On the morning of May 4, the thermometer at Rome, Ga., dipped to 32°. Charlotte, N. C., and Tallahassee, Fla., registered 34° on the 4th. Never before had it been so chilly so late in the season at Charlotte and Tallahassee. The Great Plains were warmer than normal. Laredo, Tex., registered 98° on the afternoon of May 7. Pleasant temperatures were widespread at midmonth. The mornings were mostly cool and the afternoons mild. Detroit, Mich., recorded 30° and Midland, Tex., 39° on the 13th. These are location record low temperatures for so late in the season. Similarly, Burns, Oreg., set a new record low on the 17th with a 21° reading. Winslow, Ariz., set a new record on the 19th when the mercury dropped to 27°. High temperatures occurred in the southwestern deserts, 99° at Thermal, Calif., on the 12th, and in Florida, 95° at Orlando, on the 12th. Syracuse, N. Y., set a new record on the 19th when the thermometer climbed to 92°. It never before had been so warm this early in the spring at Syracuse. On the same date, Messina, N. Y., registered 95°. The last week of May was cooler than normal over most of the Nation. On the 28th, the temperature at Yuma, Ariz., never rose above 68°; this is 30° colder than the normal maximum 98°, for that date at Yuma. Much of the central Great Plains and the Ohio River Valley averaged 6° to 9° cooler than normal in the last week of May.

PRECIPITATION--Cold rain and drizzle fell in the Northeast early in May. Seven inches of snow fell at Mt. Washington, N. H., Monday evening, May 3. A storm developed in the central Rocky Mountains and moved slowly to the nearby Great Plains. Thunderstorms occurred in the Great Basin and the Rocky Mountains. Tornadoes touched down in the central Great Plains on May 5. Thunderstorms popped out over much of the eastern half of the Nation on the 6th and more tornadoes from Iowa to Indiana and southward to Texas and Kentucky. Some of the tornadoes in Oklahoma and Texas touched down in open country and caused little damage. Others demolished dwellings and other buildings in towns and villages, and on farms. A tornado pushed a train off the track near Rothville, Mo., on the evening of May 6.

Warm, moist gulf air flowed northward over mid-America in the second week of May releasing heavy rains as low pressure areas and their associated fronts moved eastward. Tornadoes occurred from Kansas to Texas and eastward to Mississippi. They caused a number of injuries and considerable damage to trees, powerlines, mobile homes, and other property. Severe thunderstorms with hail, high winds, and heavy rains occurred over portions of the central and southern Great Plains and the Deep South. About 5.50 inches of rain swamped Greenwood, Nebr., in 5 hours late on the 10th and more than 3.00 inches fell east of Lincoln, Nebr., between Elmwood and Murdock in 45 minutes. The heavy downpours flooded fields and closed roads. Hail from as small as marbles to as large as grapefruit, pelted the Lower Rio Grande Valley on the afternoon of May 11. One hailstone weighed 12 ounces. Heavy rains deluged many localities throughout the South in the 24-hour period ending at 7 a.m. May 12. A locality northwest of Little Rock, Ark., received 5.95 inches. The generous rains relieved the intense drought which had persisted in southern Florida for several months. The storminess over mid-America decreased near the end of the third week of May. The front that had stretched from the Great Lakes to the Texas Panhandle, moved eastward, and by May 20 lay along the Atlantic coast from New England to the Florida Panhandle, thence westward to southern Texas. Generous showers fell along the front.

On May 18, another storm was getting organized in the Far West. It spread several inches of snow at spots in the northern and central Rocky Mountains and the northern Great Plains. Alamosa, Colo., received 5 inches of snow during the forenoon of May 18. Six inches fell at Hill City, Minn., on the 19th. Five inches of snow whitened the eastern slope of the Sierra Nevadas on May 20. Seven inches fell at Reno, Nev., on the 21st. This is the most snow that has ever fallen at Reno so late in the spring. High winds in the West drifted the snow badly. Where there was no snow, the winds whipped up dust and sand. As the storm crossed the Rocky Mountains and moved to the western edge of the Great Plains, it produced thunderstorms, some with large hail, heavy rain, strong winds, and a few tornadoes. The most severe weather covered an area extending from the upper Mississippi River Valley to central Texas. Stormy weather continued over the central and eastern portions of the Nation in the last week of May. Some previously dry areas in California and Texas received rain late in the month.

May precipitation ranged from exceedingly heavy to very light when compared with the long-time records. The total at Casper, Wyo., 5.59 inches, exceeded all previous May totals. Other records were broken at Bakersfield, Long Beach, and San Diego, all in California. Only a light sprinkle, too small to measure, fell at Roswell, N. Mex. This was the driest May of record at Roswell. May 1971 was the driest since 1885 at Milwaukee, Wis., where only 0.90 inch fell. Lynchburg, Va., set a new record, receiving 9.07 inches of rain in May 1971.

Paradise Ranger Station, at 5,000 feet elevation on the south side of Mt. Rainier, Wash., received 1,017 inches (almost 85 feet) of snow in the 1970-71 season. This is the most snow that has fallen at any station in the United States in one season.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature — Monthly extremes						Precipitation — Monthly extremes			
	Station	Highest °F	Date	Station	Lowest °F	Date	Station	Greatest In.	Station	Least In.
[illegible]	2 Stations	92	27+	Heflin	30	4	Headland	7.60	Fort Morgan	1.43
[illegible]	3 Stations	69	31	Barter Island WSO	-15	2	Little Port Walter	18.47	4 Stations	T
Arizona	[illegible]	105	14	Willcox 3 NNW	11	8	Junipine	2.24	68 Stations	.00
[illegible]	2 Stations	92	27+	Evening Shade 1 NE	31	3	Fort Smith Water Plant	8.36	Texarkana FAA Airport	.95
California	[illegible]	104	26+	White Mountain 1	1	8	White Mountain 2	6.01	5 Stations	.00
Colorado	John Martin Dam	92	17	2 Stations	9	24+	Idalia 2 NNW	5.64	Twin Lakes Reservoir	.30
[illegible]	Falls Village	85	19	Wigwam Reservoir	26	24	Norfolk 2 SW	5.38	New Haven Airport	3.22
Delaware	Bridgeville 1 NW	89	19	Newark University Farm	30	4	Bridgeville 1 NW	6.51	Wilmgton NCastle WSO	4.51
Florida	[illegible]	101	11	2 Stations	34	4	Caryville	8.27	Apalachicola WSO	.63
Georgia	Hawkinsville	96	21	Blairsville Exp Sta	26	4	Morgan 5 NW	9.60	Curryville 2 W	1.03
[illegible]	Keawakapu Beach 260.2,Maui	91	25+	Mauna Loa Slope Obs,Hawaii	27	9	Mount Waialeale 1047,Kauai	22.17	13 Stations	.00
[illegible]	[illegible]	95	12	3 Stations	18	20+	Elk River 1 S	4.24	Emmett 2 E	.10
Illinois	3 Stations	90	17	Piper City 3 SE	25	3	Red Bud	7.31	La Salle 1 S	.83
[illegible]	2 Stations	89	18+	Logansport Radio WSAL	20	3	Frankfort Disposal Pl	6.95	Plymouth Power Substa	1.50
[illegible]	Cedar Rapids FAA AP	91	17	2 Stations	24	3	Greenfield	7.83	Centerville 4 SSW	.91
Kansas	Medicine Lodge	98	31	2 Stations	28	12	Lincoln 1 ESE	11.48	Aetna 2 S	.75
Kentucky	Jackson	91	19	Falmouth 5 WNW	23	4	Frenchburg	10.36	Scottsville 2 SW	2.42
[illegible]	St Francisville 6 SE	94	26	3 Stations	40	14+	Jonesboro Fire Tower	12.70	Saint Bernard	.69
[illegible]	Fort Kent	87	20	Clayton Lake 2	24	2	Machias	5.11	Harris Station	2.05
Maryland	Cumberland	93	19	Oakland 1 SE	22	1	Prince Frederick 1 N	9.20	Westernport UPRC	3.55
Massachusetts	Chester 2	90	19	2 Stations	27	23+	Edgartown	6.80	Gardner	2.97
Michigan	2 Stations	90	18	3 Stations	19	6+	Newberry State Hospital	4.82	Mount Clemens AF Base	.69
Minnesota	Springfield 1 NW	90	14	Moose Lake 1 SSE	16	3	Winona	6.06	Hallock	.92
Mississippi	2 Stations	93	27+	Forest 3 S	30	4	Tylertown 2 WNW	13.94	Standard	1.56
Missouri	St Joseph 4 WNW	92	17	2 Stations	27	3	Camdenton	7.28	Waverly	1.13
Montana	[illegible]	93	27	Bangtail Ridge	14	17	Biddle 8 SW	5.07	Havre WSO	.56
Nebraska	Falls City	89	31	Valley 3 E	26	7	Wahoo	10.40	Newcastle	1.61
Nevada	Sunrise Manr Las Vegas	100	15	Sheldon	11	17	Deeth 2 SW	5.58	Beatty	.15
New Hampshire	3 Stations	90	20+	Mount Washington	16	23+	Mount Washington	10.96	North Stratford	2.27
[illegible]	[illegible]	92	19	2 Stations	31	5	Phillipsburg	6.34	Atlantic City WSO	1.88
New Mexico	Jal	103	16	Eagle Nest	9	19	Lake Maloya	3.38	31 Stations	.00
[illegible]	Massena FAA Airport	95	19	Speculator	21	7	Port Jervis	6.61	Angelica	1.02
North Carolina	2 Stations	93	20	2 Stations	24	4+	Blowing Rock	8.54	Wilmington WSO	2.29
[illegible]	2 Stations	88	14	Wishek	20	2	Wishek	4.13	Park River	.27
Ohio	Ironton	92	18	Mansfield 6 W	18	4	Galion Water Works	7.30	Willoughby-Eastlake	1.83
Oklahoma	[illegible]	103	17	Goodwell	28	13	Idabel	7.19	3 Stations	.40
Oregon	2 Stations	94	11	Crater Lake NP HQ	9	17	Valsetz	5.50	Nyssa	.02
Pennsylvania	2 Stations	94	20	Clermont 4 NW	16	23	Spring Grove	7.60	Torpedo	.93
Puerto Rico	Alex Hamilton Fld FAA,V.I.	98	26	Adjuntas Substation, P.R.	52	19	Pico Del Este, P.R.	21.57	San German 4 W, P.R.	2.70
Rhode Island	Providence WSO	81	12	Kingston	30	1	Kingston	5.10	Providence WSO	3.83
South Carolina	Orangeburg 2	99	20	Walhalla	28	4	Hogback Mountain	7.87	Florence 2 N	2.15
South Dakota	Sisseton	89	14	2 Stations	21	12+	Mt Rushmore Natl Mem	8.00	Sioux Falls WSO	1.06
Tennessee	Murfreesboro 5 N	89	19	Tazewell	25	4	Sparta	9.58	Chattanooga WSO	2.17
Texas	Zapata	108	5	3 Stations	30	14+	Eastland	10.10	6 Stations	.00
Utah	Dewey	95	26	Blowhard Mtn Radar	9	17	Blowhard Mtn Radar	5.03	2 Stations	.08
[illegible]	2 Stations	92	19	Mount Mansfield	22	23	Mount Mansfield	6.44	Newport	2.37
Virginia	3 Stations	93	19	Big Meadows	18	3	New Canton	12.66	Parramore Beach L B S	1.61
Washington	Eltopia 7 WNW	95	3	2 Stations	18	21+	Cedar Lake	7.86	Waterville	.07
West Virginia	3 Stations	92	24+	Buckeye	18	1	Mc Ross	8.60	Parkersburg WSO	3.82
Wisconsin	2 Stations	88	17+	Drummond 6 W	17	3	Galesville 3 SE	6.21	Union Grove	.70
Wyoming	Worland FAA AP	92	27	Foxpark	12	18	Double Four Ranch	8.10	Kendall	.20

+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

MAY 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No of days							No. of days		Snow, Ice pellets		Resultant speed	Resultant direction	Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	993.6	1015.8	78	52	65.3	- 6.5	88	27	36	4	0	0	53	67	2.64	- 0.78	1.07	8	6	0.0	0	1.3	25	29	SW	27	9	9	13	5.7	75
HUNTSVILLE	624	992.6	1015.7	76	53	64.4	- 6.0	85	31+	36	4+	0	0	53	69	3.59	0.20	2.91	10	7	0.0	0	1.1	29	30	35	12	11	9	11	5.5	
MOBILE	211	1008.1	1015.8	83	63	73.0	- 2.6	89	19+	46	4	0	0	60	68	3.16	- 1.72	1.09	5	5	0.0	0	1.5	18	35	32	8	9	7	15	6.0	
MONTGOMERY	183	1008.5	1015.8	80	57	68.2	- 4.2	87	27+	40	4	0	0	58	73	3.73	0.26	1.51	7	6	0.0	0	1.4	25	26	S	8	11	6	14	5.6	62
ALASKA																																
ANCHORAGE	114	1003.4	1008.3	47	36	41.6	- 5.8	55	25	28	8	0	5	29	64	0.52	0.00	0.23	5	0	T	T	4.7	19	31	16	30	1	4	26	8.8	37
ANNETTE	110	1014.9	1018.9	53	38	45.7	- 3.5	69	31	31	8	0	3	38	78	4.24	- 2.83	1.12	14	0	0.0	0	2.6	17	31	14	23	3	14	14	6.8	
BARROW	31	1013.2	1013.8	22	13	17.4	- 1.0	34	31	- 6	4	0	31	16	92	0.25	0.13	0.10	8	0	2.4	10	7.1	7	25	6	14+	2	3	26	8.7	
BARTER ISLAND	39	1010.8	1012.6	25	15	20.3	- 0.4	45	30	-15	2	0	31	18	90	0.16	- 0.09	0.07	5	0	1.6	16	3.6	7	28	8	6	2	7	22	8.4	
BETHEL	125	998.6	1004.4	42	29	35.2	- 3.8	53	31+	18	6	0	21	30	82	0.78	- 0.17	0.13	15	0	6.2	2	1.5	11	31	7	31	0	3	28	9.1	
BETTLES	644	982.7	1007.9	51	32	41.2		63	28+	9	1	0	15	31	68	1.18		0.48	8	0	1.7	17	1.9	3	21	5	18+	3	9	19	7.5	
BIG DELTA	1268			52	36	44.3		62	25	26	1	0	8			0.29		0.16	5	0	1.6	5			40	19	20	3	7	21	7.6	
COLD BAY	96	998.6	1002.4	38	30	34.3	- 5.2	45	28+	23	6+	0	24	30	85	3.75	1.46	1.13	21	0	9.3	3	4.5	25	39	27	31+	0	4	27	9.3	
FAIRBANKS	436	989.5	1006.6	57	38	47.3	0.2	68	25	28	1	0	5	27	48	0.16	- 0.55	0.05	8	0	1.1	1	1.8	20	27	23	26	0	7	24	8.2	
GULKANA	1572	952.3	1009.8	50	32	40.8		58	25+	19	4	0	15	24	53	0.10		0.06	4	0	1.5		10.1	18	29	18	5	1	12	18	7.5	
HOMER	67	1003.7	1006.5	44	32	38.4		48	28+	25	24+	0	15	32	77	1.90	0.83	0.57	18	0	6.6	6	2.0	9	35	4	20	1	4	26	8.9	
JUNEAU	12	1016.3	1017.0	51	36	43.5	- 2.1	65	12	28	5	0	9	38	85	4.30	1.06	1.62	18	0	T	T	5.2	12	32	12	6	1	4	26	8.9	34
KING SALMON	49	1000.7	1002.7	44	32	37.7	- 5.6	52	23	21	8	0	14	29	71	1.43	0.47	0.27	17	0	2.5	1	4.7	11	48	9	31+	0	2	29	9.5	
KOTZEBUE	10	1007.1	1007.7	35	20	27.1	- 3.8	51	30	1	11	0	29	24	84	0.26	- 0.07	0.12	7	0	3.7	15	1.5	18	24	14	14	3	10	18	7.5	
MC GRATH	344	992.6	1005.3	50	34	41.7	- 2.4	62	25	19	9	0	14	28	61	1.31	0.43	0.58	11	0	7.6	12	1.1	11	28	10	31	0	2	29	9.1	
NOME	13	1005.1	1006.0	35	25	29.7	- 5.3	53	31	8	11	0	24	23	76	0.28	- 0.41	0.10	11	0	4.4	10	3.9	5	32	3	31	2	5	24	8.4	47
ST. PAUL ISLAND	22	1003.7	1004.6	32	24	27.8	- 7.0	36	28+	8	5	0	31	26	92	0.94	- 0.36	0.25	16	0	12.7	18	9.2	35	44	33	20	1	4	26	9.1	
SHEMYA	122	1007.8	1011.5	40	33	36.6	- 1.4	44	20	27	8	0	15	28	71	0.77	- 1.63	0.45	9	0	2.6	1	7.2	34	38	33	25	0	1	30	9.2	
SUMMIT	2401	921.4	1008.9	40	27	33.2		50	28+	13	1	0	31	26	75	0.31		0.17	6	0	9.3	29	3.2	24	26	22	3	0	5	26	9.0	
TALKEETNA	345			49	31	40.2	- 4.6	60	25	24	17	0	19			1.18	- 0.16	0.29	14	0	1.7	20			18	12	28					
UNALAKLEET	15			40	26	32.7		60	31	11	9	0	22			0.50		0.12	12	0	2.7	10			26	6	31	1	5	25	8.8	
YAKUTAT	28	1014.2	1015.2	44	31	37.6	- 7.0	61	12	23	14+	0	18	34	89	17.00	9.02	2.49	22	0	11.4	5	5.3	13	33	13	12	0	5	26	9.1	
ARIZONA																																
FLAGSTAFF	7006	785.3	1012.4	63	31	46.8	- 4.1	75	15	20	19	0	21	22	43	1.23	0.72	0.45	7	6	6.1	1	5.8	21	28	19	21	18	6	7	3.7	
PHOENIX	1117	971.2	1009.7	88	59	73.3	- 1.7	97	26+	51	5	15	0	31	23	T	- 0.13	T	0	0	0.0	0	1.5	23	46Y	NE	12	23	4	4	2.4	93
TUCSON	2584	923.1	1009.6	85	54	69.3	- 4.2	94	25	46	19+	10	0	25	21	0.01	- 0.12	0.01	1	0	0.0	0	4.4	22	34	W	17+	24	4	3	2.0	95
WINSLOW	4895	848.6	1010.8	78	42	60.0	- 4.8	89	25	27	19	0	1	20	28	0.07	- 0.25	0.03	4	1	0.0	0	6.6	21	51	18	29	22	3	6	3.0	
YUMA	194	1003.1	1010.2	87	59	73.1	- 4.9	98	25+	51	29	14	0	41	34	T	- 0.01	T	0	0	0.0	0	3.3	25	31	N	17	24	3	4	1.9	89
ARKANSAS																																
FORT SMITH	447	997.3	1014.0	78	55	66.4	- 3.5	88	31+	41	13	0	0	54	67	4.36	- 0.90	1.35	11	9	0.0	0	1.6	12	38	N	22	10	12	9	5.4	64
LITTLE ROCK	257	1005.4	1014.8	77	44	65.6	- 4.9	86	23	40	4	0	0	56	74	5.37	0.09	2.37	9	7	0.0	0	2.1	19	35	SE	10	14	5	12	4.9	79
CALIFORNIA																																
BAKERSFIELD	475	996.3	1013.9	79	57	67.9	- 2.5	94	25+	48	21	3	0	45	48	2.39	2.17	1.40	5	2	0.0	0	5.7	34	26	33	20	15	8	8	4.2	
BISHOP	4108	870.0		73	42	57.5	- 5.1	88	15	31	18	0	1			1.04	0.84	0.77	7		0.0	0						9	15	7	5.0	
BLUE CANYON	5280			54	39	46.5	- 5.7	70	10	30	31	0	6			3.44	0.34	0.92	16		4.7	3			13	24	20	8	6	17	6.6	
EUREKA U	43			55	47	50.6	- 2.4	62	12	41	17	0	0			1.28	- 0.90	0.56	9		0.0	0			35	NW	21	5	8	18	7.1	58
FRESNO	328	1002.7	1014.3	77	51	64.2	- 4.0	94	24	44	17	3	0	46	60	1.40	1.10	0.70	6	3	0.0	0	4.5	30	28	NW	16	15	5	11	4.7	75
LONG BEACH	25	1013.9	1015.2	72	55	63.2	- 0.3	91	17	47	2	2	0	51	69	0.67	0.56	0.37	5	0	0.0	0	4.1	23	23	31	16	7	15	9	5.6	
LOS ANGELES	97	1011.2	1014.8	68	55	61.4	- 0.6	88	17	49	2	0	0	51	75	0.17	0.04	0.13	5	0	0.0	0	6.1	25	40Y	N	17	5	15	11	6.3	
LOS ANGELES U	270			71	57	64.0	- 0.8	87	19+	50	2	0	0			0.22	0.06	0.12	3		0.0	0			29	NW	16	4	14	8	5.1	75
MT SHASTA R	3544			63	40	51.4	- 2.4	78	11	31	17	0	1			4.33	2.34	1.32	11		T	0										
OAKLAND	6	1016.3	1016.5	63	51	57.0	- 2.7	71	17	47	31	0	0	47	74	0.17	- 0.48	0.09	5	0	0.0	0	8.3	28	28	29	29	10	9	12	5.5	
RED BLUFF	342	1001.4	1014.1	76	52	63.7	- 4.6	92	10	45	16	1	0	42	51	1.22	0.09	0.63	7	0	0.0	0	1.6	36	38	NW	20	13	5	13	4.3	78
SACRAMENTO	17	1013.5	1014.4	74	49	61.8	- 2.2	87	24+	44	31+	0	0	45	62	0.77	0.18	0.44	6	0	0.0	0	4.7	22	33	NW	21	13	4	14	4.3	76
SANDBERG R	4517	860.5		59	41	50.0	- 6.6	76	25+	31	21	0	2			0.84	0.53	0.32	7		T	0			35	36	16	12	6	13	5.2	
SAN DIEGO	13	1014.2	1015.3	66	57	61.5	- 2.5	82	18	53	6	0	0	50	68	0.95	0.80	0.40	7	0	0.0	0	5.1	26	20	NW	18	6	12	13	4.5	57
SAN FRANCISCO	8	1015.9	1016.7	64	49	56.4	- 1.9	74	22	45	16	0	0	46	74	0.25	- 0.23	0.16	5	0	0.0	0	10.6	27	40	28	20	12	9	10	5.3	
SAN FRANCISCO U	52			60	50	54.6	- 2.8	68	18	46	3	0	0			0.19	- 0.44	0.13	3		0.0	0			33	W	20					62
SANTA MARIA	236			64	45	54.2	- 3.4	78	16	37	19+	0	0			0.98	0.76	0.80	6		0.0	0						11	9	11	5.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90 F. or above	Temperature: No. of days Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 01 inch or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days (sunrise to sunset) Clear 0-3	No. of days (sunrise to sunset) Partly cloudy 4-7	No. of days (sunrise to sunset) Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb	Mb.	F	F.	F.	F.	F		F.				F.	%	In.	In	In.			In.	In	M.p.h		M.p.h							%
CALIFORNIA																																
STOCKTON	22	1014.6	1015.5	76	51	63.4	- 2.8	91	24	45	3	1	0	45	59	0.86	0.42	0.37	6	0	0.0	0	6.5	29	25	26	20+	12	7	12	5.4	
COLORADO																																
ALAMOSA	7536	770.1		65	30	47.3	- 3.5	76	27+	17	19	0	20			1.07	0.34	0.71	8		7.4	7						12	11	8	4.8	
COLORADO SPRINGS	6145	809.3	1012.1	66	41	53.3	- 1.7	80	28	31	19	0	1	33	55	2.24	0.11	1.12	11	10	T	0	3.0	2	52	27	28	10	9	12	5.6	
DENVER	5283	833.7	1010.6	68	40	54.2	- 2.0	85	26	32	19	0	1	38	62	1.34	- 1.36	0.46	12	8	T	T	1.7	8	38	SE	29	6	10	15	6.4	61
GRAND JUNCTION	4843	848.6	1009.3	74	46	60.1	- 2.1	90	27+	34	19	2	0	32	41	1.10	0.50	0.46	8	3	T	T	3.2	15	33	S	21+	8	14	9	5.3	65
PUEBLO	4684	852.7	1010.2	75	42	58.5	- 2.1	87	28+	32	19+	0	2	34	46	0.73	- 1.07	0.31	7	5	T	0	1.6	1	47	N	17	12	9	10	5.2	81
CONNECTICUT																																
BRIDGEPORT	7	1012.9	1013.6	66	49	57.3	- 1.4	78	17	39	1	0	0	45	68	4.60	0.89	1.26	11	1	0.0	0	1.8	30	38	8	8	7	8	16	6.7	
HARTFORD	169	1006.4	1012.8	70	47	58.1	- 1.8	84	18	35	1	0	0	43	63	4.08	0.67	1.39	13	1	0.0	0	1.5	28	29	NW	14	6	7	18	6.9	44
DELAWARE																																
WILMINGTON	74	1010.5	1013.5	70	50	60.4	- 2.3	85	19	39	1	0	0	48	68	4.51	0.98	1.62	14	2	0.0	0	2.0	30	22	21	25	5	8	18	7.1	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	290	1002.4	1014.0	72	48	60.1		88	19	37	4	0	0	49	69	8.47		1.95	14	3	0.0	0	1.6	30	28	31	4	10	5	16	6.3	
WASHINGTON NATIONAL	10	1010.8	1013.4	73	54	63.7	- 2.1	90	19	43	1	1	0	49	62	6.80	2.66	2.04	14	4	0.0	0	1.6	32	27	S	25	9	7	15	6.5	49
FLORIDA																																
APALACHICOLA U	13			81	66	73.4	- 1.4	87	28+	51	4	0	0			0.63	- 2.65	0.29	4	2	0.0	0			30	S	12	11	12	8	4.5	91
DAYTONA BEACH	31	1014.9	1016.4	84	62	73.3	- 0.9	91	13	44	5	1	0	60	68	3.12	0.27	1.38	6	5	0.0	0	2.3	10	28	27	29	15	9	7	4.3	
FORT MYERS	15	1015.6	1015.8	88	66	77.1	- 0.3	92	27	52	5	10	0	65	69	3.77	- 0.08	2.21	5	4	0.0	0	2.0	26	29	28	13	13	13	5	4.1	
JACKSONVILLE	26	1014.9	1015.8	84	60	71.8	- 4.0	91	20	45	4	2	0	62	74	1.90	- 1.57	0.64	8	6	0.0	0	1.9	21	27	SW	13+	14	8	9	4.6	70
KEY WEST	4	1014.6	1015.4	85	76	80.7	1.7	87	28+	69	5	0	0	69	70	4.37	1.64	2.14	6	4	0.0	0	4.4	11	29	SW	15	14	10	7	4.4	88
LAKELAND U	214			87	66	76.3	- 0.6	91	25+	54	4	8	0			4.01	0.47	1.84	6		0.0	0						20	8	3	3.3	81
MIAMI	7	1015.2	1015.7	86	72	79.1	1.5	92	30+	61	4	4	0	67	68	4.13	- 2.31	2.25	7	6	0.0	0	3.3	9	25	23	29+	10	13	8	5.1	
ORLANDO	108	1011.5	1015.8	89	67	78.2	0.6	95	12+	54	5	17	0	61	61	4.31	0.74	2.49	5	7	0.0	0	0.8	20	29	28	3	16	9	6	3.9	
PENSACOLA	112	1011.9	1016.0	83	64	73.2	- 2.3	88	22	51	4	0	0	62	70	3.92	- 0.64	1.71	6	4	0.0	0	1.4	17	26	20	12	11	8	12	5.5	
TALLAHASSEE	55	1013.5	1015.7	84	56	69.5	- 5.4	92	27	34	4	3	0	58	70	4.08	- 0.02	1.49	8	5	0.0	0	0.8	26	28	20	12	11	12	8	5.0	
TAMPA	19	1015.6	1015.7	87	65	75.8	- 1.0	91	12+	49	5	6	0	61	63	4.09	1.24	3.97	5	4	0.0	0	1.9	29	30	27	15	15	11	5	4.2	82
WEST PALM BEACH	15	1015.2	1015.8	88	70	78.8	1.2	96	29	56	5	6	0	64	62	5.04	- 0.07	3.32	8	3	0.0	0	4.0	11	22	14	12	15	9	7	4.3	
GEORGIA																																
ATHENS	802	986.1	1014.8	79	55	66.8	- 3.3	89	27	37	4	0	0	55	69	3.05	- 0.56	1.67	5	4	0.0	0	2.5	25	27	25	12	13	9	9	5.1	
ATLANTA	1010	978.3	1014.7	78	55	66.7	- 2.4	86	27+	37	4	0	0	52	62	2.12	- 1.04	1.05	6	4	0.0	0	3.6	28	65	SW	12	11	9	11	5.2	71
AUGUSTA	136	1009.5	1014.8	81	54	67.4	- 4.2	91	27	35	4	1	0	56	71	3.85	0.86	2.13	6	4	0.0	0	2.4	23	28	19	12+	10	13	8	5.4	
COLUMBUS	385	1001.4		81	58	69.2	- 2.9	89	27+	40	4	0	0	57	69	4.42	0.92	1.71	8	4	0.0	0	2.0	27	39	23	12	11	10	10	5.1	
MACON	354	1002.7	1015.5	83	57	70.1	- 3.8	92	31+	40	4	5	0	57	67	3.50	0.48	2.05	8	7	0.0	0	2.5	26	33	S	12	8	12	11	5.4	70
ROME	637			79	52	65.3	- 3.4	87	6	32	4	0	1			1.55	- 2.25	0.75	7		0.0	0										
SAVANNAH	46	1013.5	1015.4	83	60	71.1	- 2.3	92	20	40	4	3	0	57	66	3.56	- 0.21	1.02	9	7	0.0	0	3.4	23	29	SW	8	11	9	11	5.3	76
HAWAII																																
HILO	27	1017.3	1018.4	81	64	72.2	- 0.8	84	16+	59	10	0	0	64	79	6.49	- 2.84	1.46	23	0	0.0	0	1.3	14	20	E	20	3	15	13	6.6	36
HONOLULU	7	1017.3	1017.8	83	70	76.2	0.3	87	17	65	11	0	0	62	64	0.43	- 0.56	0.18	8	0	0.0	0	12.6	5	29	NE	24	11	17	3	4.4	78
KAHULUI	48	1014.9	1017.4	86	65	75.1	- 0.2	90	15	58	12	1	0	64	69	0.10	- 0.59	0.05	5	0	0.0	0	11.4	5	29	E	19	18	11	2	3.5	81
LIHUE	103	1014.2	1019.3	82	72	76.9	2.4	85	2	63	10	0	0	66	71	1.03	- 1.56	0.49	14	0	0.0	0	10.5	6	22	NE	24	4	22	5	5.5	70
IDAHO																																
BOISE	2838	912.0	1011.0	73	47	60.0	1.8	86	26	30	18	0	1	36	44	0.25	- 1.04	0.12	8	3	0.0	0	1.8	32	37	SE	26	6	9	16	6.4	70
LEWISTON	1413			73	48	60.4	2.0	90	12	35	21	1	0			1.92	0.37	0.54	9		0.0	0						9	5	17	6.5	
POCATELLO	4454	859.5	1011.0	67	39	52.7	- 2.4	83	27	30	18	0	3	34	52	0.50	- 0.63	0.14	12	5	T	0	3.4	22	37	SW	16	5	12	14	6.9	55
ILLINOIS																																
CAIRO U	314			75	56	65.2	- 3.8	86	16	43	3	0	0			4.36	- 0.03	1.80	10		0.0	0			38	SW	17+	12	7	12	5.2	60
CHICAGO O HARE	658	990.2	1014.3	69	45	57.2	- 0.6	88	17	31	3	0	1	41	56	2.23	- 1.53	0.90	9	6	T	T	1.2	26	35	22	24	11	8	12	5.5	
CHICAGO MIDWAY	607	991.9	1014.3	69	46	57.6	- 2.4	89	17	32	3	0	1	40	56	1.98	- 1.75	1.05	8	6	T	T	0.6	22	32	N	11	9	12	10	5.5	67

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 90 F. or above	Temperature: No of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 01 inch or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0.3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In	In	In.			In	In	M.p.h.		M.p.h							%
ILLINOIS																																
MOLINE	582	992.6	1014.1	70	46	58.0	- 3.2	89	17	31	13	0	1	43	61	3.14	- 0.66	1.11	10	7	0.0	0	2.1	22	35	W	23	10	6	15	5.7	57
PEORIA	652	990.5	1014.3	69	46	57.7	- 3.8	86	17	30	13	0	2	44	61	2.80	- 1.47	1.32	7	7	T	0	1.8	20	30	NW	5	6	12	13	6.3	67
ROCKFORD	724	987.1	1013.9	69	45	57.0	- 2.1	87	17	31	3	0	1	42	61	1.83	- 2.00	0.69	8	5	0.3	0	0.8	23	27	19	17	10	6	15	5.6	
SPRINGFIELD	588	991.9	1014.8	72	49	60.4	- 3.5	86	18+	35	4	0	0	45	59	3.59	- 0.29	1.28	9	6	0.0	0	2.8	20	34	W	24+	6	11	14	6.0	62
INDIANA																																
EVANSVILLE	381	1001.0	1015.1	75	52	63.4	- 3.4	86	17	36	4	0	0	51	66	3.96	- 0.23	1.35	13	6	0.0	0	1.7	27	30	S	24	12	6	13	5.7	62
FORT WAYNE	791	985.1	1015.2	70	45	57.7	- 3.0	85	18+	30	4	0	1	43	61	3.63	- 0.10	1.47	9	4	0.0	0	3.0	25	47	SW	24	7	12	12	6.3	68
INDIANAPOLIS	792	985.8	1014.7	71	47	58.9	- 2.5	84	18+	31	3	0	2	45	61	4.25	0.26	1.61	9	6	0.0	0	2.0	26	38	W	16	8	10	13	6.0	67
SOUTH BEND	773	986.5	1014.2	68	45	56.3	- 2.4	85	18	32	3	0	1	42	61	1.64	- 1.98	1.16	9	3	0.0	0	2.5	27	24	29	19	10	10	11	5.7	
IOWA																																
BURLINGTON	692			70	49	59.2	- 2.6	87	17	35	13+	0	0	45	61	3.30	- 0.73	1.00	10	7	0.0	0	1.5	23	25	27	24+	10	11	10	5.5	
DES MOINES	938	979.3	1013.9	70	48	58.7	- 1.9	86	31	32	3	0	1	46	64	3.87	- 0.20	1.28	11	6	0.0	0	0.6	14	35	NE	5	10	6	15	5.9	68
DUBUQUE	1056	975.3		68	44	55.8	- 2.3	88	17	32	13	0	1			4.35	0.13	1.83	9		0.0	0						8	8	15	5.8	
SIOUX CITY	1095	973.6	1013.3	71	48	59.6	- 1.8	84	14	34	12+	0	0	44	60	2.85	- 0.38	0.75	10	9	0.0	0	1.4	5	38	W	23	9	7	15	5.9	64
WATERLOO	868	982.4	1014.0	66	41	53.5	- 6.4	85	15	25	3	0	5	42	69	5.51	1.77	1.81	9	7	0.0	0	0.5	10	38	28	18	9	9	13	5.8	
KANSAS																																
CONCORDIA	1470	959.4	1011.9	70	49	59.4	- 3.7	83	31	36	12	0	0	50	73	6.47	2.58	2.06	11	10	0.0	0	2.2	14	56	E	21	10	8	13	5.6	74
DODGE CITY	2582	921.1	1011.0	76	48	62.0	- 1.7	91	22+	32	12	3	1	45	61	2.81	- 0.41	0.93	9	10	0.0	0	1.9	16	52	NW	23	13	10	8	4.9	71
GOODLAND	3654	885.2	1011.1	69	43	56.3	- 2.2	86	21	30	12	0	1	44	69	4.24	1.83	1.57	11	5	0.0	0	0.6	15	46	23	5	11	7	13	5.5	
TOPEKA	877	981.0	1012.8	74	49	61.4	- 3.0	88	31	33	3	0	1	51	71	4.83	0.45	1.91	14	12	0.0	0	1.7	17	31	W	23	9	11	11	5.8	61
WICHITA	1321	964.4	1011.7	76	51	63.9	- 2.1	92	17	39	13	2	0	49	62	3.02	- 0.95	1.82	9	9	0.0	0	3.9	18	49	NE	21	9	14	8	5.2	61
KENTUCKY																																
COVINGTON	869	983.7	1015.0	73	49	60.8	- 1.7	86	17	30	4	0	1	46	61	3.31	- 0.28	1.18	9	2	0.0	0	2.7	26	26	19	24	6	12	13	6.7	
LEXINGTON	966	980.0	1015.5	70	48	59.2	- 5.3	83	24+	32	4	0	1	47	67	6.14	2.29	1.81	11	6	0.0	0	2.0	23	29	21	24	9	12	10	6.0	
LOUISVILLE	477	997.3	1014.9	73	50	61.5	- 2.9	85	18+	34	4	0	0	48	65	6.15	2.25	1.84	12	4	0.0	0	2.0	26	30	N	6	8	10	13	5.7	53
LOUISIANA																																
ALEXANDRIA	92	1011.2	1015.4	81	58	69.0	- 3.9	87	26	45	14+	0	0			9.15	3.61	2.75	10	7	0.0	0	1.9	15	35	27	24	8	11	12	5.8	
BATON ROUGE	64	1012.5	1015.1	84	61	72.7	- 2.1	90	26+	51	14+	2	0	61	71	3.71	- 1.09	1.77	5	3	0.0	0	1.9	12	23	2	27	11	8	12	5.7	
LAKE CHARLES	9	1013.5		84	65	74.3	- 1.3	90	30	50	1	1	0	64	76	5.78	1.17	4.20	6	7	0.0	0	4.6	15	29	32	24	6	13	12	6.3	
NEW ORLEANS	4	1014.6	1015.5	84	62	72.9	- 1.5	90	25+	49	2	2	0	61	67	1.38	- 3.00	0.90	4	4	0.0	0	1.9	13	23	15	24	14	7	11	5.0	
SHREVEPORT	254	1004.7	1014.1	82	60	70.8	- 2.3	89	27+	46	14	0	0	61	73	5.26	0.47	2.01	9	10	0.0	0	3.6	15	25	18	23+	10	7	14	5.9	53
MAINE																																
CARIBOU	624	988.9		63	41	51.6	1.7	79	20	30	15	0	3			2.06	- 0.97	0.75	11		0.0	0						5	7	19	7.3	
PORTLAND	43	1010.2	1012.5	62	44	52.7	- 0.3	76	11	35	15+	0	0	45	77	4.09	0.68	1.71	15	0	0.0	0	1.4	23	29	N	14	6	5	20	7.2	40
MARYLAND																																
BALTIMORE	148	1008.8	1014.2	71	51	61.2	- 3.2	86	19	40	1	0	0	46	61	6.12	2.14	1.84	16	3	0.0	0	1.8	31	35	SW	25	7	8	16	6.7	47
MASSACHUSETTS																																
BLUE HILL OBS R	629			64	47	55.2	- 1.5	79	12	39	1	0	0			4.18	0.70	1.36	15		0.0	0			39	SW	25+					
BOSTON	15	1011.5	1012.5	64	48	56.7	- 3.1	79	25+	43	11+	0	0	45	73	3.72	0.38	1.10	12	0	0.0	0	0.9	26	28	SW	25+	5	10	16	7.1	47
WORCESTER	986	978.3	1013.4	64	45	54.2	- 1.0	79	11	38	24+	0	0	40	65	5.22	1.43	1.70	13	1	0.0	0	3.2	29	26	31	14	6	9	16	6.8	
MICHIGAN																																
ALPENA	689	988.5	1013.8	64	37	50.2	- 0.4	83	15	27	4	0	9	36	61	2.87	- 0.04	0.79	12	5	T	0	1.4	24	28	SW	17	11	9	11	5.4	62
DETROIT	619			69	46	57.8	- 1.2	90	18	36	4+	1	0	38	50	1.51	- 2.02	0.89	8	2	0.0	0	1.6	25	32	24	14					
DETROIT METRO	633	989.8	1014.1	70	43	56.4	- 1.2	88	18	30	13	0	2	40	57	1.97	- 1.57	1.05	9	4	0.3	0	1.5	26	36	W	19	8	12	11	5.8	62
FLINT	771	985.8	1013.6	67	42	54.6	- 1.8	85	18	31	13+	0	3	41	63	1.98	- 1.41	0.68	8	3	0.0	0	2.7	25	31	29	14	8	15	8	5.7	
GRAND RAPIDS	784	985.1	1014.1	68	40	54.0	- 2.8	81	17	26	4+	0	4	39	59	1.05	- 2.41	0.39	7	2	0.0	0	3.0	24	48	W	24	8	12	10	5.8	49
HOUGHTON LAKE	1149	971.6	1013.6	65	38	51.6	- 0.7	79	18	28	14+	0	6	39	65	1.52	- 1.41	0.57	8	4	T	1	3.2	26	35	27	15	10	10	11	5.7	
LANSING	841	982.6	1014.1	67	41	55.0	- 2.1	87	18	28	4	0	4	40	58	1.93	- 1.80	1.28	8	4	0.0	0	3.2	25	31	SW	25+	7	14	10	5.7	70
MARQUETTE	677			58	39	48.4	- 1.5	84	29	30	12	0	2			2.53	- 0.43	0.77	10		3.9	2			33		17	10	6	15	5.8	58

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No of days							No of days		Snow, Ice pellets		Resultant speed	Resultant direction	Fastest mile			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
	Ft.	Mb	Mb.	F.	F.	F.	F	F.		F.				F.	%	In.	In	In			In	In.	M p.h		M p.h							
MICHIGAN																																
MUSKEGON	625	991.2	1014.3	66	41	53.6	- 2.2	82	17	27	4	0	2	37	57	1.67	- 1.30	0.98	8	4	0.0	0	3.3	24	25	22	25	12	8	11	5.2	
SAULT STE MARIE	721	986.5	1013.1	60	35	47.4	- 2.2	75	10	26	4	0	11	34	62	2.99	0.22	0.74	12	3	0.5	T	2.3	30	33	SE	24	12	4	15	5.9	65
MINNESOTA																																
DULUTH	1428	963.1	1014.8	61	36	48.1	- 1.1	76	10	24	3	0	12	33	61	3.45	0.16	1.57	12	2	0.6	T	2.4	3	39	W	15	11	5	15	6.1	52
INTERNATIONAL FALLS	1179	971.6	1014.7	64	37	50.2	- 0.5	85	14	27	12	0	7	35	58	2.30	- 0.31	0.81	10	1	0.3	T	2.7	1	26	31	15	8	9	14	6.3	
MINNEAPOLIS	834	983.4	1014.0	67	44	55.4	- 1.9	84	14	32	3	0	1	37	53	3.14	- 0.05	1.20	8	6	0.2	T	1.9	2	25	E	31+	11	6	14	5.4	69
ROCHESTER	1297	966.1	1013.7	66	42	54.4	- 2.3	81	15	29	12	0	2	41	63	3.65	0.00	1.40	10	6	0.0	0	0.9	29	35	26	19	9	9	13	5.7	
ST CLOUD	1034	976.6	1014.6	66	41	53.5	- 2.1	85	14	30	12+	0	3			3.86	0.35	1.64	9		3.2	2						15	4	12	5.1	
MISSISSIPPI																																
JACKSON	310	1003.7	1015.5	81	55	67.9	- 5.2	88	26	38	4	0	0	59	75	8.05	3.67	2.55	11	10	0.0	0	1.5	18	29	NW	12	10	9	12	5.7	74
MERIDIAN	290	1004.7	1015.8	81	55	67.7	- 4.7	87	26	38	4	0	0	59	79	5.17	1.26	3.31	9	8	0.0	0	1.2	21	20	18	24	9	8	14	6.1	
MISSOURI																																
COLUMBIA REGIONAL	887	982.1	1014.2	72	51	61.3	- 3.1	86	31+	36	3	0	0	48	63	4.30	- 0.40	1.39	13	10	0.0	0	2.5	17	34	NW	31+	5	11	15	6.6	66
KANSAS CITY	742	985.8	1012.7	75	54	64.4	- 1.2	89	31+	35	3	0	0	50	64	3.02	- 1.38	1.06	14	11	0.0	0	2.4	17	37	W	19	10	10	11	5.5	68
ST JOSEPH	811			79	52	65.4	1.3	92	17+	37	3	3	0			2.80	- 1.59		13				1.5	15	23	15	23	9	9	13	6.1	
ST LOUIS	535	994.6	1014.7	74	51	62.3	- 1.9	86	17+	37	4	0	0	51	70	5.66	1.93	2.34	13	8	0.0	0	1.6	19	35	SE	18	7	8	16	6.5	58
SPRINGFIELD	1268	969.2	1014.0	76	49	62.5	- 2.0	89	31	35	3	0	0	48	61	3.84	- 1.44	2.38	10	12	0.0	0	4.3	17	40	SE	22+	9	9	13	5.7	72
MONTANA																																
BILLINGS	3567	889.9	1013.2	66	43	54.5	- 2.3	86	27	33	18	0	0	37	55	2.07	0.19	0.82	6	2	T	0	2.6	1	33	NW	17	9	9	13	6.1	60
GLASGOW	2284	932.6	1014.0	70	42	55.8	0.7	90	13	33	18	1	0	33	46	0.91	- 0.58	0.58	7	1	0.4	T	3.5	9	37	29	13	10	12	9	5.3	
GREAT FALLS	3662	886.9	1013.5	67	43	54.6	1.6	86	27	35	17+	0	0	36	53	3.03	0.93	0.90	14	2	T	0	2.4	24	38	SW	14	4	10	17	7.0	64
HAVRE	2584	921.8	1013.2	71	42	56.1	1.4	92	27	28	18	1	4	34	47	0.56	- 0.97	0.24	6	2	0.0	0	1.3	10	48	W	14	5	15	11	6.2	76
HELENA	3828	879.4	1014.3	64	38	51.4	- 1.5	81	26	31	23	0	1	34	56	1.77	0.21	0.65	13	6	T	0	3.8	30	35	W	16	3	13	15	7.2	57
KALISPELL	2965	909.6	1013.9	67	40	53.7	1.5	81	26	29	15	0	3	38	60	2.17	0.50	0.67	11	5	T	T	0.8	3	25	25	14+	7	8	16	6.8	
MILES CITY	2629	920.4	1013.0	69	45	56.9	- 0.5	90	13	34	18	1	0	39	55	1.55	- 0.18		12	3	0.1		2.7	5								
MISSOULA	3190	902.8	1014.2	68	41	54.5	1.9	86	26	30	21	0	1	40	64	1.35	- 0.52	0.54	11	5	T	0	2.3	32	39	NW	15	7	6	18	6.7	68
NEBRASKA																																
GRAND ISLAND	1841	946.8	1012.4	70	48	59.0	- 1.6	83	15	33	2	0	0	45	63	5.32	1.47	1.39	15	9	0.0	0	1.4	10	40	2	18	9	8	14	5.8	
LINCOLN U	1150			71	50	60.4	- 2.1	85	15	36	2	0	0			6.30	2.82	1.61	12		0.0	0			57	S	21	11	7	13	5.6	57
NORFOLK	1544			69	47	57.7	- 2.5	81	16+	32	2	0	1			2.19	- 1.47	0.66	13		0.0	0						11	6	14	5.8	
NORTH PLATTE	2775	915.3	1012.8	67	43	54.7	- 3.8	80	16	31	12	0	1	44	70	2.54	- 0.41	0.86	12	5	T	T	3.6	8	31	NW	23+	7	9	15	6.4	55
OMAHA	977	977.7	1012.9	72	49	60.4	- 2.6	85	31	32	3	0	1	47	63	7.21	3.73	2.83	13	9	0.0	0	1.3	8	29	NW	18	8	9	14	5.9	56
SCOTTSBLUFF	3957	877.1	1012.2	68	41	54.5	- 2.3	84	16	31	7	0	1	42	69	4.73	2.03	1.65	11	10	T	T	2.4	8	29	32	22+	6	5	20	7.2	
VALENTINE	2587			68	44	55.5	- 1.6	84	16	30	2	0	2			2.99	0.32	1.03	11		0.0	0			34	NW	24	4	15	12	6.4	57
NEVADA																																
ELKO	5050	841.5	1012.0	61	35	48.2	- 3.8	76	26	23	18	0	10	33	60	4.09	3.13	1.73	14	4	11.3	1	1.6	23	29	26	16+	6	7	18	6.9	
ELY	6253	805.3	1010.3	61	33	47.0	- 3.7	74	25+	20	18	0	16	30	59	2.89	2.04	0.70	14	7	6.3	1	4.1	20	42	SE	27	6	10	15	6.8	69
LAS VEGAS	2162	934.6	1010.1	81	56	68.0	- 5.8	95	15	46	8	7	0	30	29	0.84	0.76	0.60	4	1	0.0	0	3.6	22	52	SW	21	16	9	6	3.8	83
RENO	4404	863.5	1012.7	65	37	50.9	- 3.0	79	15	25	18	0	7	36	60	2.38	1.86	0.94	13	6	6.3	6	2.8	32	36	NE	20	8	6	17	6.5	59
WINNEMUCCA	4301	865.6	1011.8	70	36	52.7	- 1.0	82	25+	20	18	0	11	35	57	1.33	0.39	0.67	8	5	4.3	T	2.0	28	36	NW	20	4	9	18	6.9	74
NEW HAMPSHIRE																																
CONCORD	342	1000.0	1012.8	68	41	54.1	- 1.4	83	12	28	15	0	5	42	68	3.36	0.19	1.13	12	0	0.0	0	1.5	28	26	W	14	7	5	19	6.7	52
MT WASHINGTON OBS	6262			40	28	34.1	- 0.9	59	20	16	23+	0	21			10.96	5.12	3.35	14	1	33.8	25			88Y	W	5	6	6	19	7.4	41
NEW JERSEY																																
ATLANTIC CITY	64	1011.2	1013.7	67	49	57.6	- 3.7	82	19	36	1	0	0	46	67	1.88	- 1.63	0.78	12	2	0.0	0	1.5	27	28	24	5	5	8	18	7.0	46
ATLANTIC CITY U	11			63	51	56.9	- 2.6	76	26	43	1	0	0			2.14	- 1.02	1.08	12						31	NE	16+					
NEWARK	7	1012.2	1013.2	70	52	60.6	- 1.4	84	25+	42	1	0	0	47	65	3.65	0.00	1.51	11	0	0.0	0	2.3	30	27	24	26	5	10	16	7.0	
TRENTON U	56			68	51	59.5	- 2.8	89	19	43	1	0	0			3.88	0.26	1.20	11		0.0	0			34	NW	17	5	11	15	6.7	46

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets				Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
NEW MEXICO	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALBUQUERQUE	5311	835.1	1009.1	78	45	61.7	- 3.4	88	26	34	19	0	0	19	24	0.16	- 0.59	0.38	4	3	0.0	0	3.3	23	47	SW	29	14	10	7	3.9	85
CLAYTON	4969			74	43	58.4	- 1.4	87	16	31	19	0	1			2.27	- 0.47	1.71	8		T	0						15	7	9	4.5	
ROSWELL	3612			86	51	68.6	0.6	97	16	39	19	13	0			T	- 1.28	T	0		0.0	0			36	SW	4					83
NEW YORK																																
ALBANY	275	1002.4	1013.1	67	43	54.9	- 3.0	87	19	31	15	0	2	43	68	3.48	0.01	0.95	13	2	0.0	0	2.1	26	29	W	14	4	10	17	7.1	50
BINGHAMTON	1590	955.3	1013.9	63	45	54.3	- 0.8	85	19	34	1	0	0	42	66	3.31	- 0.18	1.46	11	4	T	0	2.9	27	32	NW	20	5	8	18	7.1	54
BUFFALO	705	988.2	1013.9	65	44	54.5	- 0.3	83	19	36	1	0	0	40	62	1.56	- 1.39	0.63	9	0	0.0	0	4.6	25	34	W	25	8	7	16	6.4	60
NEW YORK U	132	1010.2	1013.2	70	53	61.4	- 1.0	85	18	45	4+	0	0	46	64	4.24	0.57	1.66	10	0	0.0	0	1.7	31	24	W	4					49
NEW YORK KENNEDY	13	1012.9	1013.5	67	52	59.5	- 0.7	82	17	44	4	0	0	46	66	2.61	- 1.06	1.03	9	0	0.0	0	1.6	27	31	18	13	7	6	18	6.9	
NEW YORK LA GUARDIA	11	1012.5	1013.6	67	52	59.4	- 2.7	81	25	45	4+	0	0	45	63	3.37	- 0.21	1.02	11	0	0.0	0	2.1	32	26	NE	30+	6	10	15	6.4	
ROCHESTER	547	992.9	1013.3	66	42	54.0	- 2.7	89	19	32	1	0	1	42	68	1.71	- 1.06	0.97	9	1	0.0	0	4.1	28	32	SW	25	9	11	11	6.0	64
SYRACUSE	410	998.3	1013.1	67	44	55.8	- 1.9	92	19	37	23+	1	0	43	64	3.40	0.13	1.18	12	3	0.0	0	3.0	29	36	SW	25	7	10	14	6.5	57
NORTH CAROLINA																																
ASHEVILLE	2140	939.7	1015.1	74	48	61.1	- 1.9	83	27+	29	4	0	1	49	69	3.54	- 0.12	1.25	9	5	0.0	0	2.7	35	40	34	2	7	12	12	6.0	73
CAPE HATTERAS R	7	1014.6	1014.8	73	56	64.9	- 3.1	83	19	39	2	0	0	57	76	5.52	1.54	2.50	9	4	0.0	0	2.6	21	30	23	6	10	8	13	5.7	61
CHARLOTTE	736	987.5	1014.6	77	53	65.0	- 4.0	87	18	34	4	0	0	52	68	4.47	1.36	2.11	10	5	0.0	0	1.8	26	24	SW	8+	7	9	15	6.3	74
GREENSBORO	897	983.1	1014.6	74	51	62.5	- 4.4	84	27+	35	4	0	0	51	71	5.37	2.08	1.92	12	9	0.0	0	1.8	27	26	NW	3	6	14	11	6.3	62
RALEIGH	434	999.0	1014.7	77	52	64.4	- 3.2	88	20+	34	4	0	0	54	72	4.68	1.16	1.51	10	6	0.0	0	1.9	27	25	24	13+	10	6	15	6.0	60
WILMINGTON	28	1013.5	1014.9	79	58	68.8	- 1.7	92	19	42	4	3	0	58	72	2.29	- 1.23	1.24	7	5	0.0	0	3.4	24	31	E	13	10	9	12	5.5	72
NORTH DAKOTA																																
BISMARCK	1647	955.6	1014.8	65	40	52.4	- 3.5	80	13	25	2	0	4	37	60	1.34	- 0.63	0.48	9	1	T	T	2.8	7	37	S	16	9	9	13	6.1	71
FARGO	896	981.7	1014.5	67	41	54.2	- 1.2	86	14	30	20+	0	4	38	58	2.68	0.65	1.37	8	3	T	T	2.4	2	32	NW	14	12	7	12	5.6	68
WILLISTON	1899	946.2	1014.4	70	40	54.9	0.2	85	13	31	19+	0	3	35	53	2.28	0.85	1.33	8	2	0.7	T	2.0	8	34	W	16	11	10	10	5.1	74
OHIO																																
AKRON	1208	969.9	1014.4	69	45	57.3	- 2.4	83	19+	29	4	0	1	42	59	2.65	- 1.20	0.95	12	3	T	T	2.4	28	29	30	16	6	10	15	6.6	
CINCINNATI AUSE OB	761			72	51	61.2	- 3.0	86	17	37	4	0	0			3.58	- 0.22	1.23	11		0.0	0			21	NW	2					53
CLEVELAND	777	985.8	1014.9	68	45	56.5	- 1.5	86	18	28	4	0	1	40	55	3.29	- 0.23	1.54	12	4	0.0	0	2.1	25	33	SW	25	7	10	14	6.0	71
COLUMBUS	812	984.8	1014.8	70	46	58.0	- 3.5	85	18	31	1	0	1	44	62	3.66	- 0.34	1.06	11	5	0.0	0	1.4	29	38	SW	24	6	11	14	6.4	53
DAYTON	1002	978.7	1014.7	70	49	59.5	- 2.1	83	31+	35	4	0	0	47	66	4.20	0.47	1.07	11	5	0.0	0	2.3	26	47	W	16	7	9	15	6.5	64
MANSFIELD	1295			68	45	56.4	- 1.6	82	18	30	4	0	1	43	64	4.24	0.52	2.05	12	7	0.0	0	2.4	25	25	22	25	7	12	12	6.1	
TOLEDO	669	988.8	1014.1	70	43	56.4	- 1.9	87	18	31	4	0	1	41	58	2.33	- 0.71	0.98	10	5	0.0	0	2.2	27	31	SW	25	8	9	14	6.0	69
YOUNGSTOWN	1178	971.9	1014.6	67	43	55.2	- 2.7	85	19+	30	4	0	1	41	61	2.58	- 1.49	0.99	12	3	0.0	0	2.0	29	31	30	24	7	9	15	6.6	
OKLAHOMA																																
OKLAHOMA CITY	1285	966.5	1012.4	80	55	67.3	- 1.1	92	26	39	13	4	0	51	59	2.68	- 2.51	0.74	12	8	0.0	0	4.9	16	40	N	26	9	16	6	5.2	67
TULSA	650	988.5	1012.7	78	56	66.7	- 1.1	88	26+	41	13	0	0	54	66	6.59	1.33	1.58	8	9	0.0	0	5.4	17	52	NW	26	12	9	10	5.2	70
OREGON																																
ASTORIA	8	1018.0	1018.7	59	44	51.4	- 1.9	77	11	36	10+	0	0	45	81	2.30	- 0.90	0.61	13	0	T	0	5.8	26	35	24	16+	4	3	24	8.1	
BURNS U	4151	871.0	1013.1	66	39	52.1	- 1.3	80	27	21	17	0	5	34	54	2.02	1.13	1.00	8		T	T	5.2	31				7	10	14	6.1	
EUGENE	359	1004.7	1018.4	66	43	54.5	- 1.6	85	11	36	16+	0	0	45	74	2.52	0.38	0.79	11	0	0.0	0	2.9	25	32	21	15	6	7	18	7.2	
MEACHAM	4050	875.7	1014.8	58	38	48.3	0.3	75	11	26	17	0	8			3.02	0.57	0.67	10		T	0			26	25	19	7	12	12	6.5	
MEDFORD	1298	969.2	1016.9	69	43	55.8	- 1.7	87	11	32	17	0	1	44	67	1.13	- 0.34	0.46	6	2	0.0	0	3.9	32	29	35	20	6	10	15	6.5	
PENDLETON	1482	961.4	1014.6	74	47	60.5	0.9	92	11	38	21+	1	0	42	55	1.41	0.29	0.40	7	3	T	0	5.9	29	40	28	16	8	9	14	6.0	
PORTLAND	21	1016.3	1017.5	68	46	56.8	- 0.6	91	11	40	21+	1	0	44	65	1.00	- 0.99	0.32	11	1	0.0	0	3.6	30	31	SW	15	7	5	19	7.1	58
SALEM	176	1010.5	1018.0	66	40	53.3	- 3.0	89	11	32	21+	0	2	43	70	1.89	- 0.22	0.58	10	0	T	0	2.8	27	28	21	15	6	6	19	6.8	
SEXTON SUMMIT R	3836	884.2	1017.0	58	38	47.9	- 2.1	80	11	27	17	0	8			1.57	- 0.62	0.68	12		2.9	1			36	36	20	7	10	14	6.3	
PACIFIC AREA																																
GUAM TAGUAC R	361	997.0	1009.5	86	73	79.6	- 0.8	90	13	69	3	1	0	75	86	22.68	18.49	9.92	27	5	0.0	0	9.2	10	47	E	3	0	6	25	8.8	39
JOHNSTON	7	1014.6	1015.1	82	75	78.5	- 0.7	83	31	70	10	0	0	70	74	0.49	- 0.50	0.12	12	0	0.0	0	16.6	8	31	NE	24	7	12	12	6.1	67
KUROR P	94	1004.7	1008.3	88	76	82.3	1.0	92	3	72	28	10	0	76	85	16.31	1.68	7.99	22	5	0.0	0	14.0	19	25	E	28	0	6	25	9.0	60
KWAJALEIN	8	1009.1	1009.9	86	76	80.8	- 0.3	89	7	72	11+	0	0	76	84	18.66	10.48	4.28	25	2	0.0	0	15.9	8	33	10	3	0	4	27	9.0	
MAJURO	10	1010.2	1011.4	84	76	80.0	- 0.4	86	10+	73	16+	0	0	75	84	19.86	7.11	4.32	29	1	0.0	0	12.9	7	32	E	24	0	5	26	9.0	43

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90 F. or above	Temperature: No. of days Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 0.1 inch or more	Precipitation: Snow, Ice pellets: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days sunrise to sunset: Clear 0-3	No. of days sunrise to sunset: Partly cloudy 4-7	No. of days sunrise to sunset: Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	Ft.	Mb	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In	In	In			In	In	M.p.h		M.p.h.							%
PACIFIC AREA																																
PAGO PAGO	12	1011.5	1011.7	85	73	79.2		87	25+	69	27	0	0	73	83	4.77		0.91	14	0	0.0	0	3.4	10	26	SE	31	5	15	11	6.4	47
PONAPE R	123	1003.7	1009.2	86	73	79.8	- 0.6	89	31+	71	25+	0	0	74	84	24.59	4.28	5.40	29	3	0.0	0	6.4	8	17	NE	23+	0	4	27	9.1	53
TRUK MOEN ISLAND	5	1008.8	1009.0	86	76	81.2	0.4	89	10	74	26+	0	0	75	82	15.33	1.21	5.60	27	2	0.0	0	5.7	9	78	S	1	0	1	30	9.6	64
WAKE	11	1014.2	1014.4	87	76	81.5	1.7	89	16+	73	27+	0	0	71	71	2.38	0.34	0.95	21	0	0.0	0	11.4	9	27	E	9+	13	13	5	4.9	80
YAP R	44			87	75	81.0	- 1.0	89	7+	72	25	0	0			12.84	5.32	1.72	27	2	0.0	0			20	E	30+	0	4	27	9.1	87
PENNSYLVANIA																																
ALLENTOWN	387	999.7	1013.8	68	46	56.9	- 3.5	87	19	37	15+	0	0	46	72	5.30	1.22	1.48	11	3	0.0	0	2.1	30	28	26	4	5	11	15	6.8	
ERIE	731	987.8	1014.6	62	42	51.9	- 4.5	84	19	33	4+	0	0	38	61	2.22	- 1.34	0.72	9	2	0.0	0	2.5	25	25	23	25	9	8	14	6.0	
HARRISBURG	338	1001.4	1013.9	70	50	60.0	- 2.7	89	19	36	1	0	0	47	64	5.30	1.40	1.22	13	2	0.0	0	2.2	30	26	WNW	4	8	7	16	6.6	49
PHILADELPHIA	5	1012.5	1013.6	70	52	60.9	- 1.7	87	19	44	1	0	0	47	63	4.10	0.36	1.73	12	4	0.0	0	2.0	31	33	W	25	6	7	18	7.1	46
PITTSBURGH	1137	970.5	1014.4	68	45	56.6	- 3.2	84	19+	30	4	0	2	42	59	3.87	- 0.04	2.44	11	2	0.0	0	3.7	30	25	23	25+	5	9	17	7.0	49
SCRANTON	930	980.0	1014.2	67	45	55.9	- 3.7	90	19	33	1	1	0	44	68	3.38	- 0.57	1.74	12	0	0.0	0	2.0	27	31	S	25	6	8	17	6.9	49
WILLIAMSPORT	524	994.9	1014.0	70	47	58.5	- 1.9	87	19	33	1	0	0	47	69	2.88	- 1.20	1.23	12	3	0.0	0	2.2	27	25	29	17	7	6	18	7.1	
RHODE ISLAND																																
BLOCK ISLAND	110			59	47	53.3	- 0.6	69	26+	42	1	0	0			4.57	1.56	1.63	14		0.0	0										
PROVIDENCE	51	1010.5	1013.0	67	49	58.1	0.6	81	12	41	1	0	0	45	68	3.83	0.48	1.08	13	1	0.0	0	1.3	26	25	23	26+	5	10	16	7.0	43
SOUTH CAROLINA																																
CHARLESTON	40	1013.5	1015.5	82	61	71.1	- 1.8	92	20+	43	4	5	0	59	69	4.15	0.54	1.44	7	6	0.0	0	3.3	22	40Y	S	13	14	7	10	5.2	73
CHARLESTON U	9			78	64	71.2	- 2.1	88	18	49	4	0	0			4.13	1.04	2.33	6		0.0	0			32	SW	8					
COLUMBIA	213	1007.1	1015.0	83	57	69.8	- 2.4	93	27	36	4	6	0	57	67	2.71	- 0.83	1.27	8	7	0.0	0	2.9	26	25	32	2	9	9	13	5.8	73
GRNVLLE-SPRTNBRG	957	980.4	1014.5	78	53	65.3	- 4.1	89	27	33	4	0	0	51	63	5.72	2.50	2.60	9	3	0.0	0	2.2	26	29	SW	5	10	11	10	5.5	60
SOUTH DAKOTA																																
ABERDEEN	1296	967.2	1014.0	70	42	55.6	- 1.7	83	16	26	12	0	3	39	58	1.70	- 0.64	0.64	8	2	0.0	0	3.5	4	32	10	21	11	8	12	5.7	
HURON	1281	967.2	1013.7	68	41	54.3	- 3.2	83	14	25	12	0	5	42	64	1.99	- 0.37	0.92	10	6	0.0	0	1.7	6	30	S	16+	11	8	12	5.7	74
RAPID CITY	3162	903.2	1013.5	66	42	53.6	- 2.1	81	16	32	20+	0	2	40	64	3.70	1.04	1.91	11	4	0.0	0	3.0	2	40	SW	16	6	12	13	6.4	64
SIOUX FALLS	1418	962.8	1014.0	69	42	55.3	- 3.0	84	14	26	12	0	5	40	59	1.06	- 2.32	0.86	7	3	0.0	0	1.5	3	29	13	21	14	7	10	5.2	
TENNESSEE																																
BRISTOL	1507	961.4	1015.2	73	50	61.5	- 4.2	85	18	31	4	0	1	49	66	4.38	0.93	1.82	10	4	0.0	0	2.1	29	29	36	6	9	7	15	6.1	
CHATTANOOGA	665	990.2	1014.7	78	53	65.1	- 5.0	87	27	34	4	0	0	52	65	2.17	- 1.35	1.03	9	6	0.0	0	1.0	28	26	NW	2	12	7	12	5.4	62
KNOXVILLE	980	980.4	1015.0	74	54	63.9	- 3.8	84	24+	35	4	0	0	50	63	3.78	0.28	1.78	11	6	0.0	0	2.2	27	30	SW	25	7	10	14	6.2	56
MEMPHIS	258	1005.1	1015.3	77	56	66.6	- 3.7	86	31+	43	4	0	0	52	60	3.90	- 0.33	1.82	7	2	0.0	0	1.8	19	27	N	12	13	6	12	5.2	73
NASHVILLE	590	993.2	1014.9	75	51	63.3	- 5.3	85	18	35	4	0	0	52	68	2.93	- 0.79	1.04	7	4	0.0	0	1.9	25	31	SW	24	11	10	10	5.5	68
OAK RIDGE R	905			75	52	63.5	- 3.0	86	18	33	4	0	0			7.17	3.44	3.99	9		0.0	0			36Y		24	10	10	11	5.8	
TEXAS																																
ABILENE	1762	950.9	1011.4	86	59	72.4	0.7	97	23	37	13	10	0	47	48	2.17	- 2.16	1.28	6	9	0.0	0	6.3	17	41	SE	29	11	9	11	5.3	76
AMARILLO	3604	888.3	1009.6	80	50	64.9	- 1.6	95	16	33	19	5	0	35	41	0.91	- 2.46	0.39	6	7	0.0	0	6.6	19	42	SE	29+	16	7	8	3.8	85
AUSTIN	597	990.5	1012.1	87	66	76.2	1.1	92	28+	49	14	11	0	61	63	1.37	- 2.34	0.74	3	3	0.0	0	6.0	15	30	SW	24	5	8	18	6.6	48
BROWNSVILLE	19	1011.2	1011.8	87	72	79.5	0.5	93	6	61	14+	8	0	69	75	2.47	0.11	1.40	4	3	0.0	0	11.9	15	34	S	10	6	15	10	6.1	60
CORPUS CHRISTI	41	1010.8	1012.1	87	70	78.4	0.9	95	10	55	3	4	0	70	79	4.55	1.56	3.61	4	3	0.0	0	11.7	13	35	W	10+	5	8	18	6.8	59
DALLAS	481	995.6	1012.5	84	63	73.5	0.6	92	26	48	13	6	0	57	59	3.76	- 1.07	2.57	8	5	0.0	0	6.4	14	35	SE	17	9	10	12	5.7	60
DEL RIO	1026	974.6	1010.0	90	66	78.3	- 0.1	99	23	52	14	20	0	58	53	0.59	- 2.14	0.35	4	10	0.0	0	9.3	12	37	32	11	6	8	17	6.8	
EL PASO	3918	879.1	1008.4	86	58	72.1	0.2	94	26+	46	13	13	0	24	18	T	- 0.40	T	0	1	0.0	0	6.2	25	49	SW	4	17	7	7	3.4	94
FORT WORTH	537	992.9	1013.2	82	59	70.5	- 2.2	89	26	42	14	0	0	58	68	1.88	- 2.71	0.86	6	6	0.0	0	5.4	15	35	1	27	9	10	12	5.5	
GALVESTON U	7			79	72	75.0	- 0.8	84	28	60	13	0	0			1.31	- 1.48	0.80	2		0.0	0			30	NW	11					42
HOUSTON INTERCON	96	1010.2	1014.0	84	64	74.1	- 1.1	90	28	47	14	1	0	65	75	3.41	- 0.87	1.90	6	7	0.0	0	5.0	14	21	31	11+	5	11	15	6.8	51
LUBBOCK	3254	900.8	1009.8	84	54	68.8	0.6	98	16	37	13	6	0	39	41	2.44	- 0.74	1.70	5	6	0.0	0	3.8	18	33	20	4	13	12	6	4.3	
MIDLAND	2851	913.3	1009.7	86	58	72.2	- 1.2	98	22+	39	13	9	0	39	37	2.77	0.69	2.54	6	7	0.0	0	4.9	16	29	27	29+	10	10	11	5.3	
PORT ARTHUR	16	1013.9		84	66	75.2	0.5	88	28+	52	1	0	0	68	81	3.47	- 1.47	1.72	6	5	0.0	0	5.9	15	74	SW	9	7	12	12	6.5	61
SAN ANGELO	1903	945.1	1010.1	89	62	75.2	0.9	98	16	37	13	17	0	49	45	1.42	- 1.78	1.41	2	5	0.0	0	5.7	17	31	14	29	11	6	14	5.7	
SAN ANTONIO	788	984.4	1011.9	90	67	78.1	2.8	94	23+	48	14	20	0	61	61	1.52	- 1.93	0.82	7	6	0.0	0	5.9	13	43	NW	24	5	10	16	6.7	60
VICTORIA	104	1008.8	1012.8	86	68	77.0	0.8	92	28	51	14	5	0	65	72	1.00	- 3.12	0.96	3	2	0.0	0	8.4	15	47Y	S	10	6	9	16	6.6	
WACO	501	994.6	1012.4	86	64	75.1	0.8	92	31+	45	14	7	0	61	65	0.75	- 3.82	0.37	8	12	0.0	0	7.3	15	53	16	24	9	10	12	5.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

MAY 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days sunrise to sunset: Clear, 0-3	No. of days sunrise to sunset: Partly cloudy, 4-7	No. of days sunrise to sunset: Cloudy, 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	Ft.	Mb.	Mb.	F	F.	F	F.	F.		F.				F.	%	In	In	In			In	In	M.p.h.		M.p.h							%
TEXAS																																	
WICHITA FALLS	994	975.3	1011.5	88	56	71.6	- 0.6	100	16	42	13	13	0	51	55	1.06	- 3.54	0.45	8	11	0.0	0	5.4	12	38	28	31	12	9	10	4.9	
UTAH																																	
MILFORD	5028	842.9		69	37	52.9	- 3.6	81	26+	25	18	0	5			1.06	0.37	0.40	9		T	0						8	10	13	5.8	
SALT LAKE CITY	4220	867.9	1010.6	70	44	56.6	- 2.3	86	26	33	18+	0	0	37	53	1.34	- 0.06	0.32	12	9	1.4	T	1.9	16	40	W	21	8	9	14	6.3	67
WENDOVER	4237	867.3	1011.0	68	47	57.6	- 3.8	83	26	36	17	0	0			1.70	1.04	0.71	10		T	T						8	10	13	5.9	
VERMONT																																	
BURLINGTON	332	1000.3	1012.7	66	43	54.5	0.7	90	19	29	15	1	2	43	68	2.97	- 0.02	1.06	16	1	0.0	0	0.9	24	36	S	12	6	9	16	6.8	66
VIRGINIA																																	
LYNCHBURG	916			74	51	62.1	- 3.2	88	19	36	4	0	0			9.07	5.86	2.52	15		0.0	0			25	SW	25	10	9	12	5.8	50
NORFOLK	24	1013.2	1014.1	74	56	65.0	- 2.5	86	26+	42	1	0	0	53	70	4.46	1.10	0.98	11	6	0.0	0	1.4	19	38	SW	2	10	7	14	5.8	71
RICHMOND	164	1007.8	1014.2	75	52	63.3	- 3.7	90	19	39	5+	1	0	51	69	6.82	3.10	2.19	13	6	0.0	0	1.5	27	29	SW	13+	10	6	15	6.2	57
ROANOKE	1149	972.6	1014.2	73	50	61.5	- 4.2	88	19	35	1	0	0	49	66	7.50	3.71	2.02	15	7	0.0	0	3.0	29	24	36	16	10	7	14	5.9	
WALLOPS ISLAND	9			68	54	61.0		84	6	44	1	0	0			7.13		1.61	13		0.0	0			41Y	WSW	6					
WASHINGTON																																	
OLYMPIA	195	1010.2	1017.5	66	42	53.7	- 1.4	88	11	33	21+	0	0	45	75	1.50	- 0.51	0.59	11	0	T	T	3.0	21	26	24	16+	3	9	19	7.2	
QUILLAYUTE	179	1010.5	1018.1	60	41	50.5	- 1.5	87	11	33	17	0	0	43	77	3.90	- 0.52	1.62	14	0	T	0	3.1	27	26	W	16	4	8	19	7.4	37
SEATTLE-TACOMA	400	1000.7	1017.3	63	46	54.5	- 1.0	87	11	41	21+	0	0	44	70	1.43	- 0.30	0.34	13	0	0.0	0	1.4	22	29	S	15+	5	6	20	7.1	43
SPOKANE	2356	929.9	1013.1	68	45	56.3	0.1	86	12	34	21+	0	0	37	53	1.39	0.18	0.45	9	1	0.0	0	3.1	21	31	SW	13	7	10	14	6.3	55
STAMPEDE PASS R	3958	878.8		50	36	42.9	- 1.0	67	11	27	17	0	13			4.62	0.37	2.25	15		29.7	136						4	5	22	7.7	
WALLA WALLA U	949			72	49	60.5	- 0.5	88	11	39	21+	0	0			3.39	1.90	1.91	8		0.0	0			29	W	16	7	10	14	6.5	60
YAKIMA	1052	975.6	1013.8	77	45	60.7	2.2	88	28+	34	20+	0	0	35	41	0.54	0.00	0.34	4	0	0.0	0	5.5	30	35	23	15	10	9	12	5.7	
WEST INDIES																																	
SAN JUAN P.R.	13	1013.5	1016.0	88	75	81.3	2.6	92	30	73	18+	3	0	68	68	3.87	- 3.25	1.85	17	3	0.0	0	6.7	11	31	E	5	5	15	11	6.3	53
WEST VIRGINIA																																	
BECKLEY	2594	926.9	1014.7	67	46	56.2	- 4.6	84	18	32	4+	0	2	44	68	6.24	2.11	1.87	17	6	T	T	3.9	26	23	28	25+	8	7	16	6.7	
CHARLESTON	939	980.7	1014.8	72	48	59.9	- 4.9	88	18	36	4+	0	0	47	66	5.17	1.46	1.33	15	3	0.0	0	2.1	25	23	20	5	6	9	16	6.7	
ELKINS	1948	941.1		69	42	55.4	- 3.9	86	19+	24	1	0	5			4.23	- 0.34	0.95	15		T	T						4	11	16	7.3	
HUNTINGTON	827	984.8	1014.6	72	49	60.6	- 4.0	86	18	36	4	0	0	48	66	6.04	2.15	1.64	14	6	0.0	0	2.1	25	23	24	25	4	12	15	6.8	
PARKERSBURG U	615			71	49	60.0	- 4.0	88	18	35	1	0	0			3.82	0.12	0.86	11		0.0	0			34	N	16					53
WISCONSIN																																	
GREEN BAY	682	988.2	1013.6	66	40	53.0	- 1.8	83	15	30	3	0	2	40	64	1.67	- 1.39	1.04	7	1	T	T	0.9	29	38	SW	19	11	8	12	5.8	58
LA CROSSE	651	989.5	1014.0	69	42	55.3	- 3.9	83	13	26	3	0	2	42	66	4.89	1.13		11	6	0.0		1.1	27									
MADISON	858	982.4	1013.7	70	40	55.1	- 1.0	86	17	25	3	0	5	40	59	0.98	- 2.36	0.50	7	5	0.0	0	1.8	25	32	SW	19+	8	10	13	5.7	62
MILWAUKEE	672	988.8	1014.3	62	40	51.1	- 2.3	81	15	31	4	0	2	37	60	0.90	- 2.26	0.46	8	2	T	T	2.1	30	42	SW	18	7	14	10	5.6	66
WYOMING																																	
CASPER	5338	835.4	1012.6	64	37	50.1	- 3.0	84	28	30	19+	0	8	37	68	5.59	3.56	1.87	13	6	2.2	T	1.9	36	33	29	16	4	13	14	6.8	
CHEYENNE	6126	811.0	1013.4	61	38	49.2	- 3.7	73	16+	29	19	0	3	34	61	2.38	- 0.14	0.85	12	7	1.2	T	4.3	31	43	N	10	4	10	17	7.2	49
LANDER	5563	827.3	1012.2	63	39	50.9	- 2.0	82	28	29	19+	0	3	33	54	4.95	2.30	1.69	11	6	1.5	T	2.0	27	38	SW	13	4	14	16	7.3	69
SHERIDAN	3964	877.4	1013.7	67	40	53.2	- 0.4	82	13	29	19+	0	3	36	54	2.45	- 0.12	0.81	11	1	T	T	2.6	32	28	SE	4	7	10	14	6.2	63

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

MAY 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm. or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days sunrise to sunset: Clear 0.3	No. of days sunrise to sunset: Partly cloudy 4.7	No. of days sunrise to sunset: Cloudy 8.10	Sky cover tenths sunrise to sunset	Possible sunshine
	M.	Mb.	Mb.	C	C	C.	C	C		C.				C.	%	Mm.	Mm	Mm			Mm	Mm	M.p.s.		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	993.6	1015.8	25.6	11.1	18.5	- 3.6	31.1	27	2.2	4	0	0	11.7	67	67	- 20	27	8	6	0	0	0.6	25	13.0	SW	27	9	9	13	5.7	75
HUNTSVILLE	190	992.6	1015.7	24.4	11.7	18.0	- 3.3	29.4	31+	2.2	4+	0	0	11.7	69	91	5	74	10	7	0	0	0.5	29	13.4	35	12	11	9	11	5.5	
MOBILE	64	1008.1	1015.8	28.3	17.2	22.8	- 1.4	31.7	19+	7.8	4	0	0	15.6	68	80	- 44	28	5	5	0	0	0.7	18	15.6	32	8	9	7	15	6.0	
MONTGOMERY	56	1008.5	1015.8	26.7	13.9	20.1	- 2.3	30.6	27+	4.4	4	0	0	14.4	73	95	7	38	7	5	0	0	0.6	25	11.6	S	8	11	6	14	5.6	62
ALASKA												B																				
ANCHORAGE	35	1003.4	1008.3	8.3	2.2	5.3	- 3.2	12.8	25	- 2.2	8	0	5	- 1.7	64	13	0	6	5	0	T	T	2.1	19	13.9	16	30	1	4	26	8.8	37
ANNETTE	34	1014.9	1018.9	11.7	3.3	7.6	- 1.9	20.6	31	- 0.6	8	0	3	3.3	78	108	- 72	28	14	0	0	0	1.2	17	13.9	14	23	3	14	14	6.8	
BARROW	9	1013.2	1013.8	- 5.6	-10.6	- 8.1	- 0.6	1.1	31	-21.1	4	0	31	- 8.9	92	6	3	3	8	0	61	254	3.2	7	11.2	6	14+	2	3	26	8.7	
BARTER ISLAND	12	1010.8	1012.6	- 3.9	- 9.4	- 6.5	- 0.2	7.2	30	-26.1	2	0	31	- 7.8	90	4	- 2	2	5	0	41	406	1.6	7	12.5	8	6	2	7	22	8.4	
BETHEL	38	998.6	1004.4	5.6	- 1.7	1.8	- 2.1	11.7	31+	- 7.8	6	0	21	- 1.1	82	20	- 4	3	15	0	157	51	0.7	11	13.9	7	31	0	3	28	9.1	
BETTLES	196	982.7	1007.9	10.6	0.0	5.1		17.2	28+	-12.8	1	0	15	- 0.6	68	30		12	8	0	43	432	0.8	3	9.4	5	18+	3	9	19	7.5	
BIG DELTA	386			11.1	2.2	6.8		16.7	25	- 3.3	1	0	8			7		4	5	0	41	127			17.9	19	20	3	7	21	7.6	
COLD BAY	29	998.6	1002.4	3.3	- 1.1	1.3	- 2.9	7.2	28+	- 5.0	6+	0	24	- 1.1	85	95	37	29	21	0	236	76	2.0	25	17.4	27	31+	0	4	27	9.3	
FAIRBANKS	133	989.5	1006.6	13.9	3.3	8.5	0.1	20.0	25	- 2.2	1	0	5	- 2.8	48	4	- 14	1	8	0	28	25	0.8	20	12.1	23	26	0	7	24	8.2	
GULKANA	479	952.3	1009.8	10.0	0.0	4.9		14.4	25+	- 7.2	4	0	15	- 4.4	53	3		2	4	0	38		4.5	18	13.0	18	5	1	12	18	7.5	
HOMER	20	1003.7	1006.5	6.7	0.0	3.6		8.9	28+	- 3.9	24+	0	15	0.0	77	48	21	14	18	0	168	152	0.9	9	15.6	4	20	1	4	26	8.9	
JUNEAU	4	1016.3	1017.0	10.6	2.2	6.4	- 1.2	18.3	12	- 2.2	5	0	9	3.3	85	109	27	26	18	0	T	T	2.3	12	14.3	12	6	1	4	26	8.9	34
KING SALMON	15	1000.7	1002.7	6.7	0.0	3.2	- 3.1	11.1	23	- 6.1	8	0	14	- 1.7	71	36	12	7	17	0	64	25	2.1	11	21.5	9	31+	0	2	29	9.5	
KOTZEBUE	3	1007.1	1007.7	1.7	- 6.7	- 2.7	- 2.1	10.6	30	-17.2	11	0	29	- 4.4	84	7	- 2	3	7	0	94	381	0.7	18	10.7	14	14	3	10	18	7.5	
MC GRATH	105	992.6	1005.3	10.0	1.1	5.4	- 1.3	16.7	25	- 7.2	9	0	14	- 2.2	61	33	11	15	11	0	193	305	0.5	11	12.5	10	31	0	2	29	9.1	
NOME	4	1005.1	1006.0	1.7	- 3.9	- 1.3	- 2.9	11.7	31	-13.3	11	0	24	- 5.0	76	7	- 10	3	11	0	112	254	1.7	5	14.3	3	31	2	5	24	8.4	47
ST. PAUL ISLAND	7	1003.7	1004.6	0.0	- 4.4	- 2.3	- 3.9	2.2	28+	-13.3	5	0	31	- 3.3	92	24	- 9	6	16	0	323	457	4.1	35	19.7	33	20	1	4	26	9.1	
SHEMYA	37	1007.8	1011.5	4.4	0.6	2.6	- 0.8	6.7	20	- 2.8	8	0	15	- 2.2	71	20	- 41	11	9	0	66	25	3.2	34	17.0	33	25	0	1	30	9.2	
SUMMIT	732	921.4	1008.9	4.4	- 2.8	0.7		10.0	28+	-10.6	1	0	31	- 3.3	75	8		4	6	0	236	737	1.4	24	11.6	22	3	0	5	26	9.0	
TALKEETNA	105			9.4	- 0.6	4.6	- 2.6	15.6	25	- 4.4	17	0	19			30	- 4	7	14	0	43	508			8.0	12	28					
UNALAKLEET	5			4.4	- 3.3	0.4		15.6	31	-11.7	9	0	22			13		3	12	0	69	254			11.6	6	31	1	5	25	8.8	
YAKUTAT	9	1014.2	1015.2	6.7	- 0.6	3.1	- 3.9	16.1	12	- 5.0	14+	0	18	1.1	89	432	229	63	22	0	290	127	2.4	13	14.8	13	12	0	5	26	9.1	
ARIZONA																																
FLAGSTAFF	2135	785.3	1012.4	17.2	- 0.6	8.2	- 2.3	23.9	15	- 6.7	19	0	21	- 5.6	43	31	18	11	7	6	155	25	2.6	21	12.5	19	21	18	6	7	3.7	
PHOENIX	340	971.2	1009.7	31.1	15.0	22.9	- 0.9	36.1	26+	10.6	5	15	0	- 0.6	23	T	- 3	T	0	0	0	0	0.7	23	20.6Y	NE	12	23	4	4	2.4	93
TUCSON	788	923.1	1009.6	29.4	12.2	20.7	- 2.3	34.4	25	7.8	19+	10	0	- 3.9	21	T	- 3	T	1	0	0	0	2.0	22	15.2	W	17+	24	4	3	2.0	95
WINSLOW	1492	848.6	1010.8	25.6	5.6	15.6	- 2.7	31.7	25	- 2.8	19	0	1	- 6.7	28	2	- 6	1	4	1	0	0	3.0	21	22.8	18	29	22	3	6	3.0	
YUMA	59	1003.1	1010.2	30.6	15.0	22.8	- 2.7	36.7	25+	10.6	29	14	0	5.0	34	T	T	T	0	0	0	0	1.5	25	13.9	N	17	24	3	4	1.9	89
ARKANSAS																																
FORT SMITH	136	997.3	1014.0	25.6	12.8	19.1	- 1.9	31.1	31+	5.0	13	0	0	12.2	67	111	- 23	34	11	9	0	0	0.7	12	17.0	N	22	10	12	9	5.4	64
LITTLE ROCK	78	1005.4	1014.8	25.0	12.2	18.7	- 2.7	30.0	23	4.4	4	0	0	13.3	74	136	2	60	9	7	0	0	0.9	19	15.6	SE	10	14	5	12	4.9	79
CALIFORNIA																																
BAKERSFIELD	145	996.3	1013.9	26.1	13.9	19.9	- 1.4	34.4	25+	8.9	21	3	0	7.2	48	61	55	36	5	2	0	0	2.5	34	11.6	33	20	15	8	8	4.2	
BISHOP	1252	870.0		22.8	5.6	14.2	- 2.8	31.1	15	- 0.6	18	0	1			26	21	20	7		0	0						9	15	7	5.0	
BLUE CANYON	1609			12.2	3.9	8.1	- 3.2	21.1	10	- 1.1	31	0	6			87	9	23	16		119	76			10.3	24	20	8	6	17	6.6	
EUREKA U	13			12.8	8.3	10.3	- 1.3	16.7	12	5.0	17	0	0			33	- 23	14	9		0	0			15.6	NW	21	5	8	18	7.1	58
FRESNO	100	1002.7	1014.3	25.0	10.6	17.9	- 2.2	34.4	24	6.7	17	3	0	7.8	60	36	28	18	6	3	0	0	2.0	30	12.5	NW	16	15	5	11	4.7	75
LONG BEACH	8	1013.9	1015.2	22.2	12.8	17.3	- 0.2	32.8	17	8.3	2	2	0	10.6	69	17	14	9	5	0	0	0	1.8	23	10.3	31	16	7	15	9	5.6	
LOS ANGELES	30	1011.2	1014.8	20.0	12.8	16.3	- 0.3	31.1	17	9.4	2	0	0	10.6	75	4	1	3	5	0	0	0	2.7	25	17.9Y	N	17	5	15	11	6.0	
LOS ANGELES U	82			21.7	13.9	17.8	- 0.4	30.6	19+	10.0	2	0	0			6	2	3	3		0	0			13.0	NW	16	9	14	8	5.3	35
MT SHASTA R	1080			17.2	4.4	10.8	- 1.3	25.6	11	- 0.6	17	0	1			110	59	26	11		T	0										
OAKLAND	2	1016.3	1016.5	17.2	10.6	13.9	- 1.5	21.7	17	8.3	31	0	0	8.3	74	4	- 12	2	5	0	0	0	3.7	28	12.5	29	20	10	9	12	5.5	
RED BLUFF	104	1001.4	1014.1	24.4	11.1	17.6	- 2.6	33.3	10	7.2	16	1	0	5.6	51	31	2	16	7	0	0	0	0.7	36	17.0	NW	20	13	5	13	5.3	78
SACRAMENTO	5	1013.5	1014.4	23.3	9.4	16.6	- 1.2	30.6	24+	6.7	31+	0	0	7.2	62	20	5	11	6	0	0	0	2.1	22	14.8	NW	21	13	4	14	5.3	72
SANDBERG R	1377	860.5		15.0	5.0	10.0	- 3.7	24.4	25+	- 0.6	21	0	2			21	13	8	7		T	0			15.6	36	16	12	6	13	5.2	
SAN DIEGO	4	1014.2	1015.3	18.9	13.9	16.4	- 1.4	27.8	18	11.7	6	0	0	10.0	68	24	20	10	7	0	0	0	2.3	26	8.9	NW	18	6	12	13	6.5	57
SAN FRANCISCO	2	1015.9	1016.7	17.8	9.4	13.6	- 1.1	23.3	22	7.2	16	0	0	7.8	74	6	- 6	4	5	0	0	0	4.7	27	17.9	28	20	12	9	10	5.3	
SAN FRANCISCO U	16			15.6	10.0	12.6	- 1.6	20.0	18	7.8	3	0	0			5	- 11	3	3		0	0			14.8	W	20					62
SANTA MARIA	72			17.8	7.2	12.3	- 1.9	25.6	16	2.8	19+	0	0			25	19	20	6		0	0						11	9	11	5.3	
STOCKTON	7	1014.6	1015.5	24.4	10.6	17.4	- 1.6	32.8	24	7.2	3	1	0	7.2	59	22	11	9	6	0	0	0	2.9	29	11.2	26	20+	12	7	12	5.4	
COLORADO																																
ALAMOSA	2297	770.1		18.3	- 1.1	8.5	- 1.9	24.4	27+	- 8.3	19	0	20			27	9	18	8		188	178						12	11	8	4.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
												No. of days						No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)							
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy 8-10		
	M.	Mb.	Mb.	C.	C.	C.		C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	Mps		Mps							%
COLORADO																																
COLORADO SPRINGS	1873	809.3	1012.1	18.9	5.0	11.8	- 0.9	26.7	28	- 0.6	19	0	1	0.6	55	57	3	28	11	10	T	0	1.3	2	23.2	27	28	10	9	12	5.6	
DENVER	1610	833.7	1010.6	20.0	4.4	12.3	- 1.1	29.4	28	0.0	19	0	1	3.3	62	34	- 35	12	12	8	T	T	0.8	8	17.0	SE	29	6	10	15	6.4	61
GRAND JUNCTION	1476	848.6	1009.3	23.3	7.8	15.6	- 1.2	32.2	27+	1.1	19	2	0	0.0	41	28	13	12	8	3	T	T	1.4	15	14.8	S	21+	8	14	9	5.3	65
PUEBLO	1428	852.7	1010.2	23.9	5.6	14.7	- 1.2	30.6	28+	0.0	19+	0	2	1.1	46	19	- 27	8	7	5	T	0	0.7	1	21.0	N	17	12	9	10	5.2	81
CONNECTICUT																																
BRIDGEPORT	2	1012.9	1013.6	18.9	9.4	14.1	- 0.8	25.6	17	3.9	1	0	0	7.2	68	117	23	32	11	1	0	0	0.8	30	17.0	B	8	7	8	16	6.7	
HARTFORD	52	1006.4	1012.8	21.1	8.3	14.5	- 1.0	28.9	18	1.7	1	0	0	6.1	63	104	17	35	13	1	0	0	0.7	28	13.0	NW	14	6	7	18	6.9	44
DELAWARE																																
WILMINGTON	23	1010.5	1013.5	21.1	10.0	15.8	- 1.3	29.4	19	3.9	1	0	0	8.9	68	115	25	41	14	2	0	0	0.9	30	9.8	21	25	5	8	18	7.1	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	88	1002.4	1014.0	22.2	8.9	15.6		31.1	19	2.8	4	0	0	9.4	69	215		50	14	3	0	0	0.7	30	12.5	31	4	10	5	16	6.3	
WASHINGTON NATIONAL	3	1010.8	1013.4	22.8	12.2	17.6	- 1.2	32.2	19	6.1	1	1	0	9.4	62	173	68	52	14	4	0	0	0.7	32	12.1	S	25	9	7	15	6.5	49
FLORIDA																																
APALACHICOLA U	4			27.2	18.9	23.0	- 0.8	30.6	28+	10.6	4	0	0			16	- 57	7	4	2	0	0			13.4	S	12	11	12	8	4.5	91
DAYTONA BEACH	9	1014.9	1016.4	28.9	16.7	22.9	- 0.5	32.8	13	6.7	5	1	0	15.6	68	79	7	35	6	5	0	0	1.0	10	12.5	27	29	15	9	7	4.3	
FORT MYERS	5	1015.6	1015.8	31.1	18.9	25.1	- 0.2	33.3	27	11.1	5	10	0	18.3	69	96	- 2	56	5	4	0	0	0.9	26	13.0	28	13	13	13	5	4.1	
JACKSONVILLE	8	1014.9	1015.8	28.9	15.6	22.1	- 2.2	32.8	20	7.2	4	2	0	16.7	74	48	- 40	16	8	6	0	0	0.8	21	12.1	SW	13+	14	8	9	4.6	70
KEY WEST	1	1014.6	1015.4	29.4	24.4	27.1	- 0.9	30.6	28+	20.6	5	0	0	20.6	70	111	42	54	6	4	0	0	2.0	11	13.0	SW	15	14	10	7	4.4	88
LAKELAND U	65			30.6	18.9	24.6	- 0.3	32.8	25+	12.2	4	8	0			102	12	47	6		0	0						20	8	3	3.3	81
MIAMI	2	1015.2	1015.7	30.0	22.2	26.2	- 0.8	33.3	30+	16.1	4	4	0	19.4	68	105	- 59	57	7	6	0	0	1.5	9	11.2	23	29+	10	13	8	5.1	
ORLANDO	33	1011.5	1015.8	31.7	19.4	25.7	- 0.3	35.0	12+	12.2	5	17	0	16.1	61	109	19	63	5	7	0	0	0.4	20	13.0	28	3	16	9	6	3.9	
PENSACOLA	34	1011.9	1016.0	28.3	17.8	22.9	- 1.3	31.1	22	10.6	4	0	0	16.7	70	100	- 16	43	6	4	0	0	0.6	17	11.6	20	12	11	8	12	5.5	
TALLAHASSEE	17	1013.5	1015.7	28.9	13.3	20.8	- 3.0	33.3	27	1.1	4	3	0	14.4	70	104	- 1	38	8	5	0	0	0.4	26	12.5	20	12	11	12	8	5.0	
TAMPA	6	1015.6	1015.7	30.6	18.3	24.3	- 0.6	32.8	12+	9.4	5	6	0	16.1	63	104	31	101	5	4	0	0	0.8	29	13.4	27	15	15	11	5	4.2	82
WEST PALM BEACH	5	1015.2	1015.8	31.1	21.1	26.0	- 0.7	35.6	29	13.3	5	6	0	17.8	62	128	- 2	84	8	3	0	0	1.8	11	9.8	14	12	15	9	7	4.3	
GEORGIA																																
ATHENS	244	986.1	1014.8	26.1	12.8	19.3	- 1.8	31.7	27	2.8	4	0	0	12.8	69	77	- 14	42	5	4	0	0	1.1	25	12.1	25	12	13	9	9	5.1	
ATLANTA	308	978.3	1014.7	25.6	12.8	19.3	- 1.3	30.0	27+	2.8	4	0	0	11.1	62	54	- 26	27	6	4	0	0	1.6	28	29.1	SW	12	11	9	11	5.2	71
AUGUSTA	41	1009.5	1014.8	27.2	12.2	19.7	- 2.3	32.8	27	1.7	4	1	0	13.3	71	98	22	54	6	4	0	0	1.1	23	12.5	19	12+	10	13	8	5.4	
COLUMBUS	117	1001.4		27.2	14.4	20.7	- 1.6	31.7	27+	4.4	4	0	0	13.9	69	112	23	43	8	4	0	0	0.9	27	17.4	23	12	11	10	10	5.1	
MACON	108	1002.7	1015.5	28.3	13.9	21.2	- 2.1	33.3	31+	4.4	4	5	0	13.9	67	89	5	52	8	7	0	0	1.1	26	14.8	S	12	8	12	11	5.4	70
ROME	194			26.1	11.1	18.5	- 1.9	30.6	6	0.0	4	0	1			39	- 57	19	7		0	0										
SAVANNAH	14	1013.5	1015.4	28.3	15.6	21.7	- 1.3	33.3	20	4.4	4	3	0	13.9	66	90	- 5	26	9	7	0	0	1.5	23	13.0	SW	8	11	9	11	5.3	76
HAWAII																																
HILO	8	1017.3	1018.4	27.2	17.8	22.3	- 0.4	28.9	16+	15.0	10	0	0	17.8	79	165	- 72	37	23	0	0	0	0.6	14	8.9	E	20	3	15	13	6.6	36
HONOLULU	2	1017.3	1017.8	28.3	21.1	24.6	- 0.2	30.6	17	18.3	11	0	0	16.7	64	11	- 14	5	8	0	0	0	5.6	5	13.0	NE	24	11	17	3	4.4	78
KAHULUI	15	1014.9	1017.4	30.0	18.3	23.9	- 0.1	32.2	15	14.4	12	1	0	17.8	69	3	- 15	1	5	0	0	0	5.1	5	13.0	E	19	18	11	2	3.5	81
LIHUE	31	1014.2	1019.3	27.8	22.2	24.9	- 1.3	29.4	2	17.2	10	0	0	18.9	71	26	- 40	12	14	0	0	0	4.7	6	9.8	NE	24	4	22	5	5.5	70
IDAHO																																
BOISE	865	912.0	1011.0	22.8	8.3	15.6	1.0	30.0	26	- 1.1	18	0	1	2.2	44	6	- 26	3	8	3	0	0	0.8	32	16.5	SE	26	6	9	16	6.4	70
LEWISTON	431			22.8	8.9	15.8	1.1	32.2	12	1.7	21	1	0			49	9	14	9		0	0						9	5	17	6.5	
POCATELLO	1358	859.5	1011.0	19.4	3.9	11.5	- 1.3	28.3	27	- 1.1	18	0	3	1.1	52	13	- 16	4	12	5	T	0	1.5	22	16.5	SW	16	5	12	14	6.9	55
ILLINOIS																																
CAIRO U	96			23.9	13.3	18.4	- 2.1	30.0	16	6.1	3	0	0			111	- 1	46	10		0	0			17.0	SW	7+	12	7	12	5.2	60
CHICAGO O HARE	201	990.2	1014.3	20.6	7.2	14.0	- 0.3	31.1	17	- 0.6	3	0	1	5.0	56	57	- 39	23	9	6	T	T	0.5	26	15.6	22	24	11	8	12	5.5	
CHICAGO MIDWAY	185	991.9	1014.3	20.6	7.8	14.2	- 1.3	31.7	17	0.0	3	0	1	4.4	56	50	- 44	27	8	6	T	T	0.3	22	14.3	N	11	9	12	10	5.5	67
MOLINE	177	992.6	1014.1	21.1	7.8	14.4	- 1.8	31.7	17	- 0.6	13	0	1	6.1	61	80	- 17	28	10	7	0	0	0.9	22	15.6	W	23	10	6	15	5.7	67
PEORIA	199	990.5	1014.3	20.6	7.8	14.3	- 2.1	30.0	17	- 1.1	13	0	2	6.7	61	71	- 37	34	7	7	0	0	0.8	20	13.4	NW	5	6	12	13	6.3	67
ROCKFORD	221	987.1	1013.9	20.6	7.2	13.9	- 1.2	30.6	17	- 0.6	3	0	1	5.6	61	46	- 51	18	8	5	0	0	0.4	23	12.1	19	17	10	6	15	5.5	
SPRINGFIELD	179	991.9	1014.0	22.2	9.4	15.8	- 1.9	30.0	18+	1.7	4	0	0	7.2	59	91	- 7	33	9	6	0	0	1.3	20	15.2	W	24+	6	11	14	6.0	62
INDIANA																																
EVANSVILLE	116	1001.0	1015.1	23.9	11.1	17.4	- 1.9	30.0	17	2.2	4	0	0	10.6	66	101	- 6	34	13	6	0	0	0.8	27	13.4	S	24	12	6	13	5.7	62

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MAY 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0.3	No. of days (sunrise to sunset): Partly cloudy 4.7	No. of days (sunrise to sunset): Cloudy 8.10	Sky cover tenths sunrise to sunset	Possible sunshine
	M.	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							
INDIANA																																
FORT WAYNE	241	985.1	1015.2	21.1	7.2	14.3	- 1.7	29.4	18+	- 1.1	4	0	1	6.1	61	92	- 3	37	5	4	0	0	1.3	25	21.0	SW	24	7	12	12	6.3	68
INDIANAPOLIS	241	985.8	1014.7	21.7	8.3	14.9	- 1.4	28.9	18+	- 0.6	3	0	2	7.2	61	108	7	41	9	6	0	0	0.9	26	17.0	W	16	8	10	13	6.0	67
SOUTH BEND	236	986.5	1014.2	20.0	7.2	13.5	- 1.3	29.4	18	0.0	3	0	1	5.6	61	42	- 50	29	9	3	0	0	1.1	27	10.7	29	19	10	10	11	5.7	
IOWA																																
BURLINGTON	211			21.1	9.4	15.1	- 1.4	30.6	17	1.7	13+	0	0	7.2	61	84	- 19	25	10	7	0	0	0.7	23	11.2	27	24+	10	11	10	5.5	
DES MOINES	286	979.3	1013.8	21.1	8.9	14.8	- 1.1	30.0	31	0.0	3	0	1	7.8	64	98	- 5	33	11	6	0	0	0.3	14	15.6	NE	5	10	6	15	5.9	68
DUBUQUE	322	975.3		20.0	6.7	13.2	- 1.3	31.1	17	0.0	13	0	1			110	3	46	9		0	0						8	8	15	5.8	
SIOUX CITY	334	973.6	1013.3	21.7	8.9	15.3	- 1.0	28.9	14	1.1	12+	0	0	6.7	60	72	- 10	19	10	9	0	0	0.6	5	17.0	W	23	9	7	15	5.9	64
WATERLOO	265	982.4	1014.0	18.9	5.0	11.9	- 3.6	29.4	15	- 3.9	3	0	5	5.6	69	140	45	46	9	7	0	0	0.2	10	17.0	28	18	9	9	13	5.8	
KANSAS																																
CONCORDIA	448	959.4	1011.9	21.1	9.4	15.2	- 2.1	28.3	31	2.2	12	0	0	10.0	73	164	66	52	11	10	3	0	1.0	14	25.0	E	21	10	8	13	5.6	74
DODGE CITY	787	921.1	1011.0	24.4	8.9	16.7	- 0.9	32.8	22+	0.0	12	3	1	7.2	61	71	- 10	24	9	10	0	0	0.8	16	23.2	NW	23	13	10	8	4.9	71
GOODLAND	1114	885.2	1011.1	20.6	6.1	13.5	- 1.2	30.0	21	- 1.1	12	0	1	6.7	69	108	46	40	11	5	0	0	0.3	15	20.6	23	5	11	7	13	5.5	
TOPEKA	267	981.0	1012.8	23.3	9.4	16.3	- 1.7	31.1	31	- 1.1	3	0	1	10.6	71	123	11	49	14	12	0	0	0.8	17	13.9	SW	23	9	11	11	5.8	61
WICHITA	403	964.4	1011.7	24.4	10.6	17.7	- 1.2	33.3	17	3.9	13	2	0	9.4	62	77	- 24	46	9	9	0	0	1.7	18	21.9	SE	21	9	14	8	5.2	61
KENTUCKY																																
COVINGTON	265	983.7	1015.0	22.8	9.4	16.0	- 0.9	30.0	17	- 1.1	4	0	1	7.8	61	84	- 7	30	9	2	0	0	1.2	26	11.6	19	24	6	12	13	6.7	
LEXINGTON	294	980.0	1015.5	21.1	8.9	15.1	- 2.9	28.3	24+	0.0	4	0	1	8.3	67	156	58	46	11	6	0	0	0.9	23	13.0	21	24	9	12	10	6.0	
LOUISVILLE	145	997.3	1014.9	22.8	10.0	16.4	- 1.6	29.4	18+	1.1	4	0	0	8.9	65	156	57	47	12	4	0	0	0.9	26	13.4	N	6	8	10	13	5.9	63
LOUISIANA																																
ALEXANDRIA	28	1011.2	1015.4	27.2	14.4	20.6	- 2.2	30.6	26	7.2	14+	0	0			232	92	70	10	7	0	0	0.8	15	15.6	27	24	8	11	12	5.8	
BATON ROUGE	20	1012.5	1015.1	28.9	16.1	22.6	- 1.2	32.2	26+	10.6	14+	2	0	16.1	71	94	- 28	45	5	3	0	0	0.8	12	10.3	2	27	11	8	12	5.7	
LAKE CHARLES	3	1013.5		28.9	18.3	23.5	- 0.7	32.2	30	10.0	1	1	0	17.8	76	147	30	107	6	7	0	0	2.1	15	13.0	33	24	6	13	12	6.3	
NEW ORLEANS	1	1014.6	1015.5	28.9	16.7	22.7	- 0.8	32.2	25+	9.4	2	2	0	16.1	67	35	- 76	23	4	4	0	0	0.8	13	10.3	15	24	11	9	11	5.0	
SHREVEPORT	77	1004.7	1014.0	27.8	15.6	21.6	- 1.3	31.7	27+	7.8	14	0	0	16.1	73	134	12	51	9	10	0	0	1.6	15	10.3	18	23+	10	7	14	5.9	53
MAINE																																
CARIBOU	190	988.8		17.2	5.0	10.9	0.9	26.1	20	- 1.1	15	0	3			52	- 25	19	11		0	0						5	7	19	7.3	
PORTLAND	13	1010.2	1012.5	16.7	6.7	11.5	- 0.2	24.4	11	1.7	15+	0	0	7.2	77	104	17	43	15	0	0	0	0.6	23	13.0	N	14	6	5	20	7.2	40
MARYLAND																																
BALTIMORE	45	1008.8	1014.2	21.7	10.6	16.2	- 1.8	30.0	19	4.4	1	0	0	7.8	61	155	54	47	16	3	0	0	0.8	31	14.8	SW	25	7	8	16	6.7	47
MASSACHUSETTS																																
BLUE HILL OBS R	192			17.8	8.3	12.9	- 0.8	26.1	12	3.9	1	0	0			106	18	33	15		0	0			17.4	SW	25+					
BOSTON	5	1011.5	1012.5	17.8	8.9	13.2	- 1.7	26.1	25+	6.1	11+	0	0	7.2	73	94	10	28	12	0	0	0	0.4	26	12.5	SW	25+	5	10	16	7.1	47
WORCESTER	301	976.3	1013.4	17.8	7.2	12.3	- 0.6	26.1	11	3.3	24+	0	0	4.4	65	133	36	43	13	1	0	0	1.4	29	12.5	31	14	6	9	16	6.8	
MICHIGAN																																
ALPENA	210	988.5	1013.8	17.8	2.8	10.1	- 0.2	28.3	15	- 2.8	4	0	9	2.2	61	73	- 1	20	12	5	T	0	0.6	24	12.5	SW	12	11	9	11	5.4	62
DETROIT	189			20.6	7.8	14.3	- 0.7	32.2	18	2.2	4+	1	0	3.3	50	38	- 51	23	8	2	0		0.7	25	14.3	24	19					
DETROIT METRO	193	989.8	1014.0	21.1	6.1	13.6	- 0.7	31.1	18	- 1.1	13	0	2	4.4	57	50	- 40	28	9	4	0	0	0.8	26	16.1	W	19	8	12	11	5.8	69
FLINT	235	985.8	1013.6	19.4	5.6	12.6	1.0	29.4	18	- 0.6	13+	0	3	5.0	63	50	- 36	17	8	3	0	0	1.2	25	13.9	29	19	8	15	8	5.7	
GRAND RAPIDS	239	985.1	1014.1	20.0	4.4	12.2	- 1.6	27.2	17	- 3.3	4+	0	4	3.9	59	27	- 61	10	7	2	0	0	1.3	24	18.8	W	24	8	13	10	5.8	69
HOUGHTON LAKE	350	971.6	1013.8	18.3	3.3	10.9	- 0.4	26.1	18	- 2.2	14+	0	6	3.9	65	39	- 36	14	8	4	T	T	1.4	26	15.6	27	15	10	10	11	5.7	
LANSING	256	982.4	1014.0	20.6	5.0	12.8	- 1.2	30.6	18	- 2.2	4	0	4	4.4	58	49	- 46	33	8	4	0	0	1.4	25	13.9	SW	25+	7	14	10	5.7	70
MARQUETTE U	206			14.4	3.9	9.1	- 0.8	28.9	29	- 1.1	12	0	2			64	- 11	20	10		99	51			14.8	S	17	10	6	15	5.8	58
MUSKEGON	191	991.2	1014.3	18.9	5.0	12.0	- 1.2	27.8	17	- 2.8	4	0	2	2.8	57	42	- 33	25	8	4	0	0	1.5	24	11.2	22	25	12	8	11	5.2	
SAULT STE MARIE	220	986.5	1013.1	15.6	1.7	8.6	- 1.2	23.9	10	- 3.3	4	0	11	1.1	62	76	6	19	12	3	13	T	1.0	30	14.8	SE	24	12	4	15	5.9	65
MINNESOTA																																
DULUTH	435	963.1	1014.8	16.1	2.2	8.9	- 0.6	24.4	10	- 4.4	3	0	12	0.6	61	88	4	40	12	2	15	T	1.1	3	17.4	W	15	11	5	15	6.1	52
INTERNATIONAL FALLS	359	971.6	1014.7	17.8	2.8	10.1	- 0.3	29.4	14	- 2.8	12	0	7	1.7	58	58	- 8	21	10	1	8	T	1.2	1	11.6	31	15	8	9	14	6.3	
MINNEAPOLIS	254	983.4	1014.0	19.4	6.7	13.0	- 1.1	28.9	14	0.0	3	0	1	2.8	53	80	- 1	30	8	6	5	T	0.8	2	11.2	E	31+	11	6	14	5.4	69
ROCHESTER	395	966.1	1013.7	18.9	5.6	12.4	- 1.3	27.2	15	- 1.7	12	0	2	5.0	63	93	0	36	10	6	0	0	0.4	29	15.6	26	19	9	9	13	5.7	
ST CLOUD	315	976.6	1014.6	18.9	5.0	11.9	- 1.2	29.4	14	- 1.1	12+	0	3			98	9	42	9		81	51						15	4	12	5.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MAY 1971

State and Station	Elevation (ground)	Pressure: Station Q	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No of days (sunrise to sunset): Clear 0-3	No of days (sunrise to sunset): Partly cloudy 4-7	No of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
MISSISSIPPI																																
JACKSON	94	1003.7	1015.5	27.2	12.8	19.9	- 2.9	31.1	26	3.3	4	0	0	15.0	75	204	93	65	11	10	0	0	0.7	18	13.0	NW	12	10	9	12	5.7	74
MERIDIAN	88	1004.7	1015.8	27.2	12.8	19.8	- 2.6	30.6	26	3.3	4	0	0	15.0	79	131	32	84	9	8	0	0	0.5	21	8.9	18	24	9	8	14	6.1	
MISSOURI																																
COLUMBIA REGIONAL	270	982.1	1014.2	22.2	10.6	16.3	- 1.7	30.0	31+	2.2	3	0	0	8.9	63	109	- 10	35	13	10	0	0	1.1	17	15.2	NW	31+	5	11	15	6.6	66
KANSAS CITY	226	985.8	1012.7	23.9	12.2	18.0	- 0.7	31.7	31+	1.7	3	0	0	10.0	64	77	- 35	27	14	11	0	0	1.1	17	16.5	W	19	10	10	11	5.5	68
ST JOSEPH	247			26.1	11.1	18.6	0.7	33.3	17+	2.8	3	3	0			71	- 40		13				0.7	15	10.3	15	23	9	9	13	6.1	
ST LOUIS	163	994.6	1014.7	23.3	10.6	16.8	- 1.1	30.0	17+	2.8	4	0	0	10.6	70	144	49	59	13	8	0	0	0.7	19	15.6	SE	18	7	8	16	6.5	58
SPRINGFIELD	386	969.2	1014.0	24.4	9.4	16.9	- 1.1	31.7	31	1.7	3	0	0	8.9	61	98	- 37	60	10	12	0	0	1.9	17	17.9	SE	22+	9	9	13	5.7	72
MONTANA																																
BILLINGS	1087	889.9	1013.2	18.9	6.1	12.5	- 1.3	30.0	27	0.6	18	0	0	2.8	55	53	5	21	6	2	T	0	1.2	1	14.8	NW	17	9	9	13	6.1	60
GLASGOW	696	932.6	1014.0	21.1	5.6	13.2	0.4	32.2	13	0.6	18	1	0	0.6	46	23	- 15	15	7	1	10	T	1.6	9	16.5	29	13	10	12	9	5.3	
GREAT FALLS	1116	886.9	1013.5	19.4	6.1	12.6	0.9	30.0	27	1.7	17+	0	0	2.2	53	77	24	23	14	2	T	0	1.1	24	17.0	SW	14	4	10	17	7.0	64
HAVRE	788	921.8	1013.2	21.7	5.6	13.4	0.8	33.3	27	- 2.2	18	1	4	1.1	47	14	- 25	6	6	2	0	0	0.6	10	21.5	W	14	5	15	11	6.2	76
HELENA	1167	879.4	1014.3	17.8	3.3	10.8	- 0.8	27.2	26	- 0.6	23	0	1	1.1	56	45	5	17	13	6	T	0	1.7	30	15.6	W	16	3	13	15	7.2	57
KALISPELL	904	909.6	1013.9	19.4	4.4	12.1	0.8	27.2	26	- 1.7	15	0	3	3.3	60	55	13	17	11	5	T	T	0.4	3	11.2	25	14+	7	8	16	6.8	
MILES CITY	801	920.4	1013.0	20.6	7.2	13.8	- 0.3	32.2	13	1.1	18	1	0	3.9	55	39	- 5		12	3	T		1.2	5								
MISSOULA	972	902.8	1014.2	20.0	5.0	12.5	1.1	30.0	26	- 1.1	21	0	1	4.4	64	34	- 13	14	11	5	T	0	1.0	32	17.4	NW	15	7	6	18	6.7	68
NEBRASKA																																
GRAND ISLAND	561	946.8	1012.4	21.1	8.9	15.0	- 0.9	28.3	15	0.6	2	0	0	7.2	63	135	37	35	15	9	0	0	0.6	10	17.9	2	18	9	8	14	5.8	
LINCOLN U	351			21.7	10.0	15.8	- 1.2	29.4	15	2.2	2	0	0			160	72	41	12		0	0			25.5	S	21	11	7	13	5.6	57
NORFOLK	471			20.6	8.3	14.3	- 1.4	27.2	16+	0.0	2	0	1			56	- 37	17	13		0	0						11	6	14	5.8	
NORTH PLATTE	846	915.3	1012.8	19.4	6.1	12.6	- 2.1	26.7	16	- 0.6	12	0	1	6.7	70	65	- 10	22	12	5	T	T	1.6	8	13.9	NW	23+	7	9	15	6.4	55
OMAHA	298	977.7	1012.9	22.2	9.4	15.8	- 1.4	29.4	31	0.0	3	0	1	8.3	63	183	95	72	13	9	0	0	0.6	8	13.0	NW	18	8	9	14	5.9	56
SCOTTSBLUFF	1206	877.1	1012.2	20.0	5.0	12.5	- 1.3	28.9	16	- 0.6	7	0	1	5.6	69	120	52	42	11	10	T	T	1.1	8	13.0	32	22+	6	5	20	7.2	
VALENTINE	789			20.0	6.7	13.1	- 0.9	28.9	16	- 1.1	2	0	2			76	8	26	11		0	0			15.2	NW	24	4	15	12	6.4	57
NEVADA																																
ELKO	1539	841.5	1012.0	16.1	1.7	9.0	- 2.1	24.4	26	- 5.0	18	0	10	0.6	60	104	80	44	14	4	287	25	0.7	23	13.0	26	16+	6	7	18	6.9	
ELY	1906	805.3	1010.3	16.1	0.6	8.3	- 1.8	23.3	25+	- 6.7	18	0	16	- 1.1	59	73	52	18	14	7	160	25	1.8	20	18.8	SE	27	6	10	15	6.8	69
LAS VEGAS	659	934.6	1010.1	27.2	13.3	20.0	- 3.2	35.0	15	7.8	8	7	0	- 1.1	29	21	19	15	4	1	0	0	1.6	22	23.2	SW	21	16	9	4	3.8	83
RENO	1342	863.5	1012.7	18.3	2.8	10.5	- 1.7	26.1	15	- 3.9	18	0	7	2.2	60	60	47	24	13	6	160	152	1.3	32	16.1	NE	20	8	6	17	6.5	59
WINNEMUCCA	1311	865.6	1011.8	21.1	2.2	11.5	- 0.6	27.8	25+	- 6.7	18	0	11	1.7	57	34	10	17	8	5	109	T	0.9	28	16.1	NW	20	4	9	18	6.9	74
NEW HAMPSHIRE																																
CONCORD	104	1000.0	1012.8	20.0	5.0	12.3	- 0.8	28.3	12	- 2.2	15	0	5	5.6	68	85	5	29	12	0	0	0	0.7	28	11.6	W	14	7	5	19	6.7	52
MT WASHINGTON OBS	1909			4.4	- 2.2	1.2	- 0.5	15.0	20	- 8.9	23+	0	21			278	130	85	14	1	859	635			39.3Y	W	5	6	6	19	7.4	41
NEW JERSEY																																
ATLANTIC CITY	20	1011.2	1013.7	19.4	9.4	14.2	- 2.1	27.8	19	2.2	1	0	0	7.8	67	48	- 41	20	12	2	0	0	0.7	27	12.5	24	5	5	8	18	7.0	46
ATLANTIC CITY WSO	3			17.2	10.6	13.8	- 1.4	24.4	26	6.1	1	0	0			54	- 26	27	12						13.9	NE	16+					
NEWARK	2	1012.2	1013.2	21.1	11.1	15.9	- 0.8	28.9	25+	5.6	1	0	0	8.3	65	93	0	38	11	0	0	0	1.0	30	12.1	24	26	5	10	16	7.0	
TRENTON U	17			20.0	10.6	15.3	- 1.6	31.7	19	6.1	1	0	0			99	7	30	11		0	0			15.2	NW	17	5	11	15	6.7	46
NEW MEXICO																																
ALBUQUERQUE	1619	835.1	1009.1	25.6	7.2	16.5	- 1.9	31.1	26	1.1	19	0	0	- 7.2	24	4	- 15	2	4	3	0	0	1.5	23	21.0	SW	29	14	10	7	3.9	85
CLAYTON	1515			23.3	6.1	14.7	- 0.8	30.6	16	- 0.6	19	0	1			58	- 12	43	8		T	0						15	7	9	4.5	
ROSWELL	1101			30.0	10.6	20.3	0.3	36.1	16	3.9	19	13	0			T	- 33	T	0		0	0			16.1	SW	4					83
NEW YORK																																
ALBANY	84	1002.4	1013.1	19.4	6.1	12.7	- 1.7	30.6	19	- 0.6	15	0	2	6.1	68	88	T	24	13	2	0	0	0.9	26	13.0	W	14	4	10	17	7.1	50
BINGHAMTON	485	955.3	1013.4	17.2	7.2	12.4	- 0.4	29.4	19	1.1	1	0	0	5.6	66	84	- 5	37	11	4	T	0	1.3	27	14.3	NW	20	5	8	18	7.1	44
BUFFALO	215	988.2	1013.9	18.3	6.7	12.5	- 0.2	28.3	19	2.2	1	0	0	4.4	62	40	- 35	16	9	0	0	0	2.1	25	15.2	W	25	8	7	16	6.4	60
NEW YORK U	40	1010.2	1013.2	21.1	11.7	16.3	- 0.6	29.4	18	7.2	4+	0	0	7.8	64	108	14	42	10	3	0	0	0.8	31	10.7	W	4					45
NEW YORK KENNEDY	4	1012.4	1013.5	19.4	11.1	15.3	- 0.4	27.8	17	6.7	4	0	0	7.8	66	66	- 27	26	9	0	0	0	0.7	27	13.9	18	13	7	4	19	6.3	
NEW YORK LA GUARDIA	3	1012.5	1013.6	19.4	11.1	15.2	- 1.5	27.2	25	7.2	4+	0	0	7.2	63	86	- 5	26	11	0	0	0	0.9	32	11.6	NE	30+	6	10	15	6.8	
ROCHESTER	167	992.9	1013.3	18.9	5.6	12.2	- 1.5	31.7	19	0.0	1	0	1	5.6	68	43	- 27	25	9	1	0	0	1.8	28	14.3	SW	25	9	11	11	6.0	64
SYRACUSE	125	998.3	1013.1	19.4	6.7	13.2	- 1.1	33.3	19	2.8	23+	1	0	6.1	64	86	3	30	12	3	0	0	1.3	29	16.1	SW	25	7	10	14	6.5	57

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MAY 197-

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days Sunrise to Sunset: Clear 0-3	No. of days Sunrise to Sunset: Partly cloudy 4-7	No. of days Sunrise to Sunset: Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb	C.	C	C	C	C.		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
NORTH CAROLINA																																
ASHEVILLE	652	939.7	1015.1	23.3	8.9	16.2	- 1.1	28.3	27+	- 1.7	4	0	1	9.4	69	9[illegible]	- 3	32	9	5	0	0	1.2	35	17.9	34	2	7	12	12	6.0	73
CAPE HATTERAS R	2	1014.6	1014.8	22.8	13.3	18.3	- 1.7	28.3	19	3.9	2	0	0	13.9	76	140	39	64	9	4	0	0	1.2	21	13.4	23	6	10	8	13	5.7	61
CHARLOTTE	224	987.5	1014.6	25.0	11.7	18.3	- 2.2	30.6	18	1.1	4	0	0	11.1	68	114	35	54	10	5	0	0	0.8	26	10.7	SW	8+	7	9	15	6.3	74
GREENSBORO	273	983.1	1014.6	23.3	10.6	16.9	- 2.4	28.9	27+	1.7	4	0	0	10.6	71	136	53	49	12	9	0	0	0.8	27	11.6	NW	3	6	14	11	6.1	62
RALEIGH	132	999.0	1014.7	25.0	11.1	18.0	- 1.8	31.1	20+	1.1	4	0	0	12.2	72	119	29	38	10	5	0	0	0.8	27	11.2	24	13+	10	6	15	6.0	60
WILMINGTON	9	1013.5	1014.9	26.1	14.4	20.4	- 0.9	33.3	19	5.6	4	3	0	14.4	72	58	- 31	31	7	5	0	0	1.5	24	13.9	E	13	10	9	12	5.5	72
NORTH DAKOTA																																
BISMARCK	502	955.0	1014.8	18.3	4.4	11.3	- 1.9	26.7	13	- 3.9	2	0	4	2.8	60	34	- 16	12	9	1	T	T	1.3	7	16.5	S	16	9	9	13	6.1	71
FARGO	273	981.7	1014.5	19.4	5.0	12.3	- 0.7	30.0	14	- 1.1	20+	0	4	3.3	58	68	17	35	8	3	T	T	1.1	2	14.3	NW	14	12	7	12	5.6	68
WILLISTON	579	946.2	1014.4	21.1	4.4	12.7	0.1	29.4	13	- 0.6	19+	0	3	1.7	53	58	22	34	8	2	18	T	0.9	8	15.2	W	16	11	10	10	5.1	74
OHIO																																
AKRON	368	969.9	1014.4	20.6	7.2	14.1	- 1.3	28.3	19+	- 1.7	4	0	1	5.6	59	67	- 30	24	12	3	T	T	1.1	28	13.0	30	16	6	10	15	6.6	
CINCINNATI ABBE OB	232			22.2	10.6	16.2	- 1.7	30.0	17	2.8	4	0	0			91	- 6	31	11		0	0			9.4	NW	2					53
CLEVELAND	237	985.8	1014.9	20.0	7.2	13.6	- 0.8	30.0	18	- 2.2	4	0	1	4.4	55	84	- 6	39	12	4	0	0	0.9	25	14.8	SW	25	7	10	14	6.0	71
COLUMBUS	247	984.8	1014.8	21.1	7.8	14.4	- 1.9	29.4	18	- 0.6	1	0	1	6.7	62	93	- 9	27	11	5	0	0	0.6	29	17.0	SW	24	6	11	14	6.4	53
DAYTON	305	978.7	1014.7	21.1	9.4	15.3	- 1.2	28.3	31+	1.7	4	0	0	8.3	66	107	12	27	11	5	0	0	1.0	26	21.0	W	16	7	9	15	6.5	64
MANSFIELD	395			20.0	7.2	13.6	- 0.9	27.8	18	- 1.1	4	0	1	6.1	64	108	13	52	12	7	0	0	1.1	25	11.2	22	25	7	12	12	6.1	
TOLEDO	204	988.8	1014.1	21.1	6.1	13.6	- 1.1	30.6	18	- 0.6	4	0	1	5.0	58	59	- 18	25	10	5	0	0	1.0	27	13.9	SW	25	8	9	14	6.0	69
YOUNGSTOWN	359	971.9	1014.6	19.4	6.1	12.9	- 1.5	29.4	19+	- 1.1	4	0	1	5.0	61	66	- 38	25	12	3	0	0	0.9	29	13.9	30	24	7	9	15	6.6	
OKLAHOMA																																
OKLAHOMA CITY	392	966.5	1012.4	26.7	12.8	19.6	- 0.6	33.3	26	3.9	13	4	0	10.6	59	68	- 64	19	12	8	0	0	2.2	16	17.9	N	26	9	16	6	5.2	67
TULSA	198	988.5	1012.7	25.6	13.3	19.3	- 0.6	31.1	26+	5.0	13	0	0	12.2	66	167	34	40	8	9	0	0	2.4	17	23.2	NW	26	12	9	10	5.2	70
OREGON																																
ASTORIA	2	1018.0	1018.7	15.0	6.7	10.8	- 1.1	25.0	11	2.2	10+	0	0	7.2	81	58	- 23	15	13	0	T	0	2.6	26	15.6	24	16+	4	3	24	8.1	
BURNS U	1265	871.0	1013.1	18.9	3.9	11.2	- 0.7	26.7	27	- 6.1	17	0	5	1.1	54	51	29	25	8		T	T	2.3	31				7	10	14	6.1	
EUGENE	109	1004.7	1018.4	18.9	6.1	12.5	- 0.9	29.4	11	2.2	16+	0	0	7.2	74	64	10	20	11	0	0	0	1.3	25	14.3	21	15	6	7	18	7.2	
MEACHAM	1234	875.7	1014.8	14.4	3.3	9.1	0.2	23.9	11	- 3.3	17	0	8			77	14	17	10		T	0			11.6	25	19	7	12	12	6.5	
MEDFORD	396	969.2	1016.9	20.6	6.1	13.2	- 0.9	30.6	11	0.0	17	0	1	6.7	67	29	- 9	12	6	2	0	0	1.7	32	13.0	35	20	6	10	15	6.5	
PENDLETON	452	961.4	1014.6	23.3	8.3	15.8	0.5	33.3	11	3.3	21+	1	0	5.6	55	36	7	10	7	3	T	0	2.6	29	17.9	28	16	8	9	14	6.0	
PORTLAND	6	1016.3	1017.5	20.0	7.8	13.8	- 0.3	32.8	11	4.4	21+	1	0	6.7	65	25	- 25	8	11	1	0	0	1.6	30	13.9	SW	15	7	5	19	7.1	58
SALEM	60	1010.5	1018.0	18.9	4.4	11.8	- 1.7	31.7	11	0.0	21+	0	2	6.1	70	48	- 6	15	10	0	T	0	1.3	27	12.5	21	15	6	6	19	6.8	
SEXTON SUMMIT R	1169	884.2	1017.0	14.4	3.3	8.8	- 1.2	26.7	11	- 2.8	17	0	8			40	- 16	17	12		74	25			16.1	36	20	7	10	14	6.3	
PACIFIC AREA																																
GUAM TAGUAC R	110	997.0	1009.5	30.0	22.8	26.4	- 0.4	32.2	13	20.6	3	1	0	23.9	86	576	470	252	27	5	0	0	4.1	10	21.0	E	3	0	6	25	8.8	39
JOHNSTON	2	1014.6	1015.1	27.8	23.9	25.8	- 0.4	28.3	31	21.1	10	0	0	21.1	74	12	- 13	3	12	0	0	0	7.4	8	13.9	NE	24	7	12	12	6.1	67
KOROR R	29	1004.7	1008.3	31.1	24.4	27.9	0.6	33.3	3	22.2	28	10	0	24.4	85	414	43	203	22	5	0	0	0.4	19	11.2	E	28	0	6	25	9.0	60
KWAJALEIN	2	1009.1	1009.9	30.0	24.4	27.1	0.2	31.7	7	22.2	11+	0	0	24.4	84	474	266	109	25	2	0	0	7.1	8	14.8	10	3	0	4	27	9.0	
MAJURO	3	1010.2	1010.4	28.9	24.4	26.7	0.2	30.0	30+	22.8	16+	0	0	23.9	84	504	181	110	29	1	0	0	5.8	7	14.3	E	24	0	5	26	9.0	43
PAGO PAGO	4	1011.5	1011.7	29.4	22.8	26.2		30.6	25+	20.6	27	0	0	22.8	83	121		23	14	0	0	0	1.5	10	11.6	SE	31	5	15	11	6.4	47
PONAPE P	37	1003.7	1009.2	30.0	22.8	26.6	- 0.3	31.7	31+	21.7	25+	0	0	23.3	84	625	109	137	29	3	0	0	2.9	8	7.6	NE	23+	0	4	27	9.1	53
TRUK MOEN ISLAND	2	1008.8	1009.0	30.0	24.4	27.3	0.2	31.7	10	23.3	26+	0	0	23.9	82	389	31	142	27	2	0	0	2.5	9	34.9	S	1	0	1	30	9.6	64
WAKE	3	1014.2	1014.4	30.6	24.4	27.5	0.9	31.7	16+	22.8	27+	0	0	21.7	71	60	9	24	21	0	0	0	5.1	9	12.1	E	9+	13	13	5	4.9	80
YAP R	13			30.6	23.9	27.2	- 0.6	31.7	7+	22.2	25	0	0			326	84	44	27	2	0	0			8.9	E	30+	0	4	27	9.1	87
PENNSYLVANIA																																
ALLENTOWN	118	999.7	1013.8	20.0	7.8	13.8	- 1.9	30.6	19	2.8	15+	0	0	7.8	72	135	31	38	11	3	0	0	0.9	30	12.5	26	4	5	11	15	6.8	
ERIE	223	987.8	1014.6	16.7	5.6	11.1	- 2.5	28.9	19	0.6	4+	0	0	3.3	61	56	- 34	18	9	2	0	0	1.1	25	11.2	23	25	9	8	14	6.0	
HARRISBURG	103	1001.4	1013.9	21.1	10.0	15.6	- 1.5	31.7	19	2.2	1	0	0	8.3	64	135	36	31	13	2	0	0	1.0	30	11.6	WNW	4	8	7	16	6.6	49
PHILADELPHIA	2	1012.5	1013.6	21.1	11.1	16.1	- 0.9	30.6	19	6.7	1	0	0	8.3	63	104	9	44	12	4	0	0	0.9	31	14.8	W	25	6	7	18	7.1	46
PITTSBURGH	347	970.5	1014.4	20.0	7.2	13.7	- 1.8	28.9	19+	- 1.1	4	0	2	5.6	59	98	- 1	62	11	2	0	0	1.7	30	11.2	23	25+	5	9	17	7.0	49
SCRANTON	283	980.0	1014.2	19.4	7.2	13.3	- 2.1	32.2	19	0.6	1	1	0	6.7	68	86	- 14	44	12	0	0	0	0.9	27	13.9	S	25	6	8	17	6.9	49
WILLIAMSPORT	160	994.9	1014.0	21.1	8.3	14.7	- 1.1	30.6	19	0.6	1	0	0	8.3	69	73	- 30	31	12	3	0	0	1.0	27	11.2	29	17	7	6	18	7.1	
RHODE ISLAND																																
BLOCK ISLAND	34			15.0	8.3	11.8	- 0.3	20.6	26+	5.6	1	0	0			116	40	41	14		0	0										
PROVIDENCE	16	1010.5	1013.0	19.4	9.4	14.5	0.3	27.2	12	5.0	1	0	0	7.2	68	97	12	27	13	1	0	0	0.6	26	11.2	23	26+	5	10	16	7.0	43

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0.3	No. of days (sunrise to sunset): Partly cloudy 4.7	No. of days (sunrise to sunset): Cloudy, 8.10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm.	M.p.s		M.p.s							%
SOUTH CAROLINA																																
CHARLESTON	12	1013.5	1015.5	27.8	16.1	21.7	- 1.0	33.3	20+	6.1	4	5	0	15.0	69	135	14	37	7	6	0	0	1.5	22	17.9Y	S	13	14	7	10	5.2	73
CHARLESTON U	3			25.6	17.8	21.8	- 1.2	31.1	18	9.4	4	0	0			105	26	59	6		0	0			14.3	SW	8					
COLUMBIA	65	1007.1	1015.0	28.3	13.9	21.0	- 1.3	33.9	27	2.2	4	6	0	13.9	67	69	- 21	32	8	7	0	0	1.3	26	11.2	32	2	9	9	13	5.8	73
GRNVLLE SPRTNBRG	292	980.4	1014.5	25.6	11.7	18.5	- 2.3	31.7	27	0.6	4	0	0	10.6	63	145	64	66	9	3	0	0	1.0	26	13.0	Sw	5	10	11	10	5.5	60
SOUTH DAKOTA																																
ABERDEEN	395	967.2	1014.0	21.1	5.6	13.1	- 0.9	28.3	16	- 3.3	12	0	3	3.9	58	43	- 16	16	8	2	0	0	1.6	4	14.3	10	21	11	8	12	5.7	
HURON	390	967.2	1013.7	20.0	5.0	12.4	- 1.8	28.3	14	- 3.9	12	0	5	5.6	64	51	- 9	23	10	6	0	0	0.8	6	13.4	S	16+	11	8	12	5.7	74
RAPID CITY	964	903.2	1013.5	18.9	5.6	12.0	- 1.2	27.2	16	0.0	20+	0	2	4.4	64	94	26	49	11	4	0	0	1.3	2	17.9	SW	16	6	12	13	6.4	64
SIOUX FALLS	432	962.8	1014.0	20.6	5.6	12.9	- 1.7	28.9	14	- 3.3	12	0	5	4.4	59	27	- 59	22	7	3	0	0	0.7	3	13.0	13	21	14	7	10	5.2	
TENNESSEE																																
BRISTOL	459	961.4	1015.2	22.8	10.0	16.4	- 2.3	29.4	18	- 0.6	4	0	1	9.4	66	111	24	46	10	4	0	0	0.9	29	13.0	36	6	9	7	15	6.1	
CHATTANOOGA	203	990.2	1014.7	25.6	11.7	18.4	- 2.8	30.6	27	1.1	4	0	0	11.1	65	55	- 34	26	9	6	0	0	0.4	28	11.6	NW	2	12	9	12	5.4	62
KNOXVILLE	299	980.4	1015.0	23.3	12.2	17.7	- 2.1	28.9	24+	1.7	4	0	0	10.0	63	96	7	45	11	6	0	0	1.0	27	13.4	SW	25	7	10	14	6.2	56
MEMPHIS	79	1005.1	1015.3	25.0	13.3	19.2	- 2.1	30.0	31+	6.1	4	0	0	11.1	60	99	- 8	46	7	2	0	0	0.8	19	12.1	N	12	13	6	12	5.2	73
NASHVILLE	180	993.2	1014.9	23.9	10.6	17.4	- 2.9	29.4	18	1.7	4	0	0	11.1	68	74	- 20	26	7	4	0	0	0.8	25	13.9	SW	24	11	10	10	5.5	68
OAK RIDGE R	276			23.9	11.1	17.5	- 1.7	30.0	18	0.6	4	0	0			182	87	101	9		0	0			16.1Y		24	10	10	11	5.8	
TEXAS																																
ABILENE	537	950.9	1011.4	30.0	15.0	22.4	0.4	36.1	23	2.8	13	10	0	8.3	48	55	- 55	33	6	9	0	0	2.8	17	18.3	St	29	11	9	11	5.3	76
AMARILLO	1098	888.3	1009.6	26.7	10.0	18.3	- 0.9	35.0	16	0.6	19	5	0	1.7	41	23	- 62	10	6	7	0	0	3.3	19	18.8	SE	29+	16	7	8	4.8	85
AUSTIN	182	990.5	1012.1	30.6	18.9	24.6	0.6	33.3	28+	9.4	14	11	0	16.1	63	35	- 59	19	3	3	0	0	2.7	15	13.4	SW	24	5	8	18	6.6	48
BROWNSVILLE	6	1011.2	1011.8	30.6	22.2	26.4	0.3	33.9	6	16.1	14+	8	0	20.6	75	63	3	36	4	3	0	0	5.3	15	15.2	E	10	6	15	10	6.1	60
CORPUS CHRISTI	12	1010.8	1012.1	30.6	21.1	25.8	0.6	35.0	10	12.8	3	4	0	21.1	79	116	40	92	4	3	0	0	5.2	13	15.6	W	10+	5	9	18	6.8	59
DALLAS	147	999.6	1012.5	28.9	17.2	23.1	0.3	33.3	26	8.9	13	6	0	13.9	59	96	- 27	65	8	5	0	0	2.9	14	15.6	SE	17	9	10	12	5.7	60
DEL RIO	313	974.6	1010.0	32.2	18.9	25.7	- 0.1	37.2	23	11.1	14	20	0	14.4	53	15	- 54	9	4	10	0	0	4.2	12	16.5	32	11	6	8	17	6.8	
EL PASO	1194	879.1	1008.4	30.0	14.4	22.3	0.1	34.4	26+	7.8	13	13	0	- 4.4	18	T	- 10	T	0	1	0	0	2.8	25	21.9	Sw	4	17	7	7	3.4	94
FORT WORTH	164	992.9	1013.2	27.8	15.0	21.4	- 1.2	31.7	26	5.6	14	0	0	14.4	68	48	- 69	22	6	6	0	0	2.4	15	15.6	J	27	9	10	12	5.5	
GALVESTON U	2			26.1	22.2	23.9	- 0.4	28.9	28	15.6	13	0	0			33	- 38	20	2		0	0			14.4	NW	11					42
HOUSTON INTERCON	29	1010.2	1014.0	28.9	17.8	23.4	- 0.6	32.2	28	8.3	14	1	0	18.3	75	87	- 22	48	6	7	0	0	2.2	14	9.4	31	11+	5	11	15	6.6	51
LUBBOCK	992	900.8	1009.8	28.9	12.2	20.4	0.3	36.7	16	2.8	13	6	0	3.9	41	62	- 19	43	5	6	0	0	1.7	18	14.8	20	4	13	12	6	4.3	
MIDLAND	869	913.3	1009.7	30.0	14.4	22.3	- 0.7	36.7	22+	3.9	13	9	0	3.9	37	70	18	65	6	7	0	0	2.2	16	13.0	27	29+	10	10	11	5.3	
PORT ARTHUR	5	1013.9		28.9	18.9	24.0	0.3	31.1	28+	11.1	1	0	0	20.0	81	88	- 37	44	6	6	0	0	2.6	15	18.1	Sw	9	7	12	12	6.5	61
SAN ANGELO	580	945.1	1010.1	31.7	16.7	24.0	0.5	36.7	16	2.8	13	17	0	9.4	45	36	- 45	36	2	5	0	0	2.5	17	13.9	14	29	11	5	14	5.7	
SAN ANTONIO	240	984.4	1011.9	32.2	19.4	25.6	1.6	34.4	23+	8.9	14	20	0	16.1	61	39	- 49	21	7	6	0	0	2.6	13	19.2	NW	24	5	10	16	6.7	60
VICTORIA	32	1008.8	1012.8	30.0	20.0	25.0	0.4	33.3	28	10.6	14	5	0	18.3	72	25	- 79	24	3	2	0	0	3.8	15	21.0Y	S	10	6	9	16	6.8	
WACO	153	994.6	1012.4	30.0	17.8	23.9	0.4	33.3	31+	7.2	14	7	0	16.1	65	19	- 97	9	8	12	0	0	3.3	15	25.7	16	24	9	10	12	5.6	
WICHITA FALLS	303	975.3	1011.5	31.1	13.3	22.0	- 0.3	37.8	16	5.6	13	13	0	10.6	55	27	- 90	11	8	11	0	0	2.4	12	17.0	28	31	13	9	10	4.9	
UTAH																																
MILFORD	1533	842.9		20.6	2.8	11.6	- 2.0	27.2	26+	- 3.9	18	0	5			27	9	10	9		T	0						8	10	13	5.8	
SALT LAKE CITY	1286	867.9	1010.6	21.1	6.7	13.7	- 1.3	30.0	26	0.6	18+	0	0	2.8	53	34	- 2	8	12	9	36	T	0.8	16	17.9	W	21	8	9	14	6.3	67
WENDOVER	1291	867.3	1011.0	20.0	8.3	14.2	- 2.1	28.3	26	2.2	17	0	0			43	26	18	10		T	T						8	10	13	5.9	
VERMONT																																
BURLINGTON	101	1000.3	1012.7	18.9	6.1	12.5	0.4	32.2	19	- 1.7	15	1	2	6.1	68	75	- 1	27	16	1	0	0	0.4	24	16.1	S	12	6	9	16	5.8	66
VIRGINIA																																
LYNCHBURG	279			23.3	10.6	16.7	- 1.8	31.1	19	2.2	4	0	0			230	149	64	15		0	0			11.2	Sw	25	13	9	12	5.8	60
NORFOLK	7	1013.2	1014.1	23.3	13.3	18.3	- 1.4	30.0	26+	5.6	1	0	0	11.7	70	113	28	25	11	6	0	0	0.6	19	17.0	Sw	2	16	7	14	5.6	71
RICHMOND	50	1007.8	1014.2	23.9	11.1	17.4	- 2.1	32.2	19	3.9	5+	1	0	10.6	69	173	79	56	13	6	0	0	0.7	27	13.0	Sw	13+	10	8	13	6.2	67
ROANOKE	350	972.6	1014.2	22.8	10.0	16.4	- 2.3	31.1	19	1.7	1	0	0	9.4	66	191	94	51	15	7	0	0	1.3	29	12.7	36	16	10	7	14	5.9	
WALLOPS ISLAND	3			20.0	12.2	16.1		28.9	6	6.7	1	0	0			181		41	13		0	0			18.3Y	WSW	6					
WASHINGTON																																
OLYMPIA	59	1010.2	1017.5	18.9	5.6	12.1	- 0.8	31.1	11	0.6	21+	0	0	7.2	75	38	- 13	15	11	0	T	T	1.3	21	11.6	24	16+	3	9	19	7.2	
QUILLAYUTE	55	1010.5	1018.1	15.6	5.0	10.3	- 0.8	30.6	11	0.6	17	0	0	6.1	77	99	- 13	41	14	0	T	0	1.4	27	11.6	W	16	4	8	19	7.4	37
SEATTLE TACOMA	122	1000.7	1017.3	17.2	7.8	12.5	- 0.6	30.6	11	5.0	21+	0	0	6.7	70	36	- 8	9	13	0	0	0	0.6	22	13.0	S	15+	5	6	20	7.1	43
SPOKANE	718	929.9	1013.1	20.0	7.2	13.5	0.1	30.0	12	1.1	21+	0	0	2.8	53	35	5	11	9	1	0	0	1.4	21	13.9	SW	17	7	10	14	6.3	56
STAMPEDE PASS R	1206	878.8		10.0	2.2	6.1	- 0.6	19.4	11	- 2.8	17	0	13			117	9	57	15		754	3454						4	5	22	7.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, ice pellets: Total	Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days: Clear 0.3	No. of days: Partly cloudy 4.7	No. of days: Cloudy 8.0	Sky cover tenths: sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p.s		M p.s							
WASHINGTON																																
WALLA WALLA U	289			22.2	9.4	15.8	- 0.3	31.1	11	3.9	21+	0	0			86	48	49	8		0	0			13.0	W	16	7	10	14	6.5	40
YAKIMA	321	975.6	1013.8	25.0	7.2	15.9	1.2	31.1	28+	1.1	20+	0	0	1.7	41	14	0	9	4	0	0	0	2.5	30	15.6	23	15	12	9	10	5.7	
WEST INDIES																																
SAN JUAN P.R.	4	1013.5	1016.0	31.1	23.9	27.4	1.4	33.3	30	22.8	18+	3	0	20.0	68	98	- 83	47	17	3	0	0	3.0	11	13.9	1	5	5	15	11	6.3	50
WEST VIRGINIA																																
BECKLEY	763	926.9	1014.7	19.4	7.8	13.4	- 2.6	28.9	18	0.0	4+	0	2	6.7	68	158	54	47	17	4	T	T	1.7	26	10.3	28	25+	8	7	16	6.7	
CHARLESTON	286	980.7	1014.8	22.2	8.9	15.5	- 2.7	31.1	18	2.2	4+	0	0	8.3	66	131	37	34	15	3	0	0	0.9	25	10.3	29	4	6	9	16	6.7	
ELKINS	594	941.1		20.6	5.6	13.0	- 2.2	30.0	19+	- 4.4	1	0	5			107	- 9	24	15		T	T						4	11	16	7.3	
HUNTINGTON	252	984.8	1014.6	22.2	9.4	15.9	- 2.2	30.0	18	2.2	4	0	0	8.9	66	153	55	42	14	4	0	0	0.9	25	10.3	24	25	4	12	15	6.8	
PARKERSBURG U	187			21.7	9.4	15.6	- 2.2	31.1	18	1.7	1	0	0			97	3	22	11		0	0			15.2	N	16					53
WISCONSIN																																
GREEN BAY	208	988.2	1013.6	18.9	4.4	11.7	- 1.0	28.3	15	- 1.1	3	0	2	4.4	64	42	- 35	26	7	1	T	T	0.4	29	17.0	SW	19	11	8	12	5.8	58
LA CROSSE	198	989.5	1014.0	20.6	5.6	12.9	- 2.2	28.3	13	- 3.3	3	0	2	5.6	66	124	29		11	6	0		0.5	27								
MADISON	262	982.4	1013.7	21.1	4.4	12.8	- 0.6	30.0	17	- 3.9	3	0	5	4.4	59	25	- 60	13	7	5	0	0	0.8	25	14.3	SW	19+	8	10	13	5.7	62
MILWAUKEE	205	988.8	1014.3	16.7	4.4	10.6	- 1.3	27.2	15	- 0.6	4	0	2	2.8	60	23	- 57	12	8	2	T	T	0.9	30	18.8	SW	18	7	14	10	5.6	66
WYOMING																																
CASPER	1627	835.4	1012.6	17.8	2.8	10.1	- 1.7	28.9	28	- 1.1	19+	0	8	2.8	68	142	90	47	13	6	56	1	0.8	36	14.8	29	16	4	13	14	6.8	
CHEYENNE	1867	811.0	1013.4	16.1	3.3	9.6	- 2.1	22.8	16+	- 1.7	19	0	3	1.1	61	60	- 4	22	12	7	10	T	1.9	31	19.2	N	10	4	10	17	7.2	49
LANDER	1696	827.3	1012.2	17.2	3.9	10.5	- 1.1	27.8	28	- 1.7	19+	0	3	0.6	54	126	58	43	11	6	38	T	0.9	27	17.0	SW	13	1	14	16	7.3	69
SHERIDAN	1208	877.4	1013.7	19.4	4.4	11.8	- 0.2	27.8	13	- 1.7	19+	0	3	2.2	54	62	- 3	21	11	1	T	T	1.2	32	10.5	SE	4	7	10	14	6.2	63

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1 C. or above for Alaskan Stations.
Y Peak Gust
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
[illegible]	74	3110	2551
HUNTSVILLE	84	3212	[illegible]
MOBILE	6	1467	[illegible]
MONTGOMERY	34	2351	2291
ALASKA			
ANCHORAGE	717	11260	10366
ANNETTE	[illegible]	7295	6748
BARROW	[illegible]	20664	19217
FAIRBANKS	[illegible]	20597	18938
BETHEL	917	14170	12794
BETTLES	728	17431	
BIG DELTA	687	[illegible]	
COLD BAY	945	9884	9289
[illegible]	[illegible]	15098	14057
[illegible]	743	14672	
HOMER	820	10795	
JUNEAU	658	9771	8694
KING SALMON	838	12524	10935
[illegible]	[illegible]	16711	15469
MC GRATH	713	15549	14025
NOME	1087	15440	13598
ST. PAUL ISLAND	1148	11257	[illegible]
SHEMYA	872	9076	8991
SUMMIT	981	15344	
TALKEETNA	762	12915	11259
UNALAKLEET	926	15344	
YAKUTAT	840	10249	8657
ARIZONA			
FLAGSTAFF	567	7001	6974
[illegible]	0	1327	1765
TUCSON	12	1722	1800
WINSLOW	168	4930	4782
YUMA	4	1083	1217
ARKANSAS			
FORT SMITH	37	3459	3292
LITTLE ROCK	55	3168	3219
CALIFORNIA			
BAKERSFIELD	22	2049	2122
BISHOP	234	4309	4191
BLUE CANYON	565	[illegible]	5312
BURBANK	438	4726	4358
FRESNO	81	2620	2492
LONG BEACH	72	1448	1693
LOS ANGELES	130	1532	1745
LOS ANGELES U	77	1120	1331
MT SHASTA R	414	5930	5563
OAKLAND	243	3034	2780
RED BLUFF	87	2824	2515
SACRAMENTO	114	2808	2767
SANDBERG R	461	4664	4152
SAN DIEGO	129	1473	1463
SAN FRANCISCO	258	3164	2889
SAN FRANCISCO U	317	3234	2821
SANTA MARIA	330	3446	2802
STOCKTON	77	2701	2676
COLORADO			
ALAMOSA	543	8430	8361
COLORADO SPRINGS	357	6505	6339
DENVER	329	6159	6217
GRAND JUNCTION	182	5625	5626
PUEBLO	256	5084	5447
CONNECTICUT			
BRIDGEPORT	234	5484	5590
HARTFORD	215	6300	6148
DELAWARE			
WILMINGTON	153	4872	4924
DIST.OF COLUMBIA			
WASHINGTON DULLES	168	5022	
WASHINGTON NATIONAL	85	4194	4224
FLORIDA			
APALACHICOLA U	5	1394	1508
DAYTONA BEACH	7	992	879
FORT MYERS	0	465	442
JACKSONVILLE	14	1396	1239
KEY WEST	0	61	108
LAKELAND U	0	686	661
MIAMI	0	213	244
ORLANDO	0	591	766
PENSACOLA	5	1537	1463
TALLAHASSEE	26	1984	1485
TAMPA	2	770	683
WEST PALM BEACH	0	381	253
GEORGIA			
ATHENS	50	3045	2929
ATLANTA	56	3059	2983
AUGUSTA	39	2803	2397
COLUMBUS	25	2286	2383
MACON	19	2242	[illegible]
ROME	65	[illegible]	3326
SAVANNAH	15	1934	1819

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
IDAHO			
BOISE	176	5523	[illegible]
LEWISTON	171	5312	5452
POCATELLO	376	7306	6892
ILLINOIS			
CAIRO U	64	3953	3821
CHICAGO O HARE	262	6286	[illegible]
CHICAGO MIDWAY	257	6209	6107
MARINE	242	[illegible]	6369
PEORIA	241	[illegible]	5992
ROCKFORD	258	6927	6770
SPRINGFIELD	168	5495	5411
INDIANA			
EVANSVILLE	90	4780	4435
FORT WAYNE	234	6272	6166
INDIANAPOLIS	198	5755	5660
SOUTH BEND	280	6481	6379
IOWA			
BURLINGTON	202	6348	6081
DES MOINES	211	[illegible]	6769
DUBUQUE	295	7462	7298
SIOUX CITY	182	7039	6922
WATERLOO	354	8116	7266
KANSAS			
CONCORDIA	191	5976	5461
DODGE CITY	142	5368	4977
GOODLAND	269	5960	6099
TOPEKA	144	5532	5170
WICHITA	95	5099	4614
KENTUCKY			
COVINGTON	157	4944	5241
LEXINGTON	198	4988	4683
LOUISVILLE	137	4638	4651
LOUISIANA			
ALEXANDRIA	22	2224	1921
BATON ROUGE	3	1736	1560
LAKE CHARLES	0	1361	1489
NEW ORLEANS	2	1519	1385
SHREVEPORT	15	2054	2184
MAINE			
CARIBOU	411	9310	9584
PORTLAND	373	7624	7400
MARYLAND			
BALTIMORE	134	4533	4654
MASSACHUSETTS			
BLUE HILL OBS R	303	6627	6299
BOSTON	287	6065	5598
WORCESTER	327	7280	6891
MICHIGAN			
ALPENA	450	8302	8350
DETROIT	238	6329	6190
DETROIT METRO	278	6626	6455
FLINT	324	7066	6810
GRAND RAPIDS	342	7244	6927
HOUGHTON LAKE	415	8318	8204
LANSING	318	7098	6840
MARQUETTE	513	8202	8216
MUSKEGON	352	7079	6818
SAULT STE MARIE	538	9371	8847
MINNESOTA			
DULUTH	518	9873	9802
INTERNATIONAL FALLS	451	10538	10432
MINNEAPOLIS	297	8201	8301
ROCHESTER	324	8403	8202
ST CLOUD	352	8978	8774
MISSISSIPPI			
JACKSON	40	2372	2203
MERIDIAN	40	2503	2286
MISSOURI			
COLUMBIA REGIONAL	147	5031	5034
KANSAS CITY	92	4708	4711
ST JOSEPH	79	5034	5469
ST LOUIS	122	4977	4885
SPRINGFIELD	116	4756	4555
MONTANA			
BILLINGS	322	7494	6947
GLASGOW	285	9165	8846
GREAT FALLS	320	7740	7564
HAVRE	285	8997	8538
HELENA	414	8213	7934
KALISPELL	344	7997	7984
MILES CITY	257	8113	7624
MISSOULA	319	7365	7906

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
NEBRASKA			
GRAND ISLAND	194	6542	[illegible]
LINCOLN U	173	6158	5834
NORFOLK	222	[illegible]	6931
NORTH PLATTE	311	7126	6627
OMAHA	178	6323	6188
SCOTTSBLUFF	321	6968	6598
VALENTINE	291	7618	7341
NEVADA			
ELKO	515	7227	7241
ELY	649	7751	7508
LAS VEGAS	47	[illegible]	2709
RENO	429	5940	6143
WINNEMUCCA	574	6307	6608
NEW HAMPSHIRE			
CONCORD	332	7645	7308
MT WASHINGTON OBS	949	13292	13214
NEW JERSEY			
ATLANTIC CITY	228	5135	4797
ATLANTIC CITY U	246	4795	4717
NEWARK	155	4885	5058
TRENTON U	182	4976	4968
NEW MEXICO			
ALBUQUERQUE	122	4612	4348
CLAYTON	215	5308	5137
ROSWELL	30	3467	3793
NEW YORK			
ALBANY	315	7266	6830
BINGHAMTON	339	7559	7187
BUFFALO	327	6810	6984
NEW YORK U	135	4988	4862
NEW YORK KENNEDY	180	5145	5207
NEW YORK LA GUARDIA	179	4900	4805
ROCHESTER	342	7041	[illegible]
SYRACUSE	295	6985	6711
NORTH CAROLINA			
ASHEVILLE	137	4151	4457
CAPE HATTERAS R	65	2881	2612
CHARLOTTE	73	3481	3191
GREENSBORO	120	4175	3805
RALEIGH	87	3775	3393
WILMINGTON	27	2535	2347
NORTH DAKOTA			
BISMARCK	383	9290	8734
FARGO	333	9276	9127
WILLISTON	310	9353	9102
OHIO			
AKRON	248	6052	5998
CINCINNATI OBS	153	5038	4797
CLEVELAND	277	6478	6137
COLUMBUS	230	5765	5633
DAYTON	193	5595	5592
MANSFIELD	275	6127	6043
TOLEDO	272	6582	6434
YOUNGSTOWN	314	6728	6357
OKLAHOMA			
OKLAHOMA CITY	36	3757	3725
TULSA	37	3779	3860
OREGON			
ASTORIA	415	5323	4955
BURNS U	390	7153	6780
EUGENE	318	4792	4591
MEACHAM	511	7823	7535
MEDFORD	280	4749	4930
PENDLETON	169	5284	5064
PORTLAND	253	4560	4530
SALEM	355	5238	4610
SEXTON SUMMIT R	528	6516	5975
PENNSYLVANIA			
ALLENTOWN	250	5990	5786
ERIE	404	6891	6391
HARRISBURG	165	5232	5239
PHILADELPHIA	140	4845	5089
PITTSBURGH	264	6097	5948
SCRANTON	292	6669	6221
WILLIAMSPORT	212	5744	5910
RHODE ISLAND			
BLOCK ISLAND	357	5851	5705
PROVIDENCE	212	6063	5903
SOUTH CAROLINA			
CHARLESTON	16	[illegible]	2033
CHARLESTON U	14	1913	[illegible]
COLUMBIA	27	2738	2484
GRNVLLE SPRTNBRG	73	3488	3044
SOUTH DAKOTA			
ABERDEEN	287	8403	8383
HURON	325	[illegible]	[illegible]
RAPID CITY	344	7687	7219
SIOUX FALLS	297	8194	7761

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
TENNESSEE			
[illegible]	135	4238	4143
CHATTANOOGA	73	[illegible]	3254
KNOXVILLE	76	3663	3494
MEMPHIS	50	3287	3232
NASHVILLE	101	3952	3678
OAK RIDGE R	87	3918	3817
TEXAS			
ABILENE	22	2455	2624
AMARILLO	[illegible]	4077	[illegible]
AUSTIN	0	1400	1711
BROWNSVILLE	[illegible]	388	600
CORPUS CHRISTI	0	647	[illegible]
DALLAS	7	2002	2363
DEL RIO	[illegible]	1209	[illegible]
EL PASO	5	2578	2700
FORT WORTH	19	2224	2405
GALVESTON U	[illegible]	968	1235
HOUSTON INTERCON	[illegible]	1420	[illegible]
LUBBOCK	30	3423	3578
MIDLAND	15	2444	2591
PORT ARTHUR	[illegible]	1142	1447
SAN ANTONIO	[illegible]	1911	2255
VICTORIA	1	1229	[illegible]
WACO	5	997	1173
WICHITA FALLS	15	1668	2030
	15	3078	[illegible]
UTAH			
MILFORD	367	6392	6410
SALT LAKE CITY	258	5887	[illegible]
WENDOVER	227	6057	5727
VERMONT			
BURLINGTON	336	8391	8179
VIRGINIA			
LYNCHBURG	[illegible]	4313	4166
NORFOLK	69	3326	3421
RICHMOND	[illegible]	[illegible]	3865
ROANOKE	143	4306	4150
WALLOPS ISLAND	135	[illegible]	
WASHINGTON			
OLYMPIA	344	5736	5059
QUILLAYUTE	445	5871	5469
SEATTLE TACOMA	211	4998	[illegible]
SPOKANE	270	6630	6520
STAMPEDE PASS R	764	9152	8830
WALLA WALLA U	177	4655	4760
YAKIMA	158	5834	5872
WEST INDIES			
SAN JUAN P.R.	[illegible]	0	
WEST VIRGINIA			
BECKLEY	280	[illegible]	5352
CHARLESTON	184	4943	4467
ELKINS	[illegible]	6190	5627
HUNTINGTON	169	4632	4434
PARKERSBURG U	148	4939	4748
WISCONSIN			
GREEN BAY	365	8376	[illegible]
LA CROSSE	[illegible]	7971	7520
MADISON	312	7830	7761
MILWAUKEE	421	7709	7500
WYOMING			
CASPER	456	7711	7281
CHEYENNE	481	7405	7176
LANDER	428	7818	7717
SHERIDAN	[illegible]	7823	7533

COOLING DEGREE DAYS

(Base 65°F.)

MAY 1971

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	90	126	
HUNTSVILLE	75	125	
MOBILE	260	479	
MONTGOMERY	142	209	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	2	3	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	0	0	
BIG DELTA	0	0	
COLD BAY	0	0	
FAIRBANKS	0	0	
GULKANA	0	0	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	0	0	
MC GRATH	0	0	
NOME	0	0	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	0	
PHOENIX	265	457	
TUCSON	152	254	
WINSLOW	20	21	
YUMA	259	492	
ARKANSAS			
FORT SMITH	86	118	
LITTLE ROCK	79	109	
CALIFORNIA			
BAKERSFIELD	126	165	
BISHOP	8	8	
BLUE CANYON	0	0	
EUREKA	0	0	
FRESNO	64	72	
LONG BEACH	24	80	
LOS ANGELES	23	67	
LOS ANGELES U	50	211	
MT SHASTA R	0	0	
OAKLAND	0	0	
RED BLUFF	53	53	
SACRAMENTO	22	22	
SANDBERG R	0	0	
SAN DIEGO	7	34	
SAN FRANCISCO	0	0	
SAN FRANCISCO U	0	0	
SANTA MARIA	0	7	
STOCKTON	37	37	
COLORADO			
ALAMOSA	0	0	
COLORADO SPRINGS	1	1	
DENVER	0	0	
GRAND JUNCTION	36	36	
PUEBLO	4	4	
CONNECTICUT			
BRIDGEPORT	1	1	
HARTFORD	7	7	
DELAWARE			
WILMINGTON	16	16	
DIST.OF COLUMBIA			
WASHINGTON DULLES	21	21	
WASHINGTON NATIONAL	52	52	
FLORIDA			
APALACHICOLA U	272	418	
DAYTONA BEACH	270	569	
FORT MYERS	383	900	
JACKSONVILLE	231	441	
KEY WEST	492	1491	
LAKELAND U	358	767	
MIAMI	444	1356	
ORLANDO	411	913	
PENSACOLA	263	435	
TALLAHASSEE	174	282	
TAMPA	342	714	
WEST PALM BEACH	434	1045	
GEORGIA			
ATHENS	111	150	
ATLANTA	115	153	
AUGUSTA	122	148	
COLUMBUS	160	224	
MACON	185	268	
ROME	82	102	
SAVANNAH	210	334	
HAWAII			
HILO	232	963	
HONOLULU	355	1450	
KAHULUI	323	1248	
LIHUE	376	1404	
IDAHO			
BOISE	31	31	
LEWISTON	35	35	
POCATELLO	0	0	
ILLINOIS			
CAIRO U	80	129	
CHICAGO O HARE	27	27	
CHICAGO MIDWAY	29	31	
MOLINE	32	41	
PEORIA	22	36	
ROCKFORD	16	17	
SPRINGFIELD	33	65	
INDIANA			
EVANSVILLE	49	77	
FORT WAYNE	19	21	
INDIANAPOLIS	17	19	
SOUTH BEND	17	20	
IOWA			
BURLINGTON	30	50	
DES MOINES	26	39	
DUBUQUE	15	16	
SIOUX CITY	19	26	
WATERLOO	5	7	
KANSAS			
CONCORDIA	24	29	
DODGE CITY	53	56	
GOODLAND	5	5	
TOPEKA	42	66	
WICHITA	65	84	
KENTUCKY			
COVINGTON	33	33	
LEXINGTON	25	25	
LOUISVILLE	35	37	
LOUISIANA			
ALEXANDRIA	152	270	
BATON ROUGE	249	435	
LAKE CHARLES	295	483	
NEW ORLEANS	252	501	
SHREVEPORT	203	332	
MAINE			
CARIBOU	2	2	
PORTLAND	0	0	
MARYLAND			
BALTIMORE	24	24	
MASSACHUSETTS			
BLUE HILL OBS R	4	4	
BOSTON	6	6	
WORCESTER	0	0	
MICHIGAN			
ALPENA	0	0	
DETROIT	23	24	
DETROIT METRO	14	14	
FLINT	11	11	
GRAND RAPIDS	8	8	
HOUGHTON LAKE	5	5	
LANSING	14	14	
MARQUETTE U	6	6	
MUSKEGON	5	5	
SAULT STE MARIE	0	0	
MINNESOTA			
DULUTH	0	0	
INTERNATIONAL FALLS	0	0	
MINNEAPOLIS	5	7	
ROCHESTER	2	2	
ST CLOUD	1	1	
MISSISSIPPI			
JACKSON	138	233	
MERIDIAN	129	197	
MISSOURI			
COLUMBIA REGIONAL	41	69	
KANSAS CITY	81	140	
ST JOSEPH	97	155	
ST LOUIS	45	82	
SPRINGFIELD	43	62	
MONTANA			
BILLINGS	4	4	
GLASGOW	9	9	
GREAT FALLS	6	6	
HAVRE	18	18	
HELENA	0	0	
KALISPELL	0	0	
MILES CITY	15	15	
MISSOULA	1	1	
NEBRASKA			
GRAND ISLAND	15	21	
LINCOLN U	40	48	
NORFOLK	3	6	
NEBRASKA			
NORTH PLATTE	1	1	
OMAHA	34	46	
SCOTTSBLUFF	1	1	
VALENTINE	4	4	
NEVADA			
ELKO	0	0	
ELY	0	0	
LAS VEGAS	148	225	
RENO	0	0	
WINNEMUCCA	0	0	
NEW HAMPSHIRE			
CONCORD	0	0	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	6	6	
ATLANTIC CITY U	2	2	
NEWARK	25	25	
TRENTON U	14	14	
NEW MEXICO			
ALBUQUERQUE	26	31	
CLAYTON	17	21	
ROSWELL	146	177	
NEW YORK			
ALBANY	9	9	
BINGHAMTON	13	13	
BUFFALO	9	9	
NEW YORK U	29	29	
NEW YORK KENNEDY	16	16	
NEW YORK LA GUARDIA	12	12	
ROCHESTER	10	10	
SYRACUSE	17	17	
NORTH CAROLINA			
ASHEVILLE	25	28	
CAPE HATTERAS R	67	68	
CHARLOTTE	83	95	
GREENSBORO	50	50	
RALEIGH	78	84	
WILMINGTON	152	183	
NORTH DAKOTA			
BISMARCK	0	0	
FARGO	3	3	
WILLISTON	3	3	
OHIO			
AKRON	15	15	
CINCINNATI ABBE OB	41	41	
CLEVELAND	22	22	
COLUMBUS	21	21	
DAYTON	28	31	
MANSFIELD	16	16	
TOLEDO	13	14	
YOUNGSTOWN	16	16	
OKLAHOMA			
OKLAHOMA CITY	117	152	
TULSA	97	140	
OREGON			
ASTORIA	0	0	
BURNS U	0	0	
EUGENE	0	0	
MEACHAM	0	0	
MEDFORD	2	2	
PENDLETON	36	36	
PORTLAND	5	5	
SALEM	0	0	
SEXTON SUMMIT R	4	4	
PACIFIC AREA			
GUAM TAGUAC R	461	2119	
JOHNSTON	423	1838	
KOROR R	539	2592	
KWAJALEIN	498	2494	
MAJURO	473	2364	
PAGO PAGO	448	2224	
PONAPE R	465	2268	
TRUK MOEN ISLAND	507	2511	
WAKE	517	2101	
YAP R	504	2437	
PENNSYLVANIA			
ALLENTOWN	4	4	
ERIE	7	7	
HARRISBURG	17	17	
PHILADELPHIA	19	19	
PITTSBURGH	13	13	
SCRANTON	16	16	
WILLIAMSPORT	19	20	
RHODE ISLAND			
BLOCK ISLAND	0	0	
PROVIDENCE	3	3	
SOUTH CAROLINA			
CHARLESTON	215	292	
CHARLESTON U	215	295	
COLUMBIA	185	244	
GRNVLLE-SPRTNBRG	88	108	
SOUTH DAKOTA			
ABERDEEN	1	8	
HURON	1	1	
RAPID CITY	0	0	
SIOUX FALLS	1	5	
TENNESSEE			
BRISTOL	32	37	
CHATTANOOGA	81	108	
KNOXVILLE	50	70	
MEMPHIS	107	156	
NASHVILLE	55	78	
OAK RIDGE R	46	62	
TEXAS			
ABILENE	256	374	
AMARILLO	94	125	
AUSTIN	355	632	
BROWNSVILLE	459	1346	
CORPUS CHRISTI	423	989	
DALLAS	275	432	
DEL RIO	421	760	
EL PASO	235	325	
FORT WORTH	195	293	
GALVESTON U	316	474	
HOUSTON INTERCON	292	539	
LUBBOCK	157	206	
MIDLAND	245	323	
PORT ARTHUR	325	600	
SAN ANGELO	332	524	
SAN ANTONIO	414	783	
VICTORIA	380	761	
WACO	325	553	
WICHITA FALLS	226	318	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	5	5	
WENDOVER	5	5	
VERMONT			
BURLINGTON	17	17	
VIRGINIA			
LYNCHBURG	36	39	
NORFOLK	76	82	
RICHMOND	56	56	
ROANOKE	40	44	
WALLOPS ISLAND	17	17	
WASHINGTON			
OLYMPIA	0	0	
QUILLAYUTE	0	0	
SEATTLE-TACOMA	4	4	
SPOKANE	10	10	
STAMPEDE PASS R	0	0	
WALLA WALLA U	35	35	
YAKIMA	34	34	
WEST INDIES			
SAN JUAN P.R.	511	2145	
WEST VIRGINIA			
BECKLEY	14	14	
CHARLESTON	32	32	
ELKINS	6	6	
HUNTINGTON	35	35	
PARKERSBURG U	33	33	
WISCONSIN			
GREEN BAY	1	1	
LA CROSSE	3	4	
MADISON	13	13	
MILWAUKEE	0	0	
WYOMING			
CASPER	0	0	
CHEYENNE	0	0	
LANDER	0	0	
SHERIDAN	0	0	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, etc.

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								† DAMAGE				† DAMAGE				† DAMAGE			† DAMAGE				† DAMAGE				† DAMAGE			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama										0	3	5	4	1	0	0	0												
Alaska										2		5																	
Arizona										7	27	5	0																
Arkansas	4	2	0	5	5	0	0	4	3	0	2	4	3	1	0	0	0												
California						0	0	0	5																				
Colorado	2	1	0	0	0	0	0	3	4	0	0	3	0																
Connecticut *																													
Delaware										0	0	4	0																
Florida	9	5	0	0	4					0	0	4	0	0	2	0	0												
Georgia	4	2	0	0	5	0	0	5	6	0	4	5	0	0	2	4	0									0	0	4	0
Hawaii *																													
Idaho										0	0	3		0	0	3	0												
Illinois	3	2	0	0	4	0	0	3	4	0	0	4	3	2	2	3	0												
Indiana	4	2	1	3	6	0	0	4	3	0	0	4	3	2	0	0	0												
Iowa	22	5	0	13	6	0	0	6	4	0	0	6	0	0	2	5	0									0	0	5	0
Kansas	18	9	0	3	6	0	1	6	6	0	2	6	6	1	5	4	0									0	0	6	6
Kentucky	2	2	0	0	6	0	0	?	?	0	0	5	C	0	0	5	0									1	0	6	C
Louisiana	4	2	0	2	5	0	0	?	?	0	0	5	?	0	1	4	0												
Maine														0	0	3	0												
Maryland										0	0	4	0	0	1	0	0									0	0	3	0
Massachusetts										0	0	1	0	0	0	4	0												
Michigan	1	1	0	1	5	0	0	4	0	0	4	5	0	0	1	1	0												
Minnesota	3	1	0	0	5	0	0	5	5	0	0	5	0	0	0	4	0												
Mississippi	7	4	1	8	5	0	0	?	?	0	2	?	0													0	0	?	0
Missouri	8	5	1	84	6	0	0	4	5	0	5	4	5	1	6														
Montana	1	1	0	0	0									0	0	4	0												
Nebraska	19	4	0	1	5	0	0	5	5	0	0	4	4													0	0	4	0
Nevada										0	1	5	0					0	0	?	0								
New Hampshire *																													
New Jersey *																													
New Mexico						0	0	4	5																				
New York								4	C		1	4				4												5	
North Carolina	1	1	0	0	5	0	0	4	5	0	0	5	0	0	0	5	0									0	0	5	5
North Dakota *																													
Ohio	4	3	0	3	5					0	4	6		0	3	5										1	0	?	?
Oklahoma	13	8	0	1	6	0	0	6	5	1	80	6	?	1	0	4	0									0	0	4	0
Oregon	1	1	0	0	3	0	0	0	5	0	0	5	6	0	1	2	0									0	0	6	5
Pacific Area																										1	41	6	6
Pennsylvania						0	0	3	4	0	0	5	4	0	0	4	0									0	0	4	4
Puerto Rico *																													
Rhode Island *																													
South Carolina	1	1	0	0	1					0	1	4	0	1	2	0	0												
South Dakota																										0	0	?	?
Tennessee	6	3	3	162	7	0	0	5	C	0	0	5	0													0	0	4	0
Texas	27	11	1	49	6	0	2	7	6	1	14	6	6	0	0	6	0									0	0	5	5
Utah										0	0	4	0																
Vermont *																													
U.S. Virgin Is. *																													
Virginia						0	0	3	4					2	2	4	0									0	0	4	0
Washington												4	4																
West Virginia *																													
Wisconsin	3	1	0	5	5					0	0	5	0	0	0	5	0												
Wyoming	1	1	0	0	3																								

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
\# Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
MAY 1971

Elmer R. Nelson, Office of Hydrology

The most serious flooding during May occurred in north-central Kansas. The lower Saline River reached near record proportions. This was the first significant overflow on the lower Saline since 1961. Major overflows occurred over the lower Republican and the Little Blue Rivers.

Major ice-jam flooding occurred in southwestern Alaska towards the end of May.

ATLANTIC SLOPE DRAINAGE

Above normal to a near record snowpack over northern New England early this spring melted gradually and caused moderate flows in many larger rivers and streams but no flooding. Heavy rains late on the 3d and early on the 4th caused minor flooding of small streams through parts of Vermont, New Hampshire, and Maine. Minor lowland overflows occurred along larger rivers and streams except in Rhode Island. The minor flooding lasted from one day in northern sections to over one week in central and southern Connecticut along the Connecticut River. Only minor flood damage resulted from the overflows.

Precipitation during May in the Delaware River Basin above Trenton, N. J., averaged around 4.2 inches or about 107 percent of normal. In the basin below Trenton, the precipitation averaged about 5.5 inches or 134 percent of normal. In northern New Jersey, the rainfall totaled 4.4 inches or 107 percent of normal and in the southern portion, 4 inches or 106 percent of normal.

All major water-supply reservoirs in New Jersey by the end of May were filled to capacity and spilling. Pumped storage at Round Valley, N. J., was 94 percent of capacity by the end of May. New York City's three reservoirs on the upper Delaware spilled during May and were full to capacity at the end of the month. Lake Wallenpaupack increased storage during May by 1.8 billion gallons and reached 88 percent of capacity at the end of May.

Light to moderate flooding occurred in the James Basin in Virginia, during the latter part of May and the first part of June. Flood duration ranged from a few hours in the upper basin to 88 hours at Richmond. Damages were slight. The flooding was due to prolonged rains averaging about 3-1/2 inches on May 28-30.

Heavy rains on the 12th-13th caused flash flooding on a few streams in the Roanoke Basin. One road in northern Campbell County, Virginia, was closed for a short period. The Neuse River at Neuse, N. C., reached bankfull stage on the 14th. Before the slower flowing streams in eastern North Carolina subsided, additional showers and thundershowers on the 15th-16th caused the upper Dan and Roanoke Rivers to rise 1 to 3 feet over their banks. A significant rise on the upper Cape Fear River produced 6 feet of overflow in the lower portion. The upper half of the Neuse River ran around bankfull level to slightly above.

Heavy rain on the 12th-13th and again on the 15th caused minor flooding on streams in the Pee Dee and Santee River Basins in South Carolina. The Rocky River at Norwood, N. C., crested 7 feet above flood stage on the 16th. The Lumber River at Lumberton, N. C., continued out of its banks from the 18th to the 25th. The main stem of the Pee Dee River below Blewett Lake continued in flood from the 15th to the 27th. The crests ranged from 4 feet above flood stage at Peedee, S. C., to 8 feet above flood stage at Cheraw, S. C. Overflow at Lake Wateree was not prolonged and minor flooding occurred below Chappells, S. C.

Heavy rains on the 15th produced some local flooding on the Savannah, Ogeechee, and Oconee Rivers in Georgia. Stevens Creek at Modoc, S. C., exceeded flood stage by nearly 6 feet on the 15th-17th. Damage was very light.

EAST GULF OF MEXICO DRAINAGE

There were two periods of flooding along the Apalachicola River in northwest Florida at Blountstown, Fla., during May. The first overflow on the 1st-6th was due to heavy rains during the latter part of April. The second overflow was due to several periods of rain from the 9th to the 16th. Twenty-four-hour precipitation amounts exceeded 1 inch several times at most stations during this period.

Heavy rains averaging over 4 inches at some stations caused minor flooding in the Tombigbee Basin in Mississippi and Alabama. No damage of consequence was reported.

Considerable lowland flooding occurred on the Pearl River from Edinburg, Miss., downstream to Pearl River, La., during most of May. This flooding was due to heavy rainfall on the 7th-13th. Drainage from the upper Pearl River resulted in excessive discharges from the Ross Barnett Reservoir. By the 15th, the Pearl River had reached a stage of 32.7 feet at Jackson, Miss., or nearly 15 feet above flood stage. Cattle and equipment were removed from the inundated areas before the rising waters made it impossible. Timber cutting and some road maintenance came to a halt. Fields in the flooded area will have to be replanted.

MISSISSIPPI SYSTEM

Upper Mississippi Basin--The main stem of the Mississippi River receded within its banks at Libby, Minn., on May 3 and at Keithsburg, Ill., and Hannibal, Mo., on May 1. There was no other flooding in the Upper Mississippi Basin during May.

Missouri Basin--Minor flooding occurred during May in the headwaters of the Missouri Basin in Montana due to the melting of a record mountain snowpack. There were two periods of flooding along the Big Hole and East Gallatin Rivers. Some minor flooding occurred along the Sun River towards the end of the month. No reports of damage were received.

Minor flooding occurred on the North Platte River and several of its tributaries in Colorado during May. The Cache la Poudre on the South Platte River overflowed its banks at a few places toward the end of the month. No important damage resulted.

Heavy rains over the upper reaches of the South Platte River produced three-fourths bankfull crest at North Platte, Nebr., on the 4th and again on the 11th-15th. Due to the releases and heavy rains on the North Platte and South Platte Rivers, the Platte River below North Platte, Nebr., ran near bankfull with some overflow. Flooding was limited to accretion land and some pastures. Heavy rains of 5 to 6 inches over the Salt Creek Basin produced bankfull stage at Ashland, Nebr., on the 10th. Property damage from the flooding was slight.

Serious and near record flooding occurred over the lower Saline River in Kansas on the 21st-22d. Major overflows occurred over the lower Republican River, the

Little Blue River of Kansas, and several tributaries in north-central Kansas during the afternoon of the 21st-24th. Considerable flash flooding occurred on small streams on the 21st-22d. The crest of 29.8 feet on the Saline River at Tescott, Kans., was only 0.3 foot below the record flood of July 13, 1951. This was the first significant overflow in the lower Saline River since May 25, 1961. Although several significant overflows have occurred on the lower Republican over the last few years, the crest of 19.2 feet at Clay Center, Kans., on the 22d was the highest since May 22, 1961. Considerable agriculture damage resulted from the overflows.

Heavy rains (1 to 2.5 inches) during the afternoon and evening of the 11th caused significant rises on the Big Blue and Lamine Rivers. The Big Blue River at Bannister Road in Kansas City, Mo., rose to within 1-1/2 feet of bankfull stage, while the Lamine River at Clifton City, Mo., rose to about a foot above bankfull stage by late on the 12th.

The main stem of the Missouri River rose to bankfull stage at Clifton City, Mo., on the 12th. Another considerable rise occurred from Kansas City downstream beginning on the 23d. Lexington and Waverly, Mo., were near bankfull from the 26th to the 29th. Occasional rains over this area and the releasing of water from the reservoirs in Kansas along the Kansas River produced this rise.

Ohio Basin--Flash flooding occurred during the forenoon of the 6th on many small streams in extreme east-central Ohio and southwestern Pennsylvania and the northern panhandle of West Virginia. Wheeling Creek was especially hard hit. A bucket survey conducted by the U. S. Engineers showed up to 7 inches of rain near Calis, W. Va. Damage reports are incomplete but many summer cottages and basements of houses were flooded. In eastern Ohio some overflow was reported on Beaver Creek in Columbiana County. One man was drowned when he was swept from a small bridge. Some minor flooding occurred on Chartiers Creek at Houston, Pa., in the southwestern portion. Some flash flooding was reported at Hickory and at White Oak Boro near McKeesport, Pa. Ten Mile Creek around Waynesburg, Pa., was the highest in 3 years.

Heavy showers and thundershowers on the 5th-6th caused flooding on the Tug Fork at Williamson, W. Va., and on the Levisa Fork at Prestonsburg, Ky., on the 7th-8th. The crest of 30.0 feet at Williamson was 3 feet above flood stage. The city of Williamson is protected by a flood wall to 44 feet. There was some damage downstream from Williamson at Chatteroy, W. Va., and upstream at Matewan, W. Va. There were numerous small creeks that went out of their banks in eastern Kentucky and southwestern West Virginia. The headwater areas of the Big Sandy River in Virginia received 2 to 3.4 inches of rain and the Tug Fork 1.7 inches at Williamson, W. Va., to near 3 inches in the headwaters during the afternoon and night of the 6th. Considerable damage resulted to crops where farmland flooded along small creeks and to country roads and bridges. Civil Defense estimated damage in eastern Kentucky at $115,500. In southwestern West Virginia quite a few roads were cut off during the high water. No estimate of damage is available, but it is believed to be small.

Heavy rains (3 to 4 inches) from the evening of the 6th through the night of the 7th caused flooding on the North Fork of the Kentucky River on the 7th-8th. The crests ranged from 2.3 feet above flood stage at Jackson, Ky., to nearly 5 feet above flood stage at Hazard, Ky. The Corps of Engineers estimated the damage at $288,000, of which $239,000 occurred at Hazard, Ky.

Heavy rain on the 6th-7th caused minor flooding on the Cumberland River in southeast Kentucky on the 7th-8th. The rain averaged about 2.5 inches over the basin above Williamsburg with the heaviest amounts in the upper portion near Cumberland, Ky. Damage to crops was estimated at $100,000. Moderate to heavy rains (2 to 3 inches) on the 11th-12th caused moderate flooding at Barbourville, Ky., and minor flooding at Williamsburg, Ky., on the 13th-16th. Damage was confined mostly to crops. The county agent estimated the damage at $100,000.

General light rainshowers and locally heavy thundershowers fell along the Ohio Valley almost daily from the 2d through the 13th causing the Ohio River to rise above flood stage at several points by the 14th. Flood damage was confined to crops in the bottomland along the Ohio River. The Corps of Engineers estimated that 105,900 acres were inundated causing $1.2 million damage.

Arkansas Basin--Heavy rains on the 21st and 22d caused flooding in the upper portions of the Neosho and Cottonwood Rivers in Kansas on the 22d-25th. Several stations reported rainfall amounts between 5 and 6.5 inches. The total damages were estimated at $752,000.

Lower Mississippi Basin--Generally heavy rainfall on the 7th-13th caused the Big Black River at Bovina, Miss., to rise above flood stage on the 12th. It crested on the 16th nearly 10 feet above flood stage. Lowland flooding continued along the Big Black River below Pickens, Miss., most of the latter half of the month. Damage to livestock and equipment was held to a minimum.

WEST GULF OF MEXICO DRAINAGE

Heavy thundershowers in the upper Brazos Basin caused flash flooding at Eastland, Tex., during the early morning of the 29th. The Eastland cooperative observer reported 6.25 inches of rain for the 24-hour period ending at 7 a.m. on the 29th and 1.8 inches on the 30th. This was preceded by 1.74 inches on the 28th. Water flooded some low houses including the police and fire stations at Eastland.

Heavy rains (6 to 8 inches) near Knox City, Tex., washed out a section of railroad tracks, derailing 4 cars of a Santa Fe freight train on the morning of the 29th. Runoff from these rains produced a crest of 7.7 feet at Seymour, Tex., on the upper Brazos on the 30th. Flood stage is 12 feet.

Extreme drouth conditions continued along the upper Trinity Basin and much of the upper Brazos Basin during May.

Heavy rainfall (3 inches) during the early morning hours of the 29th caused minor flooding on Aquilla Creek at Aquilla, Tex., on the 30th. The crest was 2.3 feet above flood stage.

GREAT BASIN

Minor flooding occurred during May due to snowmelt runoff on numerous low elevation streams in Utah, Wyoming, and Nevada. Flooding along the Humboldt River in Nevada was confined mostly to farms or ranches. Some ranches set dams to help flood irrigate their property. A few wood bridges were washed out, but no substantial damage was reported.

Minor flooding occurred on Ham's Fork near Kemmerer, Wyo., on May 12-14, with most of the flooding confined to farmlands. A few basements were flooded.

Smiths Fork near Cokeville, Wyo., in the Bear River drainage experienced some minor flooding about the same time.

PACIFIC SLOPE DRAINAGE

Columbia Basin--Record or near-record snowpack was reported in many parts of the Columbia Basin during the latter part of April. Temperatures during the first four days of May and on the 7th-12th were 7° to 12° above normal. Snowmelt streams in all parts of the Columbia Basin responded to the warm weather with rapid rises by May 5, and remained above the critical point until cresting at mid-month. Larger streams in all parts of the Columbia Basin experienced continuous rises until crests were reached on May 14-15.

Heavy rains at mid-month added water to the already swollen streams, mainly from the central mountains and plains through the upper reaches of the Snake River Drainage. Cooler weather stabilized the streamflow as the freezing level dropped well below in the heavily snowpacked headwater areas.

The Spokane River at Spokane, Wash., crested at flood stage on May 15-17. The Kootenai River approached within 0.7 foot of flood stage at Rexford, Idaho, on the 29th and within 0.5 foot of flood stage at Bonners Ferry, Idaho, on the 31st. No significant damage resulted from the high water.

The Henry's Fork near Rexburg, Idaho, continued above flood stage from the 6th to June 10. Near St. Anthony, Idaho, the river was slightly above flood stage on the 13th-14th. The Portneuf River at Pocatello, Idaho, rose above flood stage on the 5th and continued in flood to the 21st. The crest on the 14th was 1.7 feet above flood stage. There were two overflows on the Big Wood River at Hailey, Idaho. The first on the 8th-17th and the second one the 27th to June 28. Minor damage resulted from water overflowing onto pasture and farmland.

Stages in the lower Columbia at Vancouver, Wash., on May 1 were held near 7 feet by a reservoir control operation to permit the safe downstream migration of juvenile salmon. The snowmelt runoff from the lower Snake and local area tributaries due to the above normal temperatures caused the Columbia River to reach flood stage on the 6th and attain a crest of 20.2 feet for the season on May 15. The Willamette River at Portland, Ore., in backwater from the Columbia River, reached flood stage on the 9th and a crest of 19.5 feet on the 15th.

Heavy precipitation on the 25th caused a flash flood in the normally dry Shobe Canyon southwest of Heppner, Oreg. Extensive damage occurred in that community as flood waters joined Willow Creek and moved through Heppner.

ALASKA

Major ice-jam flooding occurred in southwest Alaska towards the end of May. Many of the inhabitants in the eastern half of Bethel, Alaska, were forced to leave due to the high water on the Kuskokwim River. Most of the residents of Napakiak, Oscaiville, and Napaiskak were evacuated. On the Yukon River, ice-jam flooding extended about 100 miles upstream of the town of Russian Mission to Grayling. The town of Anvik was the hardest hit with the inundation of its power plant. In northwestern Alaska, backwater from ice jams flooded the village of Kobuk on the Kobuk River.

FLOOD STAGE DATA

(All dates in May 1971 unless otherwise specified) MAY 1971

River and station	Flood stage	Above flood stages -dates From—	To—	Crest * Stage	Date
	Ft			Ft	
ATLANTIC SLOPE DRAINAGE					
Kennebec: Skowhegan, Me.	35,000 cfs	4	6	53,000 cfs	4
Augusta, Me.	13	4	6	E 14.5	4
[illegible] Gulf Island Dam, Me.	35,000 cfs	5	5	36,200 cfs	5
Pemigewasset: Plymouth, N. H.	11	4	4	11.0	4
Connecticut: White River Junction, Vt.	18	4	4	18.3	4
Hartford, Conn.	16	5	9	18.3	6
Bodkin Rock, Conn.	8	6	10	9.5	7
Jackson: Covington, Va.	9	30	30	9.4	30
Rivanna: Palmyra, Va.	17	30	31	23.4	31
James: Buchanan, Va.	17	30	31	18.9	31
Holcombs Rock, Va.	22	31	31	22.6	31
Bremo Bluff, Va.	19	30	June 1	24.3	June 1
Columbia, Va.	18	30	June 1	E 27.0	31
Cartersville, Va.	20	30	June 1	21.5	June 1
State Farm, Va.	12	30	June 2	E 18.0	June 1
Richmond (Westham) Va.	12	30	June 2	17.0	June 1
Richmond (City Locks) Va.	9	30	June 3	14.2	June 2
Dan: Danville, Va.	11	13	13	11.65	13
		16	16	11.4	16
Roanoke: Randolph, Va.	21	14	15	22.8	14
		16	18	23.7	17
		30	31	23.9	31
Williamston, N. C.	10	24	31	11.0	30-31
Neuse: Neuse, N. C.	14	14	14	14.0	14
Smithfield, N. C.	13	18	20	13.9	20
Cape Fear: Wm. O. Huske L&D, (nr. Tarheel, N. C.)	42	17	20	48.5	18
Lock No. 2, Elizabethtown, N.C.	20	17	20	#26.0	19
Rocky: Norwood, N. C.	15	16	16	22.0	16
Lumber: Lumberton, N. C.	9	18	25	9.6	23
Pee Dee: Cheraw, S. C.	30	15	19	38.0	17
Peedee, S. C.	19	16	27	#22.9	23
Reedy: Greenville, S. C.	9	15	15	# 9.0	15
Saluda: Chappells, S. C.	14	16	17	15.7	16
Broad: Blair, S. C.	14	14	18	20.6	17
Wateree: Lake Wateree, S. C.	100	16	17	101.0	16
Stevens Creek: Modoc, S. C.	18	15	17	#23.8	16
Savannah: Clyo, Ga.	11	22	27	#11.4	25-26
Ogeechee: Scarboro, Ga.	8	17	21	# 8.2	18-19
Eden, Ga.	9	22	23	# 9.0	22-23
Oconee: Milledgeville, Ga.	20	16	18	24.9	16
EAST GULF OF MEXICO DRAINAGE					
Apalachicola: Blountstown, Fla.	15	1	6	17.35	3
		17	22	17.2	19
East Fork Tombigbee: Fulton, Miss.	16	14	16	16.8	14
Tibbee: Tibbee, Miss.	23	14	17	24.5	15
Noxubee: Macon, Miss.	26	14	18	28.2	14
Tombigbee: Amory, Miss.	20	14	14	21.7	14
Gainesville, Ala.	36	15	19	36.5	17-18
Coffeeville L & D, Ala. (formerly Jackson L & D)	43	16	20	44.2	18
EAST GULF OF MEXICO DRAINAGE - Cont.)					
Chickasawhay: Enterprise, Miss.	20	14	16	21.4	15
Pearl: Edinburg, Miss.	20	13	20	25.1	14
Jackson, Miss.	18	3	7	20.75	4
		12	27	32.7	[illegible]
Monticello, Miss.	19	13	29	23.8	23
Columbia, Miss.	17	19	[illegible]	18.3	25
Bogalusa, La.	15	[illegible]	June 2	19.4	[illegible]
Pearl River, La.	12	15	June 4	14.8	27
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Mississippi: Libby, Minn.	13	Apr. 16	3	15.7	[illegible] 24
Keithsburg, Ill.	12	Apr. 18	1	13.8	Apr. 25
Hannibal, Mo.	16	Apr. 25	[illegible]	16.8	Apr. 28
Missouri Basin					
Big Hole: Divide, Mont.	6.5	12	18	7.1	16
		29	June 4	7.2	June 1-2
Melrose, Mont.	6	14	16	6.05	15
		31	June 3	6.3	June 2
East Gallatin: Bozeman, Mont.	6	1	11	6.5	5
		13	14	6.5	14
		27	29	6.0	27-29
Sun: Manchester Bridge, Mont.	12	29	30	12.1	30
North Platte: North Platte, Nebr.	[illegible]	12	June 29	6.2	24-25,27
				6.6	June 10-11
Platte: Grand Island (nr), Nebr.	3.5	5	[illegible]	4.85	29
				4.9	June 14
Republican: Clay Center, Kans.	15	21	22	19.2	22
Mulberry Creek: Salina, Kans.	26	22	22	27.1	22
Saline: Lincoln, Kans.	30	21	23	31.35	22
Tescott, Kans.	25	21	23	29.8	23
Solomon: Niles, Kans.	24	22	24	25.7	22-23
Turkey Creek: Wilber (nr), Nebr.	11	11	12	13.8	11
Smoky Hill: New Cambria, Kans.	25	23	[illegible]	28.2	24
Enterprise, Kans.	21	23	25	22.7	23
Mill Creek: Washington, Kans.	18	22	24	25.2	22
Little Blue: Fairbury (nr), Nebr.	10	22	22	11.1	22
Hanover (nr), Kans	14	22	24	18.0	23
Fancy Creek: Winkler, Kans.	11	11	11	11.7	11
Big Blue: Blue Rapids, Kans.	1101	22	23	1106.5	22
Lamine: Clifton City, Mo.	19	12	12	20.6	12
Missouri: St. Joseph, Mo.	17	12	12	17.0	12
Ohio Basin					
Tug Fork: Williamson, W. Va.	27	7	8	30.0	7
Levisa Fork: Prestonburg, Ky.	30	7	8	32.7	8
North Fork, Kentucky: Hazard, Ky.	20	7	7	24.9	7
Jackson, Ky.	29	7	8	31.3	8
Cumberland: Barbourville, Ky.	27	7	8	32.3	8
		13	15	32.9	14
Williamsburg, Ky.	21	7	8	22.0	8
		13	16	24.2	14
Ohio: Dam No. 47, Newburgh, Ind	38	12	14	38.8	13
Shawneetown, Ill.	33	14	19	33.8	15
Dam No. 50, Fords Ferry, Ky.	34	13	20	35.7	16
Arkansas Basin					
Cottonwood: Florence, Kans.	22	22	23	24.7	23
Plymouth, Kans.	28	22	[illegible]	31.05	23
Neosho: Americus, Kans.	27	[illegible]	23	27.7	23
Lower Mississippi Basin					
Big Black: Bovina, Miss.	28	12	28	37.6	16

FLOOD STAGE DATA

(All dates in May unless otherwise specified) MAY 1971

River and station	Flood stage	Above flood stages -dates		Crest*	
		From—	To—	Stage	Date
	Ft.			*Ft*	
[illegible] SLOPE DRAINAGE					
Columbia Basin					
[illegible], Wash.	27	15	17	27.0	15-17
Henry's Fork:					
[illegible], Idaho	9	6	June 10	10.0	14
St. Anthony (nr), Idaho	7	13	14	7.1	15
Portneuf: Pocatello, Idaho	8	5	21	9.7	21
Big Wood: Hailey, Idaho	1.5	8	17	5.5	14
		27	June 28	5.1	29-30
				5.4	June 14
				5.6	June 23
Willamette: Portland, Oreg.	18	9	18	19.5	15
		30	June 3	18.3	31-June 1

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft.			*Ft.*	
PACIFIC SLOPE DRAINAGE-(Cont.)					
Columbia Basin - Continued					
Columbia: Vancouver, Wash.	16	6	23	20.2	15
		26 July	1	18.9	31
				18.3	June 14-17
				17.3	June 27

* Provisional

1 Continued at the end of the month

= Highest stage observed

E Estimated

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. — 1004 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	9.4	5.3	26	.9
1000	31	116				
950	31	543	10.1	2.0	28	3.0
900	31	992	7.9	-.7	30	3.6
850	31	1,461	5.6	-3.7	30	4.8
800	31	1,955	2.8	-6.1	29	5.2
750	31	2,475	.0	-9.7	29	5.6
700	31	3,025	-2.5	-15.2	28	6.1
650	31	3,610	-5.5	-17.7	28	6.6
600	31	4,233	-9.1	-20.4	27	8.6
550	31	4,902	-13.1	-25.6	27	9.6
500	31	5,622	-17.8	-30.4	27	11.8
450	31	6,402	-23.2	-35.5	27	13.8
400	31	7,253	-29.7	-42.0	27	14.1
350	31	8,194	-36.9	-46.9	26	15.3
300	31	9,240	-44.8	-46.9	26	16.7
250	31	10,441	-51.3		26	19.2
200	31	11,875	-55.1		27	19.4
175	31	12,729	-54.7		27	17.2
150	30	13,709	-54.6		26	14.3
125	30	14,873	-55.6		26	11.7
100	29	16,289	-56.8		26	9.1
80	29	17,702	-57.1		26	5.5
70	29	18,548	-56.8		25	3.6
60	29	19,528	-55.8		23	1.7
50	27	20,687	-54.5		15	1.1
40	27	22,119	-53.5		10	2.9
30	25	23,972	-51.7		09	4.3
25	24	25,157	-50.5		09	5.2
20	24	26,620	-48.5		09	4.8
15	22	28,523	-45.4		08	4.6
10	18	31,265	-40.1			
7						
5						
4						

ALBUQUERQUE, N. MEX. — 836 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	9.4	-7.1	08	.8
1000	31	103				
950	31	542				
900	31	1,000				
850	31	1,479				
800	31	1,985	11.4	-8.8	25	1.8
750	31	2,521	8.0	-11.4	26	5.0
700	31	3,085	3.3	-13.9	26	6.5
650	31	3,681	-1.1	-17.5	25	7.9
600	31	4,313	-5.9	-21.2	24	9.3
550	31	4,988	-11.3	-24.5	24	11.9
500	31	5,711	-16.5	-31.8	24	14.0
450	31	6,495	-21.9	-37.0	25	15.2
400	31	7,351	-28.2	-42.7	25	17.0
350	31	8,298	-35.2	-48.2	25	18.4
300	31	9,352	-43.3	-54.3	25	22.6
250	31	10,557	-51.4		25	26.8
200	31	11,983	-57.6		26	27.1
175	31	12,824	-58.8		26	22.7
150	31	13,793	-58.7		25	21.2
125	30	14,930	-60.7		25	19.4
100	30	16,311	-63.0		26	13.8
80	30	17,684	-62.3		26	5.5
70	30	18,511	-60.9		25	2.4
60	30	19,473	-59.5		25	.7
50	28	20,619	-58.2		08	2.2
40	27	22,029	-56.4		08	3.5
30	27	23,870	-52.6		08	5.2
25	27	25,052	-50.7		09	5.3
20	25	26,510	-47.9		08	4.9
15	23	28,423	-45.4		08	3.8
10	14	31,156	-41.2		08	4.9
7	6	33,601	-36.7			
5						
4						

AMARILLO, TEXAS — 889 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	11.4	2.2	20	2.3
1000	31	97				
950	31	535				
900	31	991				
850	31	1,471	12.9	2.1	23	5.1
800	31	1,980	11.8	-2.6	25	6.1
750	31	2,517	8.9	-7.0	26	7.8
700	31	3,084	4.7	-10.1	26	9.2
650	31	3,683	.4	-13.5	26	10.1
600	31	4,320	-4.4	-17.4	26	10.5
550	31	4,998	-9.6	-21.6	25	11.7
500	31	5,727	-15.1	-27.8	25	13.2
450	31	6,514	-20.8	-34.8	26	15.4
400	31	7,373	-27.5	-40.4	26	18.3
350	31	8,323	-34.8	-46.6	25	20.5
300	31	9,378	-42.7	-50.6	26	23.5
250	31	10,585	-51.8		26	28.3
200	31	12,008	-57.8		26	29.0
175	30	12,846	-58.8		26	27.5
150	30	13,812	-59.4		26	24.5
125	30	14,951	-60.9		26	21.1
100	29	16,330	-62.7		27	10.6
80	29	17,700	-64.0		26	5.4
70	29	18,523	-61.5		26	1.9
60	29	19,484	-59.7		10	.7
50	29	20,629	-58.0		08	2.4
40	29	22,040	-56.4		08	3.1
30	28	23,883	-52.7		08	4.7
25	26	25,065	-50.4		08	5.5
20	24	26,532	-47.7		09	5.7
15	24	28,443	-45.1		09	5.6
10	14	31,182	-40.6		09	5.3
7						
5						
4						

* ANCHORAGE, ALASKA — [illegible] MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	3.3	-1.4	18	1.9
1000	31	74				
950	31	490	1.7	-4.8	13	3.3
900	31	923	-1.3	-6.7	13	5.6
850	31	1,376	-4.9	-8.5	13	7.7
800	31	1,849	-8.4	-10.6	13	9.7
750	31	2,347	-11.4	-14.3	14	11.7
700	31	2,874	-14.0	-18.2	15	11.3
650	31	3,433	-17.3	-21.4	16	10.9
600	31	4,029	-20.8	-26.0	17	9.9
550	31	4,668	-24.6	-30.1	17	9.2
500	31	5,355	-29.2	-34.8	17	9.9
450	31	6,100	-34.2	-39.5	18	10.8
400	31	6,915	-39.9	-42.9	18	11.8
350	31	7,818	-45.9		19	13.1
300	31	8,829	-50.4		19	15.0
250	31	10,016	-50.3		19	12.5
200	31	11,484	-47.8		20	10.2
175	31	12,366	-47.6		19	9.7
150	31	13,385	-47.5		19	8.2
125	31	14,589	-48.2		19	7.2
100	31	16,055	-49.2		19	6.3
80	31	17,516	-49.7		19	4.9
70	31	18,390	-49.9		18	4.2
60	31	19,398	-50.2		18	3.3
50	31	20,588	-50.5		17	2.6
40	30	22,039	-50.7		15	1.9
30	29	23,918	-50.4		13	2.1
25	28	25,111	-49.5		12	2.4
20	24	26,599	-48.0		09	2.7
15	19	28,506	-45.6		09	2.5
10	5	31,305	-39.4			
7						
5						
4						

* ANNETTE, ALASKA — 1015 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	4.8	2.3	07	.8
1000	31	154	4.4	.5	10	.3
950	31	570	2.1	-1.6	17	1.5
900	31	1,005	-.4	-4.3	18	3.9
850	31	1,460	-2.5	-9.4	20	5.0
800	31	1,940	-4.3	-12.3	21	5.8
750	31	2,447	-6.6	-14.8	21	6.9
700	31	2,984	-9.1	-17.6	21	7.6
650	31	3,554	-12.2	-21.0	22	9.2
600	31	4,162	-15.5	-24.9	22	9.8
550	31	4,814	-19.6	-28.4	22	9.7
500	31	5,515	-24.2	-32.6	23	11.8
450	31	6,276	-29.5	-37.0	23	12.1
400	31	7,106	-35.4	-41.5	24	12.3
350	31	8,026	-41.8	-42.8	24	13.3
300	31	9,053	-48.7		24	13.1
250	31	10,235	-54.0		24	[illegible]
200	31	11,664	-54.3		25	10.7
175	30	12,524	-53.4		25	9.8
150	30	13,518	-52.9		24	8.1
125	30	14,692	-53.7		24	6.8
100	30	16,123	-54.5		24	5.6
80	30	17,552	-54.6		23	4.2
70	30	18,407	-54.7		23	3.4
60	29	19,395	-54.3		23	2.0
50	29	20,565	-54.0		22	1.7
40	29	22,000	-53.2		21	.4
30	29	23,859	-52.0		10	.9
25	29	25,044	-50.8		09	1.3
20	29	26,503	-49.3		09	1.6
15	29	28,403	-46.0		08	1.9
10	27	31,134	-40.5		09	2.2
7	22	33,586	-34.0		09	4.4
5	19	35,963	-28.8			
4	6	37,643	-26.0			

ATHENS, GEORGIA — 987 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	14.0	11.3	27	.9
1000	30	132				
950	30	568	16.6	7.1	27	3.0
900	30	1,027	14.0	4.1	26	3.6
850	30	1,508	11.1	.3	26	5.5
800	30	2,012	8.4	-3.8	26	6.7
750	30	2,543	5.7	-10.2	26	8.1
700	30	3,104	2.4	-13.0	27	9.4
650	30	3,699	-1.0	-17.7	27	10.7
600	30	4,333	-4.8	-21.2	27	11.6
550	30	5,012	-9.3	-24.3	27	13.5
500	30	5,742	-14.2	-30.4	27	13.8
450	30	6,533	-19.5	-35.7	27	15.6
400	30	7,397	-25.8	-42.0	27	18.1
350	30	8,354	-33.0	-48.3	27	20.4
300	30	9,417	-40.9	-53.8	28	23.0
250	30	10,635	-49.4		28	26.6
200	30	12,073	-56.3		28	30.2
175	30	12,915	-58.9		28	27.8
150	30	13,878	-60.7		28	22.3
125	30	15,013	-61.4		27	19.2
100	30	16,388	-63.5		27	12.3
80	29	17,755	-64.0		28	7.6
70	29	18,576	-62.1		28	3.4
60	29	19,533	-60.5		01	1.0
50	29	20,675	-58.3		07	3.3
40	29	22,087	-55.9		08	4.6
30	26	23,929	-52.5		09	6.5
25	24	25,115	-50.3		09	5.6
20	24	26,582	-47.4		08	6.2
15	21	28,491	-44.9		08	4.7
10	19	31,233	-40.3		09	2.9
7	8	33,702	-35.7			
5						
4						

* BARROW, ALASKA — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	8	-9.2	-9.8	08	2.8
1000	29	114	-8.9	-10.3	08	3.4
950	29	511	-8.2	-10.7	10	3.4
900	29	933	-6.8	-12.6	12	2.7
850	29	1,379	-7.8	-13.4	14	2.5
800	29	1,849	-9.5	-16.3	17	2.8
750	29	2,345	-12.4	-17.9	18	3.0
700	29	2,869	-15.6	-20.5	20	3.7
650	29	3,425	-18.8	-24.5	20	4.6
600	29	4,017	-22.4	-28.9	20	5.7
550	29	4,652	-26.1	-32.5	20	6.1
500	29	5,335	-30.5	-36.6	21	6.9
450	29	6,076	-35.5	-41.1	20	7.9
400	29	6,886	-41.3	-44.4	21	9.7
350	29	7,784	-47.2		21	9.9
300	29	8,790	-51.5		20	10.1
250	29	9,975	-50.2		20	8.1
200	29	11,444	-47.1		19	6.8
175	29	12,329	-46.8		19	6.1
150	28	13,346	-46.8		19	5.4
125	28	14,555	-47.2		19	5.1
100	28	16,029	-48.0		20	4.2
80	28	17,500	-48.0		20	3.3
70	28	18,381	-48.0		18	3.2
60	28	19,398	-48.0		18	2.8
50	27	20,594	-48.1		16	2.2
40	25	22,055	-48.2		14	1.6
30	23	23,952	-47.9		11	3.2
25	20	25,162	-47.5		11	3.3
20	10	26,593	-47.8			
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BARTER IS., ALASKA — 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-8.2	-9.6	06	.9
1000	31	99	-8.4	-9.5	06	.7
950	31	500	-5.3	-7.7	09	1.1
900	31	927	-3.2	-9.7	11	1.2
850	31	1,379	-3.2	-11.7	23	1.0
800	31	1,857	-5.7	-14.4	24	2.1
750	31	2,361	-8.9	-16.6	23	3.3
700	31	2,891	-12.1	-19.3	22	4.0
650	31	3,455	-15.5	-22.8	22	5.1
600	31	4,055	-19.0	-27.1	21	6.3
550	31	4,697	-22.9	-31.6	21	7.6
500	31	5,390	-27.4	-35.7	21	8.8
450	31	6,140	-32.7	-40.5	21	9.9
400	31	6,960	-38.5	-45.0	21	10.9
350	31	7,868	-45.0	-48.5	22	12.0
300	31	8,880	-51.0		22	12.9
250	31	10,062	-51.6		21	11.1
200	31	11,522	-47.6		21	8.2
175	31	12,406	-46.7		21	7.8
150	31	13,428	-46.9		21	6.6
125	31	14,637	-47.3		21	5.7
100	31	16,112	-47.6		21	4.6
80	31	17,585	-48.0		21	3.5
70	31	18,466	-48.0		20	3.1
60	31	19,483	-48.0		19	2.0
50	30	20,686	-47.9		16	2.1
40	29	22,161	-47.7		13	1.8
30	28	24,061	-47.3		11	2.5
25	26	25,271	-46.9		11	2.8
20	26	26,753	-46.1		10	3.3
15	25	28,687	-43.7		10	3.3
10	22	31,432	-39.4		09	3.3
7	8	33,772	-37.0			
5						
4						

BETHEL, ALASKA — 1000 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	39	-.7	-2.0	05	.5
1000	29	39				
950	29	449	-1.4	-5.0	11	2.5
900	29	878	-4.1	-7.3	14	3.7
850	29	1,326	-7.2	-9.8	15	4.3
800	29	1,797	-9.7	-13.6	15	4.0
750	29	2,293	-12.5	-16.7	15	4.2
700	29	2,817	-15.3	-19.5	14	4.4
650	29	3,374	-18.3	-22.8	14	4.9
600	29	3,967	-21.9	-26.5	15	5.7
550	29	4,603	-25.8	-30.9	15	6.8
500	29	5,287	-30.3	-36.5	15	8.2
450	29	6,029	-35.4	-41.5	15	9.1
400	29	6,839	-41.4	-44.7	16	10.0
350	29	7,736	-47.7		16	10.1
300	29	8,740	-51.9		17	10.6
250	29	9,928	-48.8		18	8.3
200	29	11,404	-46.2		18	6.8
175	28	12,290	-46.3		17	6.5
150	28	13,313	-46.8		18	6.2
125	28	14,520	-47.4		17	5.3
100	28	15,994	-48.1		17	4.6
80	28	17,463	-48.7		17	4.7
70	28	18,340	-49.2		17	4.2
60	27	19,353	-49.4		17	3.7
50	27	20,548	-49.7		16	3.1
40	27	22,007	-50.0		13	2.7
30	27	23,887	-50.1		14	2.2
25	26	25,078	-49.4		11	1.6
20	25	26,552	-48.5		10	2.0
15	22	28,442	-46.7		08	2.2
10	7	31,277	-39.8			
7						
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4						

* BISMARCK, N. DAK. — 955 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	503	5.7	1.9	06	1.2
1000	31	125				
950	31	548	6.2	.5	10	1.4
900	31	994	7.9	-1.0	12	.6
850	31	1,464	5.7	-3.2	34	1.6
800	31	1,959	3.5	-5.2	32	2.2
750	31	2,480	.9	-8.6	33	3.2
700	31	3,032	-1.9	-12.3	32	3.9
650	31	3,618	-5.1	-16.2	31	4.6
600	31	4,243	-8.7	-21.2	31	6.0
550	31	4,912	-13.1	-25.4	31	6.1
500	31	5,631	-18.1	-29.9	30	7.1
450	31	6,409	-23.8	-34.8	30	8.8
400	31	7,258	-30.3	-40.7	29	9.1
350	31	8,197	-37.5	-46.8	28	9.0
300	31	9,239	-45.9		29	9.4
250	31	10,430	-54.1		29	11.1
200	31	11,844	-57.9		28	13.2
175	31	12,690	-56.4		29	11.6
150	31	13,673	-55.1		28	10.3
125	31	14,837	-55.4		28	8.5
100	30	16,258	-56.1		28	6.7
80	30	17,677	-56.0		28	5.9
70	30	18,527	-56.0		28	4.6
60	30	19,510	-54.9		29	3.1
50	29	20,677	-53.7		30	1.6
40	29	22,113	-52.9		03	1.3
30	28	23,981	-50.7		08	2.4
25	28	25,173	-49.2		07	3.1
20	28	26,644	-47.4		08	3.6
15	26	28,556	-44.7		08	3.7
10	24	31,297	-39.3		08	4.9
7	18	33,752	-33.6		09	4.5
5	11	36,118	-29.2			
4	5	37,712	-26.8			

BOISE, IDAHO — 912 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	871	9.9	1.6	16	1.1
1000	31	97				
950	31	530				
900	31	982	11.7	1.4	20	.6
850	31	1,460	10.4	-1.5	34	.8
800	31	1,962	7.4	-3.5	01	1.1
750	31	2,490	3.6	-6.1	05	.5
700	31	3,046	-.4	-9.2	20	.6
650	31	3,634	-4.5	-13.0	21	2.0
600	31	4,259	-8.9	-17.8	22	2.6
550	31	4,927	-13.6	-22.9	22	2.6
500	31	5,645	-18.7	-29.5	22	2.6
450	31	6,422	-24.4	-35.3	21	3.0
400	31	7,269	-30.9	-41.7	20	3.5
350	31	8,205	-38.2	-48.1	19	2.8
300	31	9,244	-46.3		19	2.3
250	31	10,434	-54.1		24	3.7
200	31	11,849	-58.0		26	4.1
175	31	12,692	-56.9		26	5.6
150	31	13,672	-55.9		26	6.5
125	31	14,830	-56.8		27	5.9
100	30	16,241	-57.3		27	4.2
80	30	17,649	-57.8		25	3.3
70	29	18,495	-57.3		26	2.2
60	29	19,471	-56.6		28	.7
50	29	20,630	-55.8		08	.7
40	28	22,055	-55.0		07	1.6
30	28	23,903	-52.6		08	2.2
25	28	25,086	-50.8		08	2.4
20	28	26,547	-48.8		07	3.3
15	27	28,457	-45.4		09	4.8
10	24	31,188	-40.1		09	4.0
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BOOTHVILLE, LA. — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1	21.1	18.3	12	.7
1000	31	124	21.6	17.9	13	1.3
950	31	569	18.8	13.7	17	2.6
900	31	1,031	16.6	7.7	20	2.7
850	31	1,517	14.8	1.6	23	3.8
800	31	2,028	12.8	-2.0	25	4.2
750	31	2,568	10.0	-5.4	26	5.4
700	31	3,137	6.3	-9.0	27	5.7
650	31	3,741	2.6	-12.2	27	6.8
600	31	4,383	-1.6	-16.2	28	8.3
550	31	5,070	-6.2	-20.5	28	10.6
500	31	5,808	-11.3	-24.7	28	12.6
450	31	6,609	-16.5	-29.5	28	15.1
400	31	7,483	-22.8	-35.2	28	17.6
350	31	8,451	-30.1	-41.6	27	19.6
300	31	9,527	-38.4	-48.3	27	21.6
250	31	10,757	-47.4		27	25.3
200	31	12,199	-57.3		27	29.4
175	31	13,035	-61.5		27	30.9
150	30	13,988	-64.0		27	27.2
125	30	15,100	-66.1		27	20.3
100	30	16,446	-68.5		27	12.1
80	30	17,779	-69.4		26	5.8
70	30	18,580	-67.2		28	1.7
60	30	19,519	-63.2		09	2.0
50	29	20,652	-59.9		08	5.2
40	29	22,053	-57.2		09	7.3
30	29	23,892	-52.7		09	9.0
25	29	25,076	-50.4		09	9.4
20	29	26,541	-47.8		09	8.6
15	22	28,470	-44.1		08	8.1
10	13	31,206	-39.9			
7						
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* BROWNSVILLE, TEXAS — 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	22.8	20.5	15	3.8
1000	31	99	22.9	20.7	16	5.8
950	31	546	20.4	17.8	16	11.2
900	31	1,014	20.2	9.0	17	10.5
850	31	1,507	19.0	3.3	17	8.2
800	31	2,026	16.6	-.9	19	5.7
750	31	2,572	13.4	-4.8	20	3.7
700	31	3,148	9.6	-7.5	25	2.6
650	31	3,758	5.2	-7.9	28	4.4
600	31	4,406	.6	-12.1	28	6.1
550	31	5,098	-4.5	-16.8	29	8.4
500	31	5,841	-10.0	-21.9	28	9.9
450	31	6,645	-15.3	-27.9	27	12.5
400	31	7,524	-21.4	-34.5	27	15.6
350	31	8,498	-28.7	-40.5	27	17.9
300	31	9,579	-37.4	-47.6	27	21.1
250	31	10,813	-47.1		27	26.0
200	31	12,257	-57.1		27	31.6
175	31	13,092	-62.2		27	33.6
150	31	14,036	-65.3		27	29.4
125	31	15,137	-68.5		27	21.6
100	31	16,461	-72.3		26	12.1
80	31	17,771	-71.8		26	3.5
70	31	18,563	-69.4		09	2.4
60	31	19,494	-64.5		10	5.3
50	31	20,621	-60.3		09	6.4
40	31	22,018	-58.1		09	10.7
30	31	23,849	-53.5		09	12.1
25	30	25,030	-50.5		09	12.5
20	29	26,495	-47.8		09	11.9
15	27	28,408	-44.6		08	10.9
10	23	31,154	-39.6		09	12.8
7	18	33,629	-35.0		10	12.6
5	8	36,032	-31.5			

BUFFALO, N. Y. — 989 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	218	8.9	5.2	23	1.7
1000	30	123				
950	30	550	9.7	1.2	27	2.8
900	30	997	7.6	-1.0	28	4.5
850	30	1,466	4.8	-2.8	29	5.7
800	30	1,958	1.8	-5.7	28	6.3
750	30	2,477	-.7	-10.4	28	5.9
700	30	3,024	-3.9	-12.8	28	5.8
650	30	3,607	-6.5	-17.3	28	6.5
600	30	4,229	-9.7	-22.0	28	7.7
550	30	4,896	-13.8	-25.9	27	8.7
500	30	5,613	-18.5	-30.9	27	9.1
450	30	6,391	-23.9	-35.8	27	9.6
400	30	7,240	-30.3	-41.7	27	10.8
350	30	8,179	-37.2	-46.6	27	12.5
300	30	9,225	-44.8		27	14.5
250	30	10,425	-51.4		27	17.0
200	30	11,861	-54.4		27	17.3
175	30	12,715	-54.7		27	15.0
150	30	13,702	-54.7		27	13.5
125	30	14,867	-55.5		27	11.8
100	30	16,287	-56.4		26	9.4
80	27	17,717	-56.9		26	6.4
70	27	18,563	-57.1		26	4.4
60	27	19,542	-55.7		26	2.0
50	27	20,707	-54.9		12	.9
40	26	22,139	-54.0		08	2.7
30	26	23,995	-51.9		09	4.8
25	25	25,178	-50.3		08	4.4
20	24	26,641	-47.7		08	4.7
15	21	28,558	-44.5		08	4.9
10	13	31,302	-39.3			
7						
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CAPE HATTERAS, N. C. — 1014 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	16.5	14.1	23	1.0
1000	31	127	17.9	11.9	23	2.3
950	31	565	15.9	6.8	26	4.4
900	31	1,023	13.5	2.5	27	5.1
850	31	1,502	10.6	.4	27	5.7
800	31	2,004	7.7	-4.4	27	6.9
750	31	2,534	5.1	-9.4	27	8.3
700	31	3,094	2.0	-13.3	27	9.6
650	31	3,688	-1.5	-17.8	27	10.9
600	31	4,321	-5.2	-22.4	27	12.3
550	31	4,999	-9.4	-26.1	27	14.3
500	31	5,729	-14.0	-30.2	27	15.5
450	31	6,521	-19.4	-34.6	27	17.0
400	31	7,386	-25.5	-40.5	27	17.7
350	31	8,344	-32.6	-46.9	27	18.9
300	31	9,409	-40.7	-51.2	27	20.1
250	31	10,628	-48.8		27	23.0
200	30	12,069	-55.5		28	23.6
175	30	12,915	-57.6		27	23.2
150	30	13,886	-58.1		27	21.3
125	29	15,034	-59.7		27	17.8
100	[illegible]	16,424	-61.3		27	12.3
80	[illegible]	[illegible]	-61.6		28	[illegible]
70	[illegible]	18,637	-60.4		28	2.4
60	[illegible]	19,602	-58.5		06	1.7
50	[illegible]	20,754	-56.6		08	4.0
40	[illegible]	22,176	-54.5		08	[illegible]
30	[illegible]	24,034	-50.8		08	7.2
25	26	[illegible]	-48.4		09	6.8
20	[illegible]	[illegible]	-45.8		09	5.4
15	[illegible]	[illegible]	-43.2		09	4.7
10	18	31,383	-38.3		08	7.2
7	11	33,855	-33.7			
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE — 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	191	7.1	3.7	24	1.0
1000	31	104				
950	31	526	7.1	1.3	27	2.0
900	31	970	5.7	-1.1	27	2.7
850	31	1,436	3.6	-4.2	27	3.1
800	31	1,927	1.0	-6.0	26	4.5
750	31	2,443	-1.9	-9.2	26	6.0
700	31	2,989	-4.6	-13.[illegible]	26	6.2
650	31	3,570	-7.3	-17.3	26	7.1
600	31	4,189	-10.9	-21.3	26	7.9
550	31	4,853	-14.9	-25.8	26	9.6
500	31	5,568	-19.6	-31.5	26	10.3
450	31	6,343	-24.6	-37.2	26	11.7
400	31	7,190	-30.7	-43.1	26	11.6
350	31	8,128	-37.5	-47.5	26	13.3
300	31	9,171	-45.2		26	14.7
250	31	10,370	-51.9		26	15.2
200	28	11,813	-54.7		25	14.9
175	28	12,670	-53.4		26	13.6
150	28	13,662	-53.5		25	12.6
125	27	14,827	-54.4		25	10.5
100	27	16,255	-54.9		25	8.0
80	26	17,687	-55.2		25	6.2
70	26	18,542	-54.2		24	3.6
60	25	19,531	-53.6		21	2.1
50	24	20,709	-53.2		19	1.9
40	22	22,143	-52.9		12	1.8
30	22	24,005	-51.7		10	3.1
25	20	25,192	-50.2		08	3.9
20	20	26,657	-48.1		07	4.3
15	16	28,557	-45.1		09	3.4
10	12	31,344	-37.6		09	5.1
7						

CHARLESTON, S. C. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	13	17.0	14.4	27	1.1
1000	31	133	17.9	14.4	26	2.1
950	31	573	17.2	9.1	26	3.8
900	31	1,033	14.8	6.0	26	4.3
850	31	1,514	11.7	2.2	26	4.6
800	31	2,019	8.7	-2.4	27	5.6
750	31	2,550	6.0	-6.3	27	7.8
700	31	3,113	3.2	-10.5	27	9.1
650	31	3,710	-.2	-15.9	27	10.8
600	31	4,346	-4.2	-19.3	27	12.4
550	31	5,026	-8.3	-23.8	27	13.6
500	31	5,760	-13.1	-26.9	27	14.1
450	31	6,554	-18.3	-33.4	27	15.5
400	31	7,423	-24.5	-39.7	27	17.6
350	31	8,385	-31.7	-45.2	27	19.6
300	31	9,454	-39.6	-51.9	27	21.1
250	31	10,676	-48.8		27	23.1
200	31	12,116	-56.7		28	26.4
175	31	12,957	-59.1		28	24.4
150	31	13,920	-60.4		27	20.9
125	31	15,053	-61.9		27	18.1
100	31	16,427	-63.7		27	11.4
80	31	17,794	-63.8		27	6.4
70	31	18,617	-62.1		29	2.3
60	29	19,575	-60.3		06	1.2
50	29	20,719	-57.6		07	3.9
40	29	22,136	-55.0		09	6.2
30	27	23,993	-51.1		09	7.0
25	27	25,183	-49.4		09	6.4
20	24	26,660	-46.4		09	6.6
15	20	28,589	-43.0		08	6.1
10	12	31,347	-38.5			

CHATHAM, MASS. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	16	9.9	7.3	31	1.8
1000	31	104	10.4	4.6	30	2.4
950	31	532	10.5	3.7	29	3.5
900	31	982	8.7	1.3	29	4.8
850	31	1,453	6.5	-1.9	28	4.6
800	31	1,949	4.3	-5.1	28	5.5
750	31	2,472	1.6	-8.8	28	6.2
700	31	3,025	-1.1	-12.9	27	6.8
650	31	3,613	-4.0	-15.9	28	7.6
600	31	4,240	-7.4	-20.5	27	8.9
550	31	4,913	-11.6	-25.9	27	9.3
500	31	5,636	-16.7	-30.7	27	10.3
450	31	6,419	-22.2	-34.9	27	11.6
400	31	7,274	-28.4	-40.4	27	13.9
350	31	8,221	-35.3	-46.4	26	15.1
300	31	9,275	-43.1	-48.7	26	16.8
250	31	10,483	-50.5		26	19.6
200	30	11,925	-54.6		26	18.1
175	30	12,778	-55.1		26	18.2
150	29	13,758	-55.2		26	15.4
125	29	14,923	-55.7		26	12.8
100	28	16,333	-57.1		26	10.0
80	27	17,743	-56.4		26	7.0
70	26	18,591	-56.0		26	4.5
60	26	19,573	-55.3		25	2.5
50	25	20,742	-54.3		15	1.0
40	23	22,174	-53.2		11	1.6
30	22	24,037	-51.1		10	2.7
25	22	25,227	-49.6		09	3.7
20	22	26,695	-47.5		09	3.4
15	18	28,608	-44.1		08	4.1
10	14	31,342	-39.8			

CHIHUAHUA, MEXICO — 855 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,428	15.7	1.2	22	.7
1000	31	74				
950	31	522				
900	31	990				
850	31	1,478	17.7	.2	23	1.1
800	31	1,996	16.3	-.8	24	4.0
750	31	2,541	12.3	-4.1	25	5.4
700	31	3,114	8.6	-8.1	25	8.5
650	31	3,723	4.6	-11.3	25	8.5
600	31	4,369	-.3	-14.6	24	10.0
550	31	5,058	-5.5	-19.6	25	11.7
500	31	5,798	-10.9	-25.7	25	13.1
450	31	6,599	-16.7	-29.0	26	15.7
400	31	7,472	-23.2	-34.4	26	17.7
350	31	8,439	-30.6	-40.5	26	20.8
300	31	9,512	-39.1	-47.3	26	24.3
250	31	10,736	-48.7		26	29.0
200	31	12,173	-57.6		26	30.8
175	31	13,008	-61.3		26	29.1
150	31	13,959	-63.1		26	26.1
125	30	15,075	-65.7		26	20.2
100	29	16,425	-68.5		27	13.1
80	28	17,754	-69.2		26	7.9
70	27	18,560	-65.5		25	2.4
60	27	19,505	-62.2		11	1.1
50	26	20,642	-59.5		10	2.6
40	26	22,046	-57.1		10	4.5
30	24	23,879	-53.6		10	5.8
25	23	25,060	-51.1		09	5.4
20	22	26,520	-48.0		09	4.7
15	21	28,431	-44.4		08	5.1
10	12	31,154	-40.7			

* COLD BAY, ALASKA — 1000 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	.3	-2.1	22	.7
1000	30	26				
950	30	436	-2.2	-4.2	25	1.4
900	30	864	-4.9	-6.0	23	1.3
850	30	1,311	-7.6	-9.0	24	1.7
800	30	1,781	-9.6	-13.4	25	1.8
750	30	2,278	-11.9	-16.1	24	3.1
700	30	2,803	-14.8	-19.4	23	3.9
650	30	3,361	-17.7	-23.2	23	4.5
600	30	3,956	-21.1	-27.6	23	5.6
550	30	4,594	-25.1	-32.3	23	6.6
500	30	5,280	-29.6	-37.4	23	7.8
450	30	6,024	-34.6	-41.1	23	8.8
400	30	6,837	-40.4	-45.3	23	9.4
350	30	7,738	-46.7		23	11.0
300	30	8,747	-50.8		24	13.0
250	30	9,938	-48.7		23	10.1
200	30	11,413	-46.7		23	9.5
175	30	12,298	-47.2		23	8.7
150	30	13,318	-47.2		23	8.3
125	30	14,522	-48.1		23	6.5
100	30	15,989	-49.3		23	5.5
80	30	17,450	-49.9		22	4.7
70	29	18,325	-50.1		21	3.8
60	29	19,332	-50.3		20	3.4
50	29	20,521	-50.4		19	2.3
40	27	21,974	-50.6		18	2.3
30	26	23,850	-50.7		14	1.7
25	26	25,040	-50.2		10	2.0
20	24	26,494	-50.3		09	2.0
15	19	28,385	-47.4		09	2.1
10	12	31,046	-43.1			
7	7	33,433	-39.5			

DAYTON, OHIO — 980 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	2,9	10.1	5.8	10	.2
1000	31	129				
950	31	558	11.9	2.5	25	1.3
900	31	1,010	9.5	-.2	27	2.9
850	31	1,481	6.5	-2.7	28	4.4
800	31	1,977	4.1	-5.9	28	5.6
750	31	2,499	1.3	-9.8	28	7.3
700	31	3,052	-1.7	-14.4	29	8.0
650	31	3,639	-4.3	-18.1	28	9.2
600	31	4,266	-7.7	-22.5	28	9.5
550	31	4,937	-12.2	-27.3	28	10.0
500	31	5,659	-17.1	-32.1	28	10.9
450	31	6,441	-22.7	-37.6	27	12.9
400	31	7,294	-29.2	-42.3	27	13.9
350	31	8,237	-36.3	-47.0	27	14.6
300	31	9,285	-44.3		27	18.2
250	31	10,489	-51.1		28	21.8
200	31	11,924	-55.6		28	23.0
175	31	12,774	-56.2		28	20.2
150	31	13,754	-56.1		28	17.2
125	31	14,911	-57.3		27	14.4
100	31	16,317	-58.7		27	10.1
80	31	17,717	-58.7		27	6.7
70	31	18,557	-58.4		28	5.2
60	30	19,529	-57.4		29	1.9
50	29	20,684	-56.1		02	.7
40	29	22,107	-54.8		08	2.8
30	28	23,959	-51.4		09	4.1
25	27	25,150	-49.7		08	4.9
20	25	26,614	-47.9		08	5.5
15	21	28,531	-44.6		08	5.1
10	14	31,255	-38.9			

DEL RIO, TEXAS — 975 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	314	21.0	14.9	12	4.7
1000	31	91				
950	31	537	20.3	14.0	13	7.7
900	31	1,003	18.8	11.3	16	8.0
850	31	1,494	18.1	7.2	18	7.2
800	31	2,012	15.5	1.3	20	5.4
750	31	2,557	13.0	-3.9	24	5.4
700	31	3,132	8.7	-6.8	26	6.1
650	31	3,740	4.1	-9.8	26	7.1
600	31	4,385	-1.3	-14.2	26	8.5
550	31	5,071	-6.8	-17.9	26	10.8
500	31	5,807	-12.0	-23.8	26	14.1
450	31	6,605	-17.6	-31.0	26	15.7
400	31	7,476	-24.0	-37.0	27	18.1
350	31	8,439	-31.0	-42.2	27	22.0
300	31	9,512	-39.2	-50.3	26	26.5
250	31	10,736	-48.7		27	29.3
200	31	12,172	-57.9		26	32.1
175	31	13,006	-61.7		26	32.2
150	31	13,955	-64.0		26	27.9
125	31	15,066	-66.1		26	22.5
100	29	16,413	-68.6		27	14.3
80	29	17,746	-68.4		26	5.9
70	29	18,551	-65.7		24	1.6
60	29	19,495	-62.6		11	1.8
50	29	20,630	-59.3		08	5.0
40	28	22,031	-57.2		09	6.2
30	26	23,865	-53.3		09	7.7
25	24	25,048	-50.5		09	8.8
20	24	26,514	-47.4		09	8.0
15	22	28,430	-44.5		08	7.4
10	19	31,173	-40.6		08	7.3
7	10	33,623	-36.6			

DENVER, COLO. — 835 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,611	6.3	3.1	21	2.0
1000	31	108				
950	31	541				
900	31	994				
850	31	1,468				
800	31	1,968	8.0	-1.1	25	2.9
750	31	2,500	6.0	-5.6	27	3.5
700	31	3,061	2.4	-10.0	29	4.3
650	31	3,656	-1.7	-13.8	29	5.2
600	31	4,287	-6.6	-18.3	28	6.7
550	31	4,960	-11.6	-23.0	27	7.8
500	31	5,683	-17.0	-28.6	26	8.3
450	31	6,465	-22.8	-34.7	26	7.7
400	31	7,317	-29.6	-41.3	25	8.2
350	31	8,258	-37.0	-46.5	25	8.2
300	31	9,303	-45.0		25	8.8
250	31	10,500	-52.6		25	12.5
200	31	11,923	-57.2		25	15.2
175	31	12,766	-57.6		25	16.6
150	31	13,742	-56.9		26	15.8
125	31	14,897	-57.5		26	12.8
100	31	16,300	-59.4		26	7.9
80	31	17,696	-59.4		26	4.0
70	31	18,534	-58.4		26	1.3
60	30	19,508	-57.8		07	1.0
50	30	20,660	-56.8		06	1.3
40	30	22,079	-55.4		07	3.2
30	29	23,928	-52.5		08	4.6
25	29	25,113	-50.4		07	5.8
20	29	26,575	-48.3		09	5.6
15	28	28,486	-45.6		09	5.8
10	18	31,203	-40.1		08	2.4

DODGE CITY, KANS. — 922 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	791	10.3	5.8	25	.7
1000	31	102				
950	31	535				
900	31	988	12.2	2.9	20	1.7
850	31	1,467	11.3	.7	24	4.5
800	31	1,973	10.1	-4.3	26	6.8
750	31	2,507	7.3	-7.8	26	8.4
700	31	3,071	3.3	-11.0	26	8.9
650	31	3,668	-.7	-14.4	26	9.9
600	31	4,302	-5.5	-18.4	26	11.1
550	31	4,977	-10.7	-23.1	26	12.3
500	31	5,702	-16.0	-29.8	26	12.2
450	31	6,487	-21.7	-36.7	26	12.8
400	31	7,344	-28.4	-43.1	26	13.5
350	31	8,289	-35.8	-48.7	26	15.9
300	31	9,340	-44.0		26	18.6
250	31	10,543	-51.8		26	20.5
200	31	11,967	-57.7		26	23.2
175	31	12,806	-59.1		26	23.2
150	31	13,774	-58.5		26	20.9
125	30	14,921	-58.9		26	16.4
100	30	16,315	-61.2		26	9.6
80	28	17,697	-61.6		25	5.1
70	28	18,527	-60.5		25	2.4
60	27	19,488	-59.1		09	.2
50	26	20,640	-57.5		08	2.1
40	25	22,055	-56.0		08	4.1
30	23	23,902	-53.0		09	5.8
25	22	25,086	-51.1		08	6.4
20	21	26,547	-48.5		09	5.5
15	20	28,455	-46.5		05	4.4
10	12	31,178	-40.8			

EL PASO, TEXAS — 879 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,193	16.5	-3.4	30	2.1
1000	31	81				
950	31	528				
900	31	995				
850	31	1,483	17.5	-2.1	28	3.5
800	31	1,997	13.9	-4.5	26	5.4
750	31	2,537	9.9	-7.2	25	7.5
700	31	3,105	5.4	-10.6	25	9.1
650	31	3,706	1.1	-14.5	24	10.5
600	31	4,344	-3.5	-18.4	24	11.7
550	31	5,025	-8.3	-22.4	24	13.6
500	31	5,757	-13.4	-28.6	24	16.3
450	31	6,551	-19.0	-33.7	25	18.9
400	31	7,416	-25.6	-38.2	25	21.1
350	31	8,373	-32.8	-44.5	25	25.1
300	31	9,438	-41.0	-50.1	25	27.4
250	31	10,653	-50.3		26	31.6
200	31	12,082	-58.6		26	31.5
175	30	12,914	-60.6		26	31.2
150	29	13,879	-61.2		26	27.4
125	27	15,002	-63.6		26	21.4
100	27	16,363	-66.0		26	15.4
80	24	17,709	-66.6		25	6.5
70	23	18,524	-63.8		26	1.7
60	21	19,479	-61.2		06	1.2
50	20	20,615	-59.4		07	3.2
40	19	22,023	-57.2		08	5.6
30	19	23,861	-52.8		08	6.9
25	19	25,043	-50.7		09	7.5
20	19	26,506	-48.1		09	5.5
15	17	28,420	-45.4		08	5.1
10	8	31,139	-39.8			

ELY, NEV. — 805 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,908	2.5	-1.6	23	1.7
1000	31	120				
950	31	549				
900	31	998				
850	31	1,467				
800	31	1,961	4.8	-1.2	22	1.6
750	31	2,488	3.9	-4.4	18	1.8
700	31	3,045	-.1	-8.0	21	2.6
650	31	3,634	-4.5	-11.0	21	3.3
600	31	4,259	-9.0	-15.7	22	4.8
550	31	4,926	-13.8	-22.3	21	5.3
500	31	5,644	-18.4	-29.4	22	4.5
450	31	6,423	-23.8	-34.6	23	4.5
400	31	7,272	-30.3	-40.9	25	5.3
350	31	8,211	-37.3	-46.2	26	5.8
300	31	9,256	-44.9		26	7.5
250	31	10,455	-52.2		27	10.3
200	31	11,886	-55.6		26	11.2
175	31	12,737	-55.5		26	9.8
150	31	13,720	-55.6		26	9.6
125	31	14,878	-57.1		26	8.7
100	31	16,283	-58.8		26	6.1
80	30	17,689	-58.8		26	3.2
70	30	18,528	-58.1		25	1.9
60	30	19,501	-57.1		17	.6
50	30	20,657	-56.4		10	1.5
40	30	22,077	-55.3		07	2.3
30	30	23,925	-52.6		08	3.7
25	29	25,114	-50.4		08	4.8
20	29	26,578	-47.9		07	5.3
15	28	28,484	-45.2		08	6.0
10	27	31,215	-40.1		09	5.1
7	13	33,698	-35.0			

EMPALME, MEXICO — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	12	17.1	7.4	35	.8
1000	31	92	20.9	9.3	35	1.0
950	31	537	22.0	2.4	34	1.8
900	31	1,004	20.0	-1.3	26	1.9
850	31	1,494	17.3	-3.1	22	4.6
800	31	2,008	14.5	-7.0	22	7.0
750	31	2,550	11.3	-9.7	23	7.8
700	31	3,122	7.8	-13.2	23	9.8
650	31	3,728	4.0	-16.0	24	11.8
600	31	4,373	-.4	-19.7	24	13.3
550	31	5,062	-5.3	-23.5	25	14.8
500	31	5,803	-10.7	-26.1	25	16.2
450	31	6,604	-16.5	-30.2	25	19.0
400	31	7,478	-23.3	-35.9	26	21.6
350	31	8,444	-30.6	-41.2	26	24.4
300	31	9,518	-38.8	-49.6	26	28.1
250	31	10,743	-48.[illegible]		26	31.3
200	29	12,181	-57.7		26	33.1
175	29	13,016	-61.3		26	31.2
150	28	13,970	-63.1		26	26.3
125	28	15,085	-65.5		26	22.9
100	27	16,436	-68.7		25	15.4
80	24	17,767	-69.6		26	8.5
70	24	18,570	-65.8		27	3.4
60	24	19,514	-62.8		08	1.7
50	24	20,648	-59.4		09	4.6
40	22	22,053	-57.3		09	6.0
30	18	23,892	-53.1		09	9.2
25	18	25,074	-50.4		09	10.0
20	16	26,533	-47.9		09	8.7
15	12	28,433	-44.9			

* FAIRBANKS, ALASKA — 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	135	4.8	-1.9	35	1.0
1000	31	57				
950	31	476	4.5	-4.5	14	.6
900	31	914	1.7	-6.7	18	1.8
850	31	1,372	-1.9	-9.0	18	3.8
800	31	1,851	-5.6	-11.1	19	4.7
750	31	2,353	-9.4	-14.0	19	5.8
700	31	2,883	-13.3	-17.3	19	6.2
650	31	3,443	-16.8	-21.2	19	6.9
600	31	4,040	-20.6	-24.9	18	7.4
550	31	4,679	-24.5	-29.0	18	8.2
500	31	5,367	-28.9	-34.7	18	8.8
450	31	6,113	-33.9	-40.1	18	9.7
400	31	6,928	-39.7	-43.1	19	10.5
350	31	7,831	-46.2		18	13.7
300	31	8,838	-52.2		19	14.5
250	31	10,016	-52.0		19	11.5
200	31	11,474	-48.6		20	9.3
175	31	12,354	-48.2		20	8.5
150	31	13,370	-48.1		20	8.1
125	31	14,571	-48.7		20	7.1
100	30	16,037	-49.3		20	5.5
80	30	17,499	-49.7		19	4.4
70	30	18,373	-49.9		19	4.0
60	30	19,381	-50.1		19	2.7
50	29	20,568	-50.6		15	1.8
40	27	22,021	-50.4		15	2.4
30	26	23,901	-49.9		12	2.7
25	25	25,090	-49.6		10	3.2
20	24	26,545	-49.1		11	4.1
15	23	28,449	-46.5		10	4.2
10	22	31,182	-41.7		09	4.7
7	13	33,687	-35.3			

FLINT, MICH. — 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	236	7.4	4.5	22	1.4
1000	30	120				
950	30	546	9.7	.9	27	1.3
900	30	994	7.9	-1.6	28	3.2
850	30	1,463	5.4	-4.1	29	3.8
800	30	1,957	2.7	-8.4	29	5.0
750	30	2,476	.1	-12.9	30	6.2
700	30	3,027	-2.4	-16.9	30	6.8
650	30	3,612	-5.4	-20.8	30	7.5
600	30	4,235	-9.4	-24.1	29	8.4
550	30	4,903	-13.3	-28.4	29	9.1
500	30	5,621	-18.6	-31.4	29	10.2
450	30	6,398	-24.2	-37.1	29	11.1
400	30	7,247	-30.2	-42.6	28	12.5
350	30	8,187	-36.7	-47.9	28	12.4
300	30	9,234	-44.4		28	14.6
250	30	10,437	-51.5		28	18.2
200	30	11,871	-55.3		28	19.9
175	30	12,723	-55.3		28	17.4
150	30	13,709	-54.6		27	14.8
125	30	14,873	-55.8		27	12.7
100	30	16,291	-56.8		28	9.7
80	30	17,705	-56.7		27	7.2
70	29	18,553	-56.8		27	4.8
60	29	19,533	-55.7		28	2.8
50	28	20,698	-54.6		36	.5
40	27	22,131	-53.8		08	2.8
30	27	23,990	-51.4		09	4.5
25	25	25,172	-50.1		09	5.3
20	24	26,638	-47.5		08	6.0
15	20	28,552	-44.6		08	4.9
10	11	31,293	-39.8			

FORT WORTH, TEXAS — 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	17.5	12.3	14	.7
1000	31	108				
950	31	548	17.7	11.5	17	4.0
900	31	1,010	16.7	7.9	19	5.8
850	31	1,497	15.6	2.8	22	5.8
800	31	2,009	13.3	-2.9	24	5.8
750	31	2,549	10.0	-6.5	26	6.0
700	31	3,118	6.1	-10.1	27	7.3
650	31	3,721	1.9	-13.5	27	8.6
600	31	4,361	-2.8	-17.1	27	10.2
550	31	5,044	-7.7	-21.2	27	11.8
500	31	5,777	-13.1	-26.3	27	13.9
450	31	6,572	-18.6	-32.8	27	15.9
400	31	7,439	-25.1	-39.7	26	18.8
350	31	8,398	-32.5	-46.3	27	19.9
300	31	9,463	-40.7	-49.9	26	23.1
250	31	10,681	-49.5		26	26.7
200	30	12,110	-57.8		26	28.9
175	29	12,943	-60.6		27	29.6
150	29	13,900	-61.7		26	26.2
125	27	15,028	-62.1		27	20.2
100	27	16,399	-65.1		27	12.6
80	26	17,759	-65.0		26	6.7
70	26	18,576	-63.3		26	2.2
60	26	19,530	-60.8		16	.9
50	25	20,668	-58.7		09	2.8
40	23	22,070	-56.6		09	4.2
30	23	23,910	-52.9		09	6.3
25	22	25,092	-50.8		10	6.8
20	20	26,550	-47.9		10	6.8
15	17	28,446	-45.1		10	3.4
10	6	31,202	-41.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb.)	GLASGOW, MONT. 933 MB						* GRAND JUNCTION, COLO. 849 MB						* GREAT FALLS, MONT. 887 MB						GREEN BAY, WIS. 988 MB						GREENSBORO, N. C. 983 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	696	7.0	-.2	09	2.5	31	1,472	9.5	.1	12	3.0	31	1,118	7.8	1.0	24	2.1	31	210	6.3	2.8	27	.8	31	275	12.1	10.0	26	.5
1000	31	121					31	90					31	111					31	110					31	130				
950	31	568					31	528					31	542					31	534	9.1	-.3	28	1.9	31	583	14.8	6.1	29	2.2
900	31	996	10.5	-.3	14	2.4	31	985					31	993					31	982	7.8	-2.5	28	3.0	31	1,020	12.8	3.2	28	3.5
850	31	1,472	8.8	-3.6	21	1.2	31	1,463					31	1,466	7.9	-2.1	24	3.1	31	1,451	4.9	-5.6	30	3.6	31	1,498	9.7	1.1	28	5.0
800	31	1,970	5.3	-5.0	30	1.0	31	1,969	9.7	-3.0	15	3.8	31	1,964	4.9	-3.5	26	2.1	31	1,943	1.8	-10.1	29	4.0	31	1,999	6.7	-1.6	28	6.8
750	31	2,494	1.7	-7.7	31	1.7	31	2,501	6.3	-5.6	20	3.3	31	2,487	1.5	-5.6	27	2.7	31	2,461	-.8	-15.1	28	5.1	31	2,526	4.2	-7.1	28	8.4
700	31	3,046	-1.7	-13.3	29	2.7	31	3,062	1.9	-8.2	22	4.4	31	3,039	-2.1	-8.5	26	3.5	31	3,009	-3.5	-18.2	29	5.7	31	3,085	1.1	-12.8	28	10.1
650	31	3,633	-4.9	-18.3	29	4.0	31	3,655	-2.7	-11.0	22	5.6	31	3,624	-6.0	-12.5	26	4.6	31	3,592	-6.2	-23.3	29	6.1	31	3,677	-2.2	-18.1	28	11.5
600	31	4,258	-8.7	-22.9	29	4.8	31	4,284	-7.5	-15.5	23	6.2	31	4,246	-10.0	-17.6	26	4.2	31	4,214	-10.1	-26.5	29	7.3	31	4,309	-5.9	-23.2	28	12.6
550	31	4,927	-13.3	-26.5	29	5.4	31	4,955	-12.6	-20.8	23	7.4	31	4,912	-14.3	-22.4	25	4.1	31	4,879	-14.6	-29.7	29	8.3	31	4,984	-10.5	-26.4	28	13.8
500	31	5,645	-18.3	-31.4	28	5.9	31	5,675	-18.1	-26.8	22	8.5	31	5,628	-19.0	-29.5	25	5.0	31	5,594	-19.1	-34.0	29	9.6	31	5,711	-15.4	-30.4	27	15.3
450	31	6,423	-24.1	-35.7	29	5.9	31	6,454	-23.5	-34.0	23	9.3	31	6,404	-24.6	-36.2	26	4.5	31	6,370	-24.6	-38.9	28	10.8	31	6,498	-20.6	-34.9	27	15.9
400	31	7,271	-30.6	-42.3	28	7.5	31	7,305	-29.9	-40.6	23	10.9	31	7,250	-31.1	-41.9	25	4.8	31	7,217	-30.9	-43.9	28	11.4	31	7,339	-26.8	-40.8	27	17.1
350	31	8,208	-37.9	-47.9	28	8.1	31	8,245	-36.9	-46.4	23	10.9	31	8,186	-38.3	-48.9	25	5.1	31	8,154	-37.7	-49.2	29	12.7	31	8,312	-33.8	-47.4	27	18.3
300	31	9,248	-46.2		27	7.1	31	9,291	-44.8		24	10.5	31	9,224	-46.7		25	5.7	31	9,197	-45.2		29	14.4	31	9,373	-41.6	-53.9	27	20.9
250	31	10,437	-54.4		27	8.5	31	10,491	-52.1		25	11.7	31	10,413	-54.2		26	6.0	31	10,394	-52.4		28	16.2	31	10,586	-49.9		28	22.5
200	31	11,883	-58.2		28	8.0	30	11,924	-56.5		26	14.1	31	11,826	-59.1		26	6.2	31	11,823	-55.4		28	17.2	31	12,023	-56.4		28	24.6
175	31	12,695	-57.3		28	7.6	30	12,769	-57.2		26	14.0	31	12,666	-57.6		26	5.6	31	12,675	-55.0		28	15.7	31	12,867	-58.1		28	23.5
150	31	13,675	-55.4		28	7.7	30	13,744	-57.1		26	13.2	31	13,643	-55.9		26	5.6	31	13,663	-54.6		28	12.9	31	13,838	-58.3		27	21.5
125	31	14,838	-55.5		28	6.3	29	14,893	-57.5		26	10.9	31	14,804	-56.1		26	5.8	31	14,827	-55.7		28	11.3	31	14,981	-59.5		27	17.0
100	31	16,257	-56.2		29	5.6	29	16,296	-59.2		26	8.3	31	16,222	-56.3		27	4.4	31	16,246	-56.5		28	9.4	31	16,372	-61.3		27	12.9
80	31	17,675	-56.1		29	4.1	28	17,692	-59.1		26	4.1	30	17,636	-56.9		28	3.2	31	17,660	-56.7		28	7.5	31	17,757	-61.0		27	6.8
70	31	18,525	-55.6		29	3.4	28	18,530	-58.7		27	2.1	30	18,484	-56.0		27	2.8	31	18,507	-56.5		28	5.7	31	18,588	-60.5		26	1.9
60	31	19,510	-54.8		30	2.4	27	19,500	-57.7		31	1.1	30	19,467	-55.1		27	2.1	31	19,488	-55.5		28	3.7	31	19,549	-59.8		30	.5
50	31	20,680	-53.7		29	1.7	27	20,652	-57.0		02	1.2	30	20,633	-54.5		32	1.2	31	20,654	-54.7		28	1.5	31	20,695	-57.3		10	2.1
40	31	22,115	-53.0		35	.9	27	22,070	-55.7		07	2.2	30	22,064	-53.8		36	.6	31	22,085	-53.6		07	1.7	31	22,111	-55.6		09	4.3
30	31	23,979	-51.1		08	1.7	27	23,914	-52.5		08	4.1	30	23,921	-51.6		07	1.9	31	23,944	-51.5		08	3.3	29	23,957	-51.8		09	5.7
25	31	25,169	-49.5		07	2.5	26	25,100	-50.7		07	4.2	29	25,109	-50.2		08	2.1	29	25,136	-50.3		09	4.3	29	25,145	-49.8		09	5.3
20	31	26,638	-47.5		09	2.8	24	26,564	-48.7		08	4.9	28	26,577	-48.4		07	2.4	27	26,597	-48.3		08	5.1	28	26,615	-47.5		08	5.6
15	31	28,550	-44.9		09	3.4	20	28,477	-46.2		09	4.7	27	28,480	-45.5		08	3.0	27	28,503	-45.7		08	4.9	27	28,524	-44.5		09	5.1
10	25	31,300	-38.8		08	3.9	10	31,245	-40.0				25	31,222	-39.2		09	3.7	22	31,240	-40.4		08	4.9	18	31,245	-40.6		10	3.1
7	12	33,777	-35.4										23	33,702	-33.8		10	4.3	7	33,698	-36.6									
5													9	36,181	-27.0															

Standard pressure surface (mb.)	GUADALUPE IS., MEXICO 1015 MB						* GUAM, MARIANA IS. 998 MB						MILO, HAWAII 1017 MB						HUNTINGTON W. VA. 986 MB						* INTERNATIONAL FALLS, MINN. 972 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	29	23	18.9	14.1	32	8.5	31	111	25.5	23.5	10	3.4	31	10	19.9	17.0	24	1.7	31	246	10.9	8.2	23	.8	31	359	4.5	.7	03	.8
1000	29	146	14.6	5.8	32	8.1	31	91					31	158	20.6	17.1	22	.9	31	128					31	122				
950	29	578	12.6	2.3	31	5.2	31	543	23.4	20.0	11	9.6	31	600	17.3	15.2	09	3.3	31	559	13.2	5.6	25	3.1	31	543	7.0	-1.0	33	.6
900	29	1,033	13.3	-4.3	31	4.2	31	1,014	20.6	15.8	11	8.8	31	1,061	14.2	12.2	09	3.8	31	1,013	10.7	3.0	27	5.3	31	987	5.1	-4.3	32	2.3
850	29	1,514	13.6	-10.5	29	5.4	31	1,507	17.9	12.6	11	7.6	31	1,541	11.0	8.7	08	3.7	31	1,486	7.9	.4	28	6.3	31	1,451	2.4	-6.5	33	3.6
800	29	2,023	12.3	-12.5	28	6.3	31	2,025	15.3	8.5	11	7.5	31	2,046	8.6	.6	08	4.8	31	1,984	5.1	-2.1	27	7.3	31	1,940	.3	-11.1	33	4.3
750	29	2,561	10.3	-14.8	27	7.8	31	2,570	12.5	3.2	11	7.3	31	2,578	7.1	-7.6	08	4.1	31	2,509	2.3	-8.4	27	8.5	31	2,455	-2.0	-14.7	33	5.4
700	29	3,132	7.4	-17.2	27	7.8	31	3,146	9.5	-2.6	11	7.1	31	3,144	5.6	-15.7	09	3.1	31	3,063	-.6	-13.0	28	9.6	31	3,001	-4.6	-18.1	32	5.8
650	28	3,736	4.3	-20.2	27	8.2	31	3,758	6.3	-7.8	11	6.8	31	3,747	2.7	-20.1	07	1.9	31	3,653	-3.5	-17.4	28	10.4	31	3,581	-7.7	-21.3	31	6.5
600	28	4,383	.4	-23.7	26	8.9	31	4,410	2.4	-11.5	10	6.3	31	4,390	-.8	-24.7	03	1.4	31	4,282	-7.0	-21.8	28	10.9	31	4,199	-11.2	-24.8	31	7.0
550	28	5,074	-4.2	-27.0	26	10.2	31	5,108	-1.7	-15.9	10	5.9	31	5,079	-4.9	-29.5	34	2.2	31	4,955	-11.2	-27.5	28	12.4	31	4,863	-15.3	-27.6	31	8.6
500	28	5,818	-9.5	-30.6	25	11.0	31	5,861	-6.0	-20.4	11	5.1	31	5,821	-9.9	-33.7	33	3.5	31	5,680	-16.0	-32.1	27	12.4	31	5,576	-20.2	-33.7	31	8.7
450	28	6,623	-15.2	-35.3	25	11.9	31	6,678	-10.8	-25.6	12	4.3	31	6,625	-15.5	-37.7	32	5.1	31	6,465	-21.6	-35.3	27	14.0	31	6,348	-25.6	-37.7	29	9.6
400	28	7,501	-22.0	-41.1	25	13.1	31	7,574	-16.4	-32.5	12	3.4	31	7,502	-22.2	-42.4	31	6.1	31	7,323	-28.1	-41.5	27	15.3	31	7,191	-31.9	-43.7	30	11.0
350	27	8,471	-29.5	-47.4	25	11.7	31	8,566	-23.2	-37.9	14	1.6	30	8,472	-29.6	-48.3	30	8.3	31	8,270	-34.9	-47.3	27	17.9	31	8,124	-39.0	-48.4	30	11.6
300	27	9,548	-38.1	-54.1			31	9,676	-31.6	-45.2	20	1.8	30	9,550	-38.1	-55.3	29	11.1	30	9,324	-42.9	-50.2	27	20.6	31	9,161	-46.9		29	12.1
250	27	10,778	-47.6				31	10,938	-42.0		25	2.7	30	10,780	-47.4		29	17.1	30	10,532	-50.7		27	23.9	31	10,349	-54.0		29	13.8
200	27	12,221	-56.7				28	12,406	-54.7		26	3.4	30	12,225	-56.6		28	26.3	30	11,969	-55.0		28	23.5	31	11,774	-55.9		29	14.1
175	27	13,062	-59.7				28	13,246	-62.1		28	4.3	30	13,061	-61.8		28	26.5	30	12,822	-55.6		28	20.2	31	12,625	-54.9		29	13.2
150	27	14,025	-60.3				27	14,182	-69.9		30	4.0	30	14,006	-65.5		28	22.1	30	13,802	-56.3		27	17.6	31	13,613	-53.8		29	11.5
125	27	15,156	-62.1				24	15,244	-77.6		34	3.5	29	15,109	-68.3		28	14.9	30	14,957	-57.8		27	14.3	31	14,783	-54.6		29	8.9
100	27	16,526	-64.3				20	16,501	-81.9		07	4.2	29	16,439	-70.7		29	6.6	29	16,361	-59.4		27	10.1	31	16,208	-55.7		29	7.5
80	26	17,888	-65.2				20	17,757	-78.7		09	10.3	29	17,759	-71.4		35	1.3	29	17,759	-59.1		27	6.2	31	17,628	-55.7		29	5.9
70	26	18,706	-62.5				20	18,529	-72.9		09	11.1	29	18,550	-69.9		08	3.6	29	18,598	-58.6		27	3.3	31	18,481	-54.8		29	4.6
60	26	19,662	-60.5				18	19,445	-68.2		09	12.1	29	19,476	-66.6		09	8.0	28	19,576	-57.7		31	.3	31	19,469	-54.0		30	3.4
50	26	20,806	-57.8				17	20,551	-64.2		09	13.0	29	20,590	-62.9		10	10.3	26	20,720	-56.2		08	2.1	31	20,641	-53.7		30	2.0
40	26	22,221	-55.4				16	21,932	-59.7		09	10.2	27	21,978	-59.2		09	11.6	25	22,145	-54.6		10	3.0	31	22,081	-52.2		35	1.0
30	24	24,073	-51.5				15	23,761	-53.6		09	11.1	27	23,801	-54.4		09	13.3	23	24,001	-51.3		09	5.0	30	23,950	-50.1		09	1.9
25	25	25,267	-48.7				14	24,942	-50.9		08	10.1	27	24,976	-51.6		09	12.1	21	25,192	-49.5		08	4.7	30	25,144	-49.3		09	2.2
20	25	26,748	-44.9				13	26,403	-48.3		07	11.4	27	26,436	-48.4		09	11.4	20	26,867	-46.8		09	5.9	29	26,615	-47.1		09	2.6
15	22	28,690	-41.6				11	28,293	-45.6		08	6.8	24	28,345	-45.5		08	12.4	17	28,582	-44.3		08	4.7	28	28,528	-44.5		08	3.1
10	13	31,474	-38.1				10	28,998	-43.5				18	31,073	-40.7		09	14.2	7	31,332	-39.1				28	31,275	-38.9		08	4.2
7							7	33,411	-40.2				6	33,513	-38.0										24	33,735	-33.4		09	4.3
5																									18	36,117	-27.9		12	2.4
4																									8	37,763	-23.8			

Standard pressure surface (mb.)	JACKSON, MISS. 1004 MB						JOHN F. KENNEDY INT. AP NY 1014 MB						JOHNSTON IS., PACIFIC AREA 1015 MB						KEY WEST, FLA. 1015 MB						KING SALMON, ALASKA 1002 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	100	14.7	13.8	13	.8	31	5	12.3	5.3	32	1.0	31	3	25.4	21.0	09	7.6	31	3	25.0	21.0	10	1.7	30	15	.5	-2.9	09	1.1
1000	30	136	16.8	12.7	14	1.1	31	124	11.5	4.7	34	1.4	31	136	23.8	20.0	09	8.1	31	135	24.2	20.3	09	1.8	30	25				
950	30	575	16.5	10.1	18	.7	31	553	11.5	2.2	32	2.7	31	583	20.1	18.0	09	9.2	31	583	20.9	17.2	12	2.1	30	437	-1.2	-4.6	14	3.4
900	30	1,034	14.1	6.0	25	1.5	31	1,004	9.6	-.6	30	3.2	31	1,048	17.2	13.3	09	9.6	31	1,050	18.2	10.0	16	2.1	30	866	-4.0	-5.7	14	4.9
850	30	1,515	12.6	.0	27	3.7	31	1,476	6.7	-2.4	29	5.1	31	1,534	14.0	10.6	09	9.0	31	1,539	15.7	5.4	19	1.7	30	1,315	-6.5	-8.5	14	6.5
800	30	2,023	11.0	-4.2	28	5.6	31	1,972	4.2	-4.8	28	6.0	31	2,044	11.4	6.3	08	8.1	31	2,051	12.9	-.4	23	2.1	30	1,787	-8.8	-11.7	15	7.5
750	30	2,559	8.1	-7.2	27	7.3	31	2,495	1.7	-8.5	28	6.3	31	2,582	9.6	-2.0	08	6.4	31	2,587	10.6	-7.8	24	2.6	30	2,285	-11.2	-14.5	16	7.6
700	30	3,124	4.5	-10.9	28	8.7	31	3,049	-1.2	-11.5	27	7.7	31	3,154	7.9	-9.3	08	4.6	31	3,163	7.4	-12.0	27	2.8	30	2,812	-14.0	-17.2	16	7.4
650	30	3,724	.8	-13.2	29	9.7	31	3,636	-4.2	-15.9	27	9.0	31	3,762	5.1	-15.4	09	3.2	31	3,762	4.0	-14.9	29	3.4	30	3,372	-17.0	-21.0	16	7.0
600	30	4,362	-3.3	-16.4	28	10.7	31	4,263	-7.6	-20.1	27	10.7	31	4,411	1.6	-19.6	07	1.7	31	4,415	.4	-20.6	29	4.3	30	3,969	-20.4	-24.4	17	7.4
550	30	5,044	-7.8	-21.2	28	12.1	31	4,936	-11.6	-24.9	26	12.6	31	5,106	-2.8	-22.3	04	1.5	31	5,098	-3.7	-22.7	30	6.0	30	4,608	-24.3	-29.4	17	7.6
500	30	5,778	-12.8	-26.2	28	13.6	31	5,659	-16.5	-30.0	27	13.4	31	5,854	-7.7	-26.0	01	1.3	31	5,854	-8.6	-26.1	29	7.8	30	5,296	-29.0	-34.0	18	7.6
450	30	6,574	-18.0	-30.5	27	14.9	31	6,444	-21.8	-35.0	27	14.4	31	6,664	-13.3	-30.8	02	1.7	31	6,651	-14.4	-31.5	29	9.4	30	6,042	-34.4	-39.0	18	7.8
400	30	7,443	-24.4	-35.8	27	17.9	31	7,300	-28.1	-41.0	26	16.4	31	7,551	-19.4	-35.9	34	2.4	31	7,544	-20.9	-37.8	29	10.9	30	6,855	-40.4	-43.7	19	9.7
350	30	8,406	-31.4	-42.6	27	20.5	31	8,247	-35.3	-47.6	27	18.2	31	8,533	-26.4	-41.1	29	4.6	31	8,516	-28.3	-44.2	29	13.0	30	7,756	-46.4		19	10.1
300	30	9,475	-39.9	-48.4	27	23.8	31	9,301	-43.2	-50.6	27	21.1	31	9,625	-34.8	-48.0	28	10.0	31	9,602	-37.0	-50.8	29	15.5	30	8,765	-50.8		20	11.6
250	30	10,696	-49.2		27	27.4	31	10,508	-50.9		27	24.6	31	10,872	-44.3		27	15.6	31	10,837	-46.6		29	18.4	30	9,954	-49.2		20	10.9
200	30	12,129	-58.1		27	31.1	31	11,945	-54.8		27	24.2	31	12,332	-55.3		27	22.0	31	12,281	-57.2		29	22.3	30	11,429	-46.6		20	9.2
175	30	12,964	-61.1		27	30.9	31	12,798	-55.2		27	22.9	31	13,173	-61.0		27	23.0	31	13,116	-61.7		29	23.8	30	12,316	-46.3		20	8.8
150	30	13,920	-61.9		27	26.9	30	13,781	-54.8		26	19.2	31	14,116	-67.4		27	21.8	31	14,063	-65.4		28	22.1	30	13,338	-46.9		20	7.7
125	30	15,046	-63.0		27	19.7	30	14,944	-55.8		26	16.5	29	15,197	-72.7		27	19.0	31	15,160	-69.5		28	17.4	30	14,545	-47.7		19	6.9
100	30	16,411	-65.3		27	12.7	30	16,360	-57.2		27	12.4	29	16,498	-73.2		28	4.2	31	16,482	-71.7		29	9.5	30	16,015	-48.6		19	5.4
80	30	17,746	-65.8		26	6.8	30	17,771	-57.4		27	7.5	28	17,801	-73.0		08	3.5	31	17,797	-71.3		33	2.7	29	17,477	-49.4		19	5.2
70	30	18,580	-64.1		27	3.4	30	18,616	-56.9		26	2.9	28	18,589	-70.3		09	6.4	31	18,590	-68.6		05	2.8	29	18,332	-49.5		19	4.4
60	29	19,531	-61.8		36	1.5	30	19,595	-55.6		13	.4	28	19,512	-67.0		09	7.9	31	19,523	-64.0		08	5.2	29	19,362	-49.8		18	3.7
50	28	20,668	-58.9		07	3.4	30	20,760	-54.7		10	3.0	28	20,624	-63.2		09	11.0	31	20,685	-60.5		08	8.3	29	20,553	-50.2		17	2.9
40	28	22,075	-56.6		08	5.5	29	22,193	-53.3		09	5.0	28	22,007	-60.0		09	12.5	28	22,050	-57.7		09	11.2	28	22,015	-50.4		16	2.1
30	28	23,917	-52.5		08	6.6	26	24,065	-50.1		09	6.8	28	23,825	-54.3		09	12.1	24	23,893	-52.7		09	12.2	27	23,888	-50.5		12	1.7
25	27	25,102	-50.2		09	7.1	24	25,292	-48.9		08	7.2	28	25,005	-50.6		09	11.3	23	25,080	-49.4		09	12.6	26	25,075	-50.1		11	1.7
20	27	26,571	-46.9		09	6.0	23	26,727	-46.1		09	7.9	28	26,472	-47.4		08	10.9	21	26,555	-46.0		09	11.1	25	26,532	-49.2		09	2.0
15	25	28,486	-44.3		09	5.2	21	28,693	-42.5		09	5.1	24	28,386	-45.2		08	11.1	19	28,488	-42.3		08	11.0	19	28,434	-46.8		11	2.0
10	18	31,241	-40.9		06	3.4	16	31,358	-39.0		09	4.2	22	31,112	-41.4		10	13.6	19	31,261	-37.9		09	10.0	6	31,035	-44.1			
7													12	33,536	-38.1				13	33,702	-35.9									

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KOROR, CAROLINE IS. 1006 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	30	28.0	24.8	23	.3
1000	31	80	27.2	23.0	23	.4
950	31	534	24.1	20.1	21	.7
900	31	1,006	21.3	16.6	16	1.1
850	31	1,500	18.3	13.1	14	1.6
800	31	2,019	15.9	9.3	14	1.6
750	31	2,565	13.1	6.0	13	2.0
700	31	3,143	10.0	1.9	11	2.2
650	31	3,756	6.6	-2.1	11	2.6
600	31	4,410	3.0	-6.1	09	2.8
550	31	5,110	-.8	-11.2	09	2.7
500	31	5,865	-5.0	-16.4	10	3.3
450	31	6,687	-9.7	-21.5	09	3.9
400	31	7,587	-15.0	-28.1	09	4.6
350	31	8,587	-21.6	-35.4	09	4.8
300	31	9,701	-30.1	-43.8	10	5.5
250	31	10,972	-40.4	-52.8	10	6.8
200	31	12,451	-53.1		09	8.0
175	31	13,298	-60.2		08	8.6
150	31	14,242	-68.0		07	9.9
125	29	15,316	-75.4		07	9.4
100	28	16,587	-81.2		07	8.6
80	28	17,842	-79.2		08	10.4
70	28	18,613	-72.9		08	13.4
60	28	19,531	-67.1		09	13.9
50	27	20,644	-62.5		09	9.8
40	27	22,037	-57.4		08	3.7
30	26	23,874	-52.5		28	1.3
25	26	25,060	-49.8		26	2.8
20	26	26,530	-46.7		24	3.7
15	23	28,456	-43.9		20	2.8
10	16	31,202	-41.0		14	2.6
7	6	33,615	-38.9			

KOTZEBUE, ALASKA 1008 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	5	-4.4	-6.2	15	.9
1000	31	64				
950	31	472	-2.5	-7.2	15	2.3
900	31	899	-4.7	-7.8	15	3.6
850	31	1,347	-6.6	-10.4	15	4.6
800	31	1,819	-9.0	-13.8	15	5.5
750	31	2,316	-12.0	-16.6	16	5.6
700	31	2,841	-15.1	-20.4	16	6.5
650	31	3,398	-18.3	-23.4	15	6.6
600	31	3,991	-21.8	-28.1	16	7.1
550	31	4,627	-25.7	-31.4	16	6.9
500	31	5,311	-30.4	-35.7	17	7.1
450	31	6,053	-35.5	-40.4	17	7.7
400	31	6,862	-41.4	-42.4	17	8.2
350	31	7,760	-47.4		18	9.3
300	31	8,763	-52.5		17	10.3
250	31	9,946	-49.8		16	8.3
200	31	11,419	-46.6		16	6.2
175	31	12,306	-46.3		16	5.8
150	31	13,330	-46.6		16	5.5
125	31	14,539	-47.0		16	4.9
100	30	16,013	-47.9		16	4.4
80	30	17,495	-48.3		16	3.8
70	29	18,361	-48.4		16	3.5
60	29	19,376	-48.5		15	3.1
50	29	20,575	-48.6		14	3.3
40	29	22,043	-48.6		12	3.0
30	28	23,938	-48.4		11	3.3
25	27	25,131	-48.1		10	3.0
20	27	26,605	-47.3		09	4.0
15	23	28,529	-44.8		09	3.7
10	10	31,337	-39.6			

KWAJALEIN, MARSHALL IS. 1011 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	4	26.7	24.0	08	6.9
1000	31	97	26.1	23.6	08	8.1
950	31	548	22.7	20.9	08	10.7
900	31	1,019	19.8	17.3	09	11.3
850	31	1,511	17.3	14.1	09	10.6
800	31	2,027	15.1	10.0	09	9.7
750	31	2,573	12.4	5.1	09	8.9
700	31	3,149	9.2	3.3	09	7.8
650	31	3,760	5.7	-1.1	08	6.3
600	31	4,412	2.1	-6.1	09	4.9
550	31	5,110	-1.7	-9.2	08	4.2
500	31	5,863	-6.1	-14.3	09	3.0
450	31	6,681	-10.8	-22.4	08	2.5
400	31	7,577	-16.7	-27.6	06	1.1
350	31	8,568	-23.5	-33.1	25	.9
300	31	9,676	-31.9	-41.1	24	3.5
250	31	10,937	-42.3	-50.5	24	5.8
200	31	12,404	-54.9	-62.0	25	7.9
175	31	13,244	-61.8		26	8.9
150	31	14,181	-69.2		27	10.3
125	31	15,250	-76.7		28	8.2
100	30	16,512	-82.2		31	3.4
80	28	17,772	-78.1		08	4.7
70	28	18,543	-74.2		08	9.9
60	25	19,453	-68.0		09	11.5
50	24	20,557	-64.9		08	10.2
40	22	21,934	-60.0		08	8.7
30	21	23,755	-54.6		05	.7
25	19	24,932	-52.0		35	1.5
20	18	26,383	-49.7		31	1.5
15	18	28,280	-46.8		04	3.5
10	13	31,021	-42.3		07	4.2
7	11	33,441	-39.3			

LAKE CHARLES, LA. 1014 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	5	18.9	17.1	09	1.4
1000	31	124	19.8	16.6	12	1.6
950	31	566	18.0	14.1	17	3.3
900	31	1,028	16.0	10.5	21	4.1
850	31	1,513	14.3	3.9	22	5.2
800	31	2,024	12.1	-.6	24	5.1
750	31	2,562	9.5	-7.6	25	6.0
700	31	3,131	6.0	-10.6	27	6.4
650	31	3,734	2.4	-14.5	27	7.1
600	31	4,376	-2.3	-16.3	28	8.6
550	31	5,060	-7.2	-20.5	28	10.4
500	31	5,795	-12.2	-25.8	27	11.6
450	31	6,593	-17.6	-31.3	27	13.4
400	31	7,464	-24.1	-37.8	27	16.6
350	31	8,427	-31.1	-43.6	27	19.2
300	31	9,499	-39.3	-49.3	27	22.5
250	31	10,723	-48.5		27	24.7
200	31	12,160	-57.6		27	30.8
175	31	12,997	-60.9		27	31.7
150	31	13,950	-62.7		27	26.5
125	31	15,068	-64.7		27	19.7
100	31	16,422	-67.3		27	12.4
80	30	17,766	-67.9		26	4.2
70	30	18,573	-66.0		25	1.1
60	30	19,517	-62.5		10	1.7
50	30	20,652	-59.4		09	4.3
40	30	22,056	-57.2		09	6.0
30	29	23,895	-52.6		09	7.8
25	29	25,079	-50.3		09	8.0
20	28	26,543	-47.9		09	7.9
15	27	28,455	-45.2		08	6.3
10	18	31,190	-40.4			

LANDER, WYO. 827 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	1,697	5.9	-.3	24	2.1
1000	31	116				
950	31	549				
900	31	1,001				
850	31	1,475				
800	31	1,974	6.5	-2.6	31	1.9
750	31	2,501	3.4	-5.3	32	2.2
700	31	3,057	-.2	-8.9	32	1.9
650	31	3,646	-4.0	-12.5	31	1.5
600	31	4,273	-8.2	-16.8	26	2.0
550	30	4,942	-13.2	-22.8	24	2.9
500	30	5,660	-18.3	-29.0	23	3.6
450	30	6,438	-24.3	-36.0	23	4.0
400	30	7,285	-30.7	-41.2	24	4.7
350	30	8,222	-38.0	-47.5	24	5.8
300	30	9,263	-46.0		23	7.4
250	30	10,454	-54.2		23	8.0
200	30	11,866	-58.4		24	8.9
175	30	12,707	-57.8		26	9.6
150	30	13,682	-57.0		26	8.8
125	30	14,837	-57.0		26	8.3
100	30	16,247	-57.9		26	5.8
80	30	17,652	-58.1		26	3.9
70	30	18,495	-57.5		26	2.7
60	30	19,470	-56.8		27	1.7
50	30	20,628	-56.1		25	.6
40	29	22,049	-55.0		04	1.4
30	27	23,892	-52.4		08	2.7
25	26	25,073	-50.9		08	3.2
20	24	26,539	-48.5		08	4.0
15	21	28,443	-46.4		09	4.4
10	10	31,149	-41.7			

LIHUE KAUAI, HAWAII 1015 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	36	23.2	18.8	07	3.9
1000	31	169	21.9	17.7	07	5.1
950	31	613	18.2	16.1	08	7.2
900	31	1,074	14.8	12.8	08	6.9
850	31	1,555	11.5	9.2	08	6.2
800	31	2,061	9.6	2.4	08	6.1
750	31	2,596	8.2	-6.5	09	5.6
700	31	3,164	6.1	-14.2	08	3.8
650	31	3,768	3.2	-17.9	06	3.6
600	31	4,412	-.5	-20.9	05	3.7
550	31	5,102	-4.7	-24.5	03	3.6
500	31	5,845	-9.5	-28.0	01	3.5
450	31	6,649	-15.6	-32.5	36	3.2
400	31	7,526	-22.2	-39.0	35	4.1
350	31	8,496	-29.7	-44.7	34	4.9
300	31	9,573	-38.3	-51.4	33	6.6
250	31	10,802	-47.9		32	8.9
200	31	12,241	-57.4		31	13.5
175	31	13,076	-61.8		29	15.3
150	31	14,021	-65.2		30	13.3
125	31	15,125	-67.6		29	9.0
100	30	16,459	-70.7		30	4.6
80	29	17,779	-70.7		04	2.5
70	29	18,574	-69.2		08	3.4
60	28	19,504	-66.0		10	5.8
50	28	20,622	-61.8		09	7.9
40	28	22,011	-59.2		09	10.6
30	28	23,835	-54.5		09	13.3
25	27	25,013	-51.9		09	13.2
20	27	26,470	-48.7		03	11.9
15	26	28,375	-45.4		08	12.6
10	23	31,098	-41.3		09	12.7
7	19	33,545	-36.6		10	12.0
5	9	35,915	-32.4			

LITTLE ROCK, ARK. 1005 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	79	13.7	12.2	21	1.1
1000	31	124	15.4	9.1	21	.5
950	31	562	16.2	8.0	21	3.0
900	31	1,020	13.8	5.4	22	4.3
850	31	1,501	12.4	-1.0	25	5.6
800	31	2,008	10.0	-4.1	26	5.7
750	31	2,542	7.1	-6.6	28	6.8
700	31	3,105	3.8	-11.1	28	7.9
650	31	3,703	-.4	-13.8	28	8.6
600	31	4,338	-4.8	-18.3	28	10.4
550	31	5,016	-9.3	-23.0	28	12.1
500	31	5,746	-14.4	-29.0	28	12.7
450	31	6,537	-19.6	-33.9	28	14.2
400	31	7,401	-25.9	-39.2	28	16.5
350	31	8,357	-33.0	-45.2	28	17.9
300	31	9,420	-41.1	-50.7	27	20.1
250	31	10,635	-50.0		27	24.2
200	31	12,066	-58.1		27	26.6
175	31	12,902	-60.1		28	26.6
150	30	13,865	-59.6		28	24.0
125	30	15,001	-61.5		28	17.7
100	30	16,375	-64.0		28	12.2
80	30	17,742	-63.7		28	7.1
70	30	18,564	-61.9		29	2.6
60	30	19,521	-60.5		35	1.2
50	30	20,663	-58.3		08	2.9
40	29	22,075	-56.0		10	4.7
30	28	23,918	-52.6		08	5.3
25	26	25,102	-50.2		08	5.9
20	24	26,571	-47.4		09	5.4
15	22	28,488	-44.9		09	4.2
10	17	31,215	-40.7			

MCGRATH, ALASKA 993 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	103	2.5	-1.8	12	.3
1000	31	47				
950	31	462	2.2	-4.6	15	2.8
900	31	897	-.6	-6.1	15	4.1
850	31	1,351	-4.1	-8.2	16	5.3
800	31	1,826	-7.4	-10.2	15	5.8
750	31	2,326	-10.7	-13.6	16	6.7
700	31	2,853	-14.2	-16.8	16	6.9
650	31	3,412	-17.6	-20.6	16	7.1
600	31	4,007	-21.1	-25.6	16	7.6
550	31	4,645	-25.1	-30.2	15	8.4
500	31	5,331	-29.5	-35.2	16	9.2
450	31	6,075	-34.7	-40.7	16	9.3
400	31	6,887	-40.8	-43.8	16	9.4
350	31	7,786	-47.4		16	10.1
300	30	8,790	-52.3		17	10.0
250	30	9,974	-49.6		18	10.4
200	30	11,447	-47.0		18	8.7
175	30	12,333	-46.3		18	8.6
150	30	13,356	-46.9		18	8.2
125	30	14,563	-47.7		18	6.8
100	30	16,034	-48.4		18	6.1
80	30	17,502	-48.7		18	5.9
70	29	18,377	-48.7		17	4.2
60	29	19,390	-49.2		17	4.5
50	28	20,590	-49.6		16	4.5
40	28	22,050	-49.9		14	3.0
30	24	23,947	-49.4		12	3.2
25	22	25,144	-48.7		11	3.1
20	19	26,624	-47.3		11	3.7
15	15	28,552	-45.0		09	5.0

MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	3	27.6	24.3	07	5.9
1000	31	101	26.4	21.5	08	7.5
950	31	553	23.1	19.5	08	10.7
900	31	1,024	20.4	16.3	09	11.0
850	31	1,516	17.6	12.7	09	11.2
800	31	2,034	15.3	8.9	10	10.0
750	31	2,579	12.7	5.8	10	10.0
700	31	3,156	9.7	2.5	10	9.0
650	31	3,769	6.5	-1.3	10	6.9
600	31	4,422	2.8	-5.0	10	5.5
550	31	5,122	-.9	-9.1	09	4.8
500	31	5,878	-4.8	-15.6	10	2.8
450	31	6,700	-9.6	-20.7	11	2.2
400	31	7,600	-15.1	-27.0	15	1.2
350	31	8,600	-21.9	-34.4	17	1.8
300	31	9,713	-30.2	-42.6	20	2.7
250	31	10,983	-40.6	-52.5	25	3.8
200	31	12,463	-53.0		26	7.2
175	31	13,311	-59.8		27	8.1
150	31	14,256	-67.6		27	8.9
125	31	15,335	-74.8		27	8.5
100	31	16,609	-80.2		28	4.1
80	31	17,879	-76.5		09	5.9
70	31	18,658	-71.5		09	10.5
60	31	19,582	-65.8		09	11.8
50	31	20,702	-61.9		10	7.8
40	30	22,099	-56.6		09	2.2
30	29	23,948	-50.8		28	3.1
25	29	25,143	-48.0		26	4.2
20	29	26,624	-45.8		25	4.3
15	26	28,554	-43.5		24	2.7
10	24	31,297	-40.8		13	2.6
7	7	33,715	-38.1			

MEDFORD, OREG. 970 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	401	8.0	5.5	31	.8
1000	31	148				
950	31	573	9.1	4.5	31	1.3
900	31	1,021	7.3	2.6	32	1.7
850	31	1,489	4.6	.2	34	1.1
800	31	1,982	2.5	-5.5	34	2.2
750	31	2,501	.1	-10.9	34	3.2
700	31	3,051	-2.7	-14.3	34	3.8
650	31	3,636	-6.1	-19.1	33	4.5
600	31	4,258	-9.9	-23.8	33	4.2
550	31	4,923	-14.3	-27.7	32	4.9
500	31	5,640	-19.0	-33.0	32	4.9
450	31	6,416	-24.5	-37.9	32	6.1
400	31	7,262	-31.1	-42.9	31	6.4
350	31	8,199	-37.8	-48.9	31	4.4
300	31	9,242	-45.5		32	5.9
250	31	10,437	-53.0		32	9.8
200	31	11,859	-57.5		31	8.3
175	31	12,703	-57.3		31	9.4
150	31	13,680	-56.9		30	7.7
125	31	14,832	-57.9		29	6.6
100	31	16,239	-58.4		28	4.8
80	31	17,643	-58.2		28	3.2
70	31	18,483	-58.2		28	1.9
60	31	19,457	-57.1		32	.0
50	31	20,613	-56.3		08	.9
40	30	22,034	-55.4		11	1.7
30	29	23,879	-53.4		08	2.4
25	28	25,058	-51.8		09	2.5
20	26	26,509	-49.2		08	2.2
15	24	28,400	-46.7		07	2.8
10	21	31,128	-41.1		08	4.5
7	15	33,579	-35.4		10	4.1
5	8	35,906	-30.4			

MERIDA, MEXICO 1011 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	11	23.0	21.8	10	1.3
1000	31	108	23.3	21.8	11	3.9
950	31	557	21.9	19.5	13	8.9
900	31	1,028	21.0	13.8	13	7.6
850	31	1,522	18.7	8.9	12	4.2
800	31	2,040	15.9	3.2	14	1.4
750	31	2,586	12.4	-1.3	15	1.1
700	31	3,161	9.4	-7.5	24	.2
650	31	3,772	5.9	-11.2	35	.8
600	31	4,423	2.4	-17.4	35	2.0
550	31	5,120	-2.0	-21.3	33	3.8
500	31	5,871	-6.6	-26.6	32	4.9
450	31	6,686	-12.0	-30.8	30	5.4
400	31	7,576	-18.5	-36.6	29	5.7
350	31	8,560	-25.8	-41.5	29	7.9
300	31	9,656	-34.1	-47.5	28	10.7
250	31	10,908	-43.4		28	16.1
200	31	12,373	-54.5		28	18.5
175	31	13,217	-60.6		28	19.7
150	30	14,161	-66.9		27	17.3
125	30	15,249	-71.0		28	12.4
100	29	16,558	-74.2		27	5.5
80	28	17,859	-73.3		08	2.4
70	28	18,648	-69.7		08	4.1
60	28	19,578	-64.9		07	6.4
50	28	20,703	-60.7		07	8.7
40	28	22,103	-57.5		08	12.3
30	27	23,942	-52.4		09	13.0
25	26	25,131	-48.8		08	12.2
20	26	26,608	-45.6		08	10.4
15	24	28,542	-42.6		08	10.6
10	18	[illegible]	-37.5			
7						

MIAMI, FLA. 1016 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	4	22.9	19.4	16	.1
1000	30	138	23.3	18.2	14	.7
950	30	585	20.3	15.9	16	2.1
900	30	1,051	17.7	11.6	20	2.5
850	30	1,538	15.5	5.8	23	2.0
800	30	2,050	12.8	.8	25	2.1
750	30	2,590	10.2	-3.8	25	2.7
700	30	3,161	7.0	-7.5	27	3.3
650	30	3,766	3.6	-11.8	28	3.8
600	30	4,412	-.1	-16.2	28	4.7
550	30	5,103	-4.2	-20.4	28	6.2
500	30	5,848	-8.7	-25.0	29	8.5
450	30	6,656	-14.3	-30.1	29	9.7
400	30	7,538	-20.7	-35.8	29	11.4
350	30	8,514	-28.0	-41.5	29	13.1
300	30	9,599	-36.5	-49.1	28	15.8
250	30	10,838	-46.0		29	18.9
200	30	12,288	-56.1		29	21.8
175	30	13,128	-60.3		29	23.3
150	30	14,081	-63.9		29	22.7
125	29	15,188	-67.3		28	19.2
100	29	16,524	-69.9		28	12.1
80	29	17,851	-69.8		29	4.8
70	29	18,651	-67.5		34	.8
60	28	19,589	-62.8		07	3.2
50	28	20,723	-59.6		08	7.2
40	27	22,128	-56.9		09	9.4
30	26	23,970	-51.2		09	10.8
25	26	25,163	-48.8		09	10.4
20	25	26,637	-46.2		09	10.1
15	23	28,563	-42.3		09	9.5
10	19	31,316	-37.7		09	10.3
7	7	33,783	-34.0			

MIDLAND, TEXAS 913 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	874	15.8	5.5	13	1.5
1000	31	96				
950	31	538				
900	31	1,001	17.3	5.1	16	3.0
850	31	1,489	17.1	2.2	20	4.2
800	31	2,005	15.0	-2.7	24	3.6
750	31	2,548	11.4	-8.1	26	4.6
700	31	3,119	7.1	-12.1	25	6.8
650	31	3,724	2.6	-15.3	25	8.7
600	31	4,365	-2.5	-17.2	25	11.6
550	31	5,048	-8.0	-22.7	25	14.5
500	31	5,781	-13.2	-29.8	26	16.2
450	31	6,575	-18.7	-35.3	26	17.6
400	31	7,442	-25.3	-40.4	26	19.7
350	31	8,399	-32.7	-46.2	26	22.2
300	31	9,463	-40.9	-49.0	26	26.5
250	31	10,679	-50.1		26	29.8
200	31	12,109	-58.0		26	32.7
175	30	12,942	-60.7		26	31.8
150	29	13,895	-62.0		26	27.7
125	29	15,019	-63.9		26	22.5
100	29	16,377	-65.9		27	15.8
80	28	17,729	-65.8		26	5.4
70	28	18,544	-63.6		24	2.1
60	28	19,498	-60.9		10	1.0
50	28	20,637	-58.7		09	3.6
40	28	22,047	-56.7		08	5.3
30	27	23,888	-52.8		08	7.3
25	26	25,072	-50.6		09	7.3
20	24	26,537	-47.4		09	7.1
15	23	28,451	-44.9		09	5.8
10	17	31,182	-39.6			

MONTERREY, MEXICO 960 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	423	20.8	18.1	09	.4
1000	30	94				
950	30	541	21.1	17.5	11	1.1
900	30	1,010	20.3	14.0	16	2.1
850	30	1,504	19.1	8.5	17	3.5
800	30	2,024	17.4	3.1	18	2.5
750	30	2,573	14.5	-1.0	25	2.8
700	30	3,152	10.4	-4.2	27	3.5
650	30	3,765	6.1	-8.1	27	4.1
600	30	4,414	1.1	-11.8	27	5.7
550	30	5,107	-4.5	-15.0	27	8.0
500	30	5,849	-10.1	-20.1	26	10.6
450	30	6,654	-14.9	-28.2	26	11.7
400	30	7,535	-21.0	-34.8	26	14.2
350	30	8,510	-28.5	-41.7	26	17.1
300	30	9,592	-37.2	-48.3	26	20.1
250	29	10,826	-46.8		26	24.1
200	29	12,270	-57.4		26	29.9
175	29	13,105	-62.3		26	30.4
150	29	14,048	-65.5		26	25.9
125	29	15,149	-68.6		26	19.8
100	28	16,474	-71.7		25	12.7
80	25	17,786	-71.6		25	4.9
70	25	18,580	-68.7		22	.2
60	24	19,515	-64.0		09	4.0
50	24	20,643	-60.5		09	6.2
40	21	22,039	-58.3		08	8.3
30	19	23,867	-53.7		08	10.2
25	18	25,047	-51.2		08	11.1
20	18	26,508	-48.4		09	10.7
15	16	28,423	-43.6		08	10.1
10	7	31,180	-38.6			

MONETT, MO. 963 MB

Standard pressure surface mb.	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	438	12.2	10.2	16	1.5
1000	30	121				
950	30	554	13.9	8.8	19	1.7
900	30	1,011	13.1	4.5	23	5.2
850	30	1,491	11.7	-.8	26	6.3
800	30	1,996	9.5	-3.9	26	7.4
750	30	2,528	6.2	-7.9	27	8.6
700	30	3,090	2.7	-11.3	28	10.0
650	29	3,685	-1.3	-15.6	28	11.1
600	29	4,318	-5.5	-20.9	28	11.4
550	29	4,994	-10.4	-26.0	28	13.2
500	29	5,720	-15.6	-31.0	28	14.9
450	29	6,507	-21.1	-37.8	28	14.9
400	29	7,366	-27.4	-42.4	28	17.9
350	29	8,316	-34.3	-47.1	28	19.7
300	29	9,374	-42.3	-50.7	27	22.8
250	29	10,582	-51.5		27	26.5
200	29	12,006	-58.3		27	30.5
175	29	12,844	-58.9		27	27.4
150	29	13,811	-58.9		28	23.5
125	29	14,953	-60.1		27	18.5
100	29	16,339	-62.2		28	12.0
80	29	17,718	-61.9		27	6.4
70	29	18,546	-60.9		28	3.6
60	28	19,505	-59.3		30	1.9
50	27	20,655	-57.5		04	1.9
40	26	22,068	-55.9		08	3.8
30	25	23,913	-52.4		09	4.2
25	23	25,093	-50.7		09	5.0
20	23	26,556	-48.2		08	4.3
15	21	28,468	-45.5		09	4.4
10	9	31,211	-40.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MONTGOMERY, ALA. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	57	14.5	13.2	30	.4
1000	31	137	17.1	11.8	30	.3
950	31	577	17.3	8.8	27	1.9
900	31	1,037	14.6	5.8	27	3.7
850	31	1,518	11.8	2.1	26	5.5
800	31	2,024	9.8	-3.4	27	6.6
750	31	2,558	7.4	-8.8	28	7.7
700	31	3,123	4.3	-12.5	28	9.4
650	31	3,722	.9	-15.5	28	10.6
600	31	4,351	-3.1	-18.4	28	11.8
550	31	5,044	-7.6	-21.6	28	12.7
500	31	5,778	-12.5	-25.3	28	13.3
450	30	6,575	-17.7	-31.9	28	16.7
400	30	7,446	-23.8	-37.2	28	18.9
350	31	8,410	-30.9	-43.9	28	22.2
300	30	9,482	-39.1	-50.1	28	24.3
250	30	10,[illegible]7	-48.4		28	27.9
200	30	12,147	-57.3		29	31.7
175	29	12,994	-60.2		28	31.3
150	29	13,951	-61.8		28	24.9
125	29	15,076	-62.9		28	19.1
100	29	16,442	-65.5		28	14.1
80	29	17,798	-65.5		28	6.2
70	29	18,614	-63.8		29	2.5
60	29	19,565	-61.4		08	1.3
50	28	20,704	-58.5		08	3.7
40	28	22,116	-55.7		08	5.1
30	28	23,966	-51.7		09	4.7
25	27	25,156	-49.4		09	6.5
20	26	26,628	-46.8		09	6.6
15	24	28,544	-44.2		08	5.6
10	18	31,298	-39.2			
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NASHVILLE, TENN. 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	180	12.4	9.9	13	.2
1000	31	133				
950	31	566	14.2	5.6	25	1.3
900	31	1,022	11.9	3.6	27	3.8
850	31	1,498	8.7	1.2	28	6.5
800	31	1,997	6.5	-5.2	28	7.9
750	31	2,525	4.3	-9.9	28	9.0
700	31	3,084	1.2	-13.1	27	9.6
650	31	3,676	-2.2	-16.7	28	11.0
600	31	4,308	-6.1	-21.5	28	12.3
550	31	4,983	-10.2	-26.5	28	12.5
500	31	5,710	-15.4	-30.9	28	14.3
450	31	6,498	-20.7	-35.7	28	16.0
400	31	7,358	-27.1	-40.2	28	17.8
350	31	8,310	-33.9	-47.6	28	19.5
300	31	9,368	-42.1	-50.5	28	22.8
250	31	10,581	-50.1		29	26.9
200	29	12,005	-57.4		28	29.1
175	29	12,846	-58.6		28	27.8
150	29	13,814	-59.0		28	20.9
125	29	14,956	-60.0		27	18.3
100	29	16,341	-61.6		27	12.0
80	28	17,718	-62.4		28	6.8
70	28	18,545	-60.9		28	3.2
60	28	19,506	-59.9		32	1.2
50	28	20,651	-57.4		07	2.5
40	28	22,067	-55.8		08	4.5
30	28	23,913	-52.2		08	4.8
25	28	25,098	-50.2		08	5.8
20	28	26,565	-47.3		09	5.7
15	26	28,473	-45.0		08	4.6
10	22	31,192	-40.7		06	2.5
7	5	33,638	-35.8			
5						

*** NOME, ALASKA 1006 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	5	-2.3	-6.8	07	1.5
1000	30	48				
950	30	456	-3.1	-7.2	13	2.6
900	30	882	-5.5	-8.1	14	3.2
850	30	1,329	-7.7	-10.2	14	3.8
800	30	1,799	-9.9	-13.3	15	4.5
750	30	2,294	-12.7	-17.0	15	4.9
700	30	2,817	-16.0	-20.6	15	5.6
650	30	3,373	-18.9	-23.5	15	6.3
600	30	3,965	-22.4	-27.5	15	6.8
550	30	4,599	-26.4	-30.4	14	7.3
500	30	5,281	-30.9	-35.0	14	7.9
450	30	6,021	-35.9	-40.1	15	8.7
400	30	6,830	-41.6	-43.8	15	9.8
350	30	7,726	-48.0		15	11.2
300	30	8,726	-52.9		15	10.4
250	30	9,911	-49.2		15	7.8
200	30	11,388	-46.2		15	6.2
175	29	12,275	-46.2		15	5.6
150	29	13,300	-46.6		15	4.7
125	29	14,508	-47.3		15	4.3
100	29	15,982	-47.9		15	4.5
80	29	17,452	-48.5		15	4.0
70	29	18,331	-48.6		15	3.8
60	29	19,345	-48.7		15	3.4
50	29	20,542	-49.2		14	3.3
40	29	22,006	-49.3		13	2.8
30	28	23,888	-49.4		12	2.3
25	26	25,090	-48.8		10	2.9
20	24	26,556	-47.9		09	2.6
15	24	28,463	-45.9		07	2.9
10	23	31,205	-40.5		08	3.6
7	14	33,695	-34.7			
5	6	35,969	-30.7			

NORTH PLATTE, NEBR. 916 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	847	[illegible].9	5.5	05	[illegible]
1000	30	110				
950	30	540				
900	30	988	9.4	4.5	08	.7
850	30	1,464	9.3	1.6	23	1.4
800	30	1,965	7.2	-.6	25	2.8
750	30	2,494	4.1	-3.3	27	3.8
700	30	3,052	.8	-9.4	29	4.8
650	30	3,644	-2.7	-13.7	28	5.6
600	30	4,274	-6.6	-18.4	28	5.9
550	30	4,948	-11.4	-24.2	28	6.3
500	30	5,671	-16.8	-30.5	28	7.1
450	30	6,454	-22.4	-36.2	28	7.7
400	30	7,308	-28.9	-42.1	28	8.7
350	29	8,256	-36.3	-48.6	28	9.3
300	29	9,305	-44.4		27	11.2
250	29	10,503	-52.9		28	11.3
200	29	11,924	-57.5		26	14.6
175	29	12,767	-57.3		26	15.6
150	28	13,746	-56.8		26	14.2
125	28	14,901	-57.3		27	11.9
100	28	16,309	-58.5		27	8.5
80	28	17,710	-58.6		27	4.8
70	28	18,550	-58.3		28	2.4
60	28	19,522	-57.6		30	.9
50	28	20,678	-55.9		03	1.0
40	28	22,132	-54.5		06	2.2
30	27	23,955	-51.7		07	4.1
25	27	25,143	-50.0		08	4.9
20	26	26,611	-47.8		08	5.0
15	25	28,518	-45.5		09	5.1
10	18	31,236	-40.3		09	5.1
7	6	33,745	-35.8			
5						

OAKLAND, CALIF. 10[illegible]5 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	6	1[illegible].6	8.1	25	1.7
1000	31	133	1[illegible].2	6.9	27	1.9
950	31	559	8.6	[illegible]	30	2.8
900	31	1,008	9.5	-.5	33	4.3
850	31	1,481	8.[illegible]	-4.[illegible]	33	4.[illegible]
800	31	1,979	5.5	-7.6	33	4.1
750	31	2,504	2.5	-9.7	34	4.6
700	31	3,058	-1.0	-14.2	33	6.4
650	31	3,646	-4.4	-18.5	33	7.9
600	31	4,272	-8.[illegible]	-24.5	33	9.[illegible]
550	31	4,942	-12.4	-28.7	33	9.9
500	31	5,66[illegible]	-1[illegible].5	-32.9	32	11.3
450	31	6,444	-23.1	-36.9	31	11.8
400	31	7,295	-29.4	-42.2	31	13.2
350	31	8,238	-36.3	-47.3	31	14.9
300	31	9,287	-44.2		31	16.1
250	31	10,489	-52.1		31	17.9
200	31	11,917	-56.2		30	18.0
175	31	12,764	-57.0		30	16.1
150	31	13,740	-56.9		29	14.9
125	31	14,890	-58.8		29	11.7
100	31	16,287	-60.0		28	8.1
80	31	17,678	-60.0		28	5.0
70	31	18,513	-59.7		27	2.6
60	31	19,481	-58.0		28	.6
50	30	20,633	-57.1		21	.9
40	30	22,050	-55.8		08	1.5
30	29	23,889	-53.8		08	4.0
25	29	25,066	-52.0		08	3.5
20	28	26,521	-49.5		07	4.4
15	24	28,414	-46.1		09	4.4
10	16	31,142	-41.0		07	4.3
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OMAHA, NEBR. 965 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	403	9.8	6.8	09	.6
1000	31	107				
950	31	536	11.8	5.9	13	.3
900	31	989	11.1	3.1	21	1.2
850	31	1,465	9.1	-.9	27	2.1
800	31	1,966	7.1	-4.7	27	3.9
750	31	2,494	4.0	-6.3	27	4.8
700	31	3,051	.7	-11.0	27	6.7
650	31	3,643	-2.9	-15.2	27	7.9
600	31	4,272	-7.0	-19.6	27	8.9
550	31	4,945	-11.5	-24.9	27	10.5
500	31	5,669	-16.7	-30.1	27	11.0
450	31	6,452	-22.4	-34.9	28	11.7
400	31	7,306	-28.7	-42.2	28	12.4
350	31	8,251	-36.0	-47.8	28	12.9
300	31	9,301	-44.1	-55.3	29	15.2
250	31	10,503	-51.8		28	17.5
200	31	11,932	-56.5		27	20.7
175	31	12,779	-56.5		27	19.6
150	31	13,759	-56.0		27	17.4
125	31	14,917	-56.5		28	13.7
100	31	16,327	-58.2		27	10.0
80	31	17,730	-58.4		29	6.2
70	31	18,572	-57.5		29	3.8
60	31	19,547	-57.1		30	1.2
50	31	20,705	-55.7		04	1.4
40	31	22,130	-54.3		07	3.2
30	29	23,986	-51.4		09	5.2
25	28	25,173	-50.0		09	5.4
20	28	26,639	-47.8		09	5.6
15	24	28,548	-44.8		09	4.6
10	11	31,324	-40.2			
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PAGO PAGO, AMERICAN SAMOA + 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	5	28.7	23.5	08	2.0
1000	31	109	27.2	20.5	08	2.1
950	31	562	23.5	18.2	05	2.1
900	31	1,032	20.0	14.4	03	2.3
850	31	1,523	17.0	10.4	04	2.1
800	31	2,039	14.6	6.2	01	2.0
750	31	2,583	12.1	1.9	35	1.4
700	31	3,158	9.4	-3.0	33	1.8
650	31	3,770	6.1	-7.5	30	2.4
600	31	4,421	2.3	-12.3	29	3.7
550	31	5,119	-1.9	-17.2	29	5.2
500	31	5,871	-6.4	-22.2	28	6.0
450	31	6,687	-11.5	-27.0	27	7.8
400	31	7,580	-17.3	-32.9	27	9.7
350	31	8,570	-24.5	-39.0	26	11.6
300	31	9,671	-32.7	-46.9	25	15.5
250	31	10,929	-42.5		25	19.5
200	30	12,400	-54.1		24	23.5
175	30	13,245	-60.2		24	23.5
150	29	14,194	-67.0		24	21.0
125	29	15,275	-74.2		25	18.2
100	29	16,559	-77.7		26	10.4
80	28	17,850	-73.3		30	2.9
70	28	18,638	-70.0		07	2.4
60	28	19,565	-66.0		09	5.1
50	28	20,679	-63.2		08	4.5
40	28	22,065	-59.2		08	4.2
30	27	23,897	-52.4		25	.9
25	27	25,083	-49.9		27	4.0
20	25	26,553	-46.6		28	6.1
15	24	28,482	-42.1		26	5.7
10	19	31,254	-37.5		26	4.4
7	6	33,691	-34.8			
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*** PEORIA, ILL. 991 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	200	9.1	5.4	21	.7
1000	31	121				
950	31	550	11.8	2.9	22	2.9
900	31	1,001	9.6	.1	25	3.3
850	31	1,473	6.8	-3.4	27	4.2
800	31	1,970	4.8	-7.3	28	6.1
750	31	2,494	2.3	-10.2	29	7.2
700	31	3,048	-.9	-14.0	29	8.7
650	31	3,636	-4.3	-17.7	29	9.4
600	30	4,263	-8.4	-21.8	29	9.5
550	30	4,933	-12.5	-26.7	29	10.4
500	30	5,654	-17.5	-31.3	29	10.8
450	30	6,434	-23.2	-36.3	29	12.0
400	30	7,286	-29.6	-42.2	29	14.3
350	30	8,227	-36.6	-47.0	29	15.1
300	30	9,275	-44.5		28	18.7
250	30	10,475	-51.8		28	23.6
200	30	11,903	-56.8		27	24.5
175	30	12,748	-57.4		28	22.3
150	30	13,724	-56.6		28	16.8
125	30	14,879	-57.9		28	14.6
100	29	16,289	-58.8		27	10.4
80	29	17,688	-59.3		28	5.8
70	28	18,522	-58.9		28	3.8
60	28	19,492	-57.8		30	2.1
50	28	20,647	-56.2		36	1.3
40	28	22,069	-54.9		09	3.2
30	27	23,922	-52.0		08	4.1
25	27	25,108	-50.1		08	5.5
20	27	26,574	-47.6		10	6.0
15	26	28,488	-45.0		08	5.6
10	23	31,240	-38.4		09	4.6
7	9	33,703	-33.2			
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*** PITTSBURGH, PA. 972 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	359	9.3	6.1	22	.4
1000	31	124				
950	31	552	10.8	4.0	28	1.3
900	31	1,002	8.9	.6	30	4.3
850	31	1,473	6.0	-2.3	29	5.8
800	31	1,967	2.8	-5.0	29	6.6
750	31	2,487	.1	-9.9	28	7.4
700	31	3,037	-2.6	-14.4	28	7.4
650	30	3,624	-5.4	-19.8	27	8.3
600	30	4,248	-8.7	-25.0	27	10.3
550	30	4,917	-12.8	-28.8	28	11.3
500	30	5,638	-17.6	-33.3	27	12.7
450	30	6,418	-23.3	-37.8	27	13.1
400	30	7,269	-29.6	-44.3	27	14.9
350	30	8,210	-36.8	-50.4	27	17.2
300	30	9,257	-44.7		27	18.8
250	30	10,457	-51.6		27	20.3
200	30	11,891	-55.5		27	21.3
175	30	12,743	-55.6		27	18.3
150	30	13,725	-55.5		27	15.5
125	30	14,884	-57.0		27	13.1
100	30	16,292	-58.5		27	9.6
80	30	17,695	-58.7		27	5.9
70	30	18,535	-58.1		27	3.8
60	30	19,508	-57.2		27	1.6
50	30	20,665	-56.0		16	.7
40	30	22,089	-54.7		10	2.7
30	29	23,942	-52.3		08	5.5
25	29	25,128	-50.2		08	5.9
20	28	26,591	-47.9		09	6.2
15	26	28,506	-44.8		09	5.8
10	24	31,262	-39.2		09	6.2
7	21	33,740	-33.6		10	6.6
5	10	36,131	-31.2			

PONAPE, CAROLINE IS. + 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	27	39	27.9	24.2	08	3.5
1000	27	84	26.6	21.6	08	4.2
950	27	536	23.4	19.1	09	8.3
900	27	1,007	20.4	16.1	09	9.9
850	27	1,499	17.8	12.3	09	9.2
800	27	2,017	15.5	8.1	10	8.7
750	27	2,562	12.5	4.5	09	7.4
700	27	3,138	9.2	.8	09	6.0
650	27	3,750	6.0	-2.9	09	6.4
600	27	4,402	2.3	-6.8	09	6.7
550	27	5,100	-1.5	-11.5	10	5.6
500	27	5,854	-5.2	-15.9	10	4.1
450	27	6,674	-10.0	-21.6	09	4.0
400	26	7,573	-15.4	-28.1	08	3.6
350	25	8,572	-22.1	-35.7	08	2.7
300	26	9,684	-30.4	-44.4	08	1.8
250	26	10,953	-40.8	-53.3	09	1.4
200	26	12,430	-53.6		02	1.2
175	26	13,275	-60.5		33	2.8
150	25	14,218	-68.2		33	4.0
125	25	15,293	-75.4		34	3.9
100	25	16,566	-81.0		03	2.9
80	25	17,828	-77.8		08	7.8
70	23	18,604	-72.8		08	11.1
60	23	19,522	-66.8		09	11.6
50	23	20,636	-62.8		10	8.9
40	22	22,027	-58.2		[illegible]9	3.2
30	22	23,861	-52.8		25	1.9
25	20	25,052	-49.8		26	3.2
20	17	26,525	-47.4		27	3.2
15	15	28,440	-45.3		14	1.5
10	11	31,186	-40.4			
7						
5						

PORTLAND, MAINE 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	20	9.1	5.0	30	.9
1000	31	107	9.4	4.0	32	1.5
950	31	533	9.6	1.7	32	2.1
900	31	981	7.9	-1.1	32	2.8
850	31	1,451	5.6	-3.0	30	3.3
800	31	1,945	3.0	-6.8	29	3.7
750	31	2,465	.2	-10.1	29	4.8
700	31	3,015	-2.6	-14.0	28	7.2
650	31	3,600	-5.7	-17.2	27	8.3
600	31	4,224	-8.9	-22.4	27	8.5
550	31	4,892	-13.1	-26.3	27	10.4
500	31	5,612	-17.6	-30.7	27	12.0
450	31	6,393	-23.0	-36.7	26	12.7
400	31	7,245	-29.0	-43.1	26	12.9
350	31	8,189	-36.0	-48.7	26	14.8
300	31	9,239	-44.0	-50.6	26	16.5
250	31	10,444	-50.6		26	18.7
200	31	11,885	-54.1		26	18.6
175	31	12,742	-54.1		26	17.3
150	31	13,730	-54.2		26	13.8
125	31	14,899	-54.7		26	11.7
100	31	16,322	-56.1		26	9.1
80	31	17,740	-56.1		26	5.4
70	31	18,590	-55.5		24	3.4
60	31	19,575	-54.6		21	1.6
50	30	20,746	-54.3		12	1.3
40	30	22,182	-52.8		10	3.6
30	29	24,050	-50.9		09	4.6
25	27	25,240	-49.3		09	4.4
20	27	26,710	-47.2		09	4.7
15	23	28,615	-44.6		08	4.1
10	23	31,358	-39.6		07	2.9
7						
5						
4						

*** QUILLAYUTE, WASH. 1011 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	58	7.0	5.5	01	.6
1000	31	147	7.4	5.1	34	.6
950	31	570	6.7	2.9	30	2.2
900	31	1,014	5.8	-1.4	28	2.5
850	31	1,481	3.8	-4.8	28	2.5
800	31	1,971	1.7	-8.0	27	2.8
750	31	2,489	-1.0	-12.1	27	3.0
700	31	3,036	-4.2	-17.3	26	3.6
650	31	3,617	-7.5	-20.1	27	3.9
600	31	4,236	-11.1	-25.4	27	4.8
550	31	4,898	-15.7	-28.4	27	5.8
500	31	5,610	-20.8	-31.0	27	5.8
450	31	6,381	-26.1	-36.4	26	5.7
400	31	7,223	-32.2	-41.8	26	5.7
350	31	8,155	-38.9	-47.3	26	6.9
300	31	9,193	-46.2		26	7.4
250	31	10,385	-53.6		27	8.5
200	29	11,817	-57.8		28	8.1
175	28	12,663	-58.1		28	6.9
150	28	13,636	-57.2		27	6.0
125	28	14,790	-57.0		27	5.0
100	27	16,205	-57.1		27	3.4
80	27	17,617	-57.4		26	2.3
70	27	18,462	-56.9		27	1.4
60	27	19,440	-56.1		25	1.2
50	27	20,601	-55.6		26	1.1
40	26	22,028	-54.7		03	1.0
30	25	23,881	-53.0		07	1.9
25	24	25,067	-51.6		09	2.3
20	23	26,525	-49.5		08	2.9
15	22	28,425	-46.4		07	3.4
10	20	31,172	-40.1		08	4.7
7	19	33,639	-33.8		08	5.2
5	12	36,017	-29.6			
4	6	37,528	-25.8			

RAPID CITY, S. DAK. 903 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	966	6.9	2.2	33	3.1
1000	31	117				
950	31	545				
900	31	993	6.9	1.4	32	2.7
850	31	1,467	8.1	.7	33	2.8
800	31	1,966	6.3	-2.2	35	2.5
750	31	2,493	3.6	-5.6	35	2.6
700	31	3,050	.0	-10.2	32	3.1
650	31	3,640	-3.7	-14.7	32	3.9
600	31	4,267	-7.8	-20.1	31	4.3
550	31	4,938	-12.5	-24.3	30	4.7
500	31	5,659	-17.6	-30.1	29	5.2
450	31	6,439	-23.4	-35.6	28	6.1
400	31	7,289	-29.8	-41.6	27	7.0
350	31	8,230	-37.1	-48.2	27	6.9
300	31	9,273	-45.6		27	8.1
250	31	10,466	-54.0		27	9.8
200	31	11,877	-59.2		27	12.2
175	31	12,716	-57.7		27	11.7
150	30	13,696	-56.6		27	10.2
125	30	14,851	-56.9		27	9.3
100	30	16,263	-57.6		27	7.2
80	29	17,669	-57.8		27	4.7
70	29	18,513	-57.1		28	3.7
60	28	19,488	-56.9		29	2.3
50	28	20,646	-55.6		31	1.1
40	28	22,073	-54.4		05	1.4
30	27	23,924	-51.6		07	3.3
25	26	25,113	-50.1		09	3.8
20	24	26,577	-48.0		08	4.0
15	23	28,491	-44.9		09	4.5
10	10	31,223	-39.8			
7						
5						

ST CLOUD, MINN. 977 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	316	6.2	3.2	02	.8
1000	31	122				
950	31	546	9.2	1.9	01	1.1
900	31	993	7.5	-1.5	35	2.4
850	31	1,462	4.9	-4.5	34	3.4
800	31	1,955	2.7	-8.3	33	4.0
750	31	2,475	.0	-12.5	32	4.7
700	31	3,025	-2.7	-16.1	31	5.4
650	30	3,611	-5.6	-19.8	30	5.6
600	30	4,234	-9.4	-24.5	30	6.9
550	30	4,901	-14.0	-27.1	30	7.1
500	30	5,618	-18.9	-34.2	30	7.8
450	30	6,395	-24.0	-38.2	30	8.1
400	30	7,242	-30.6	-43.5	30	9.3
350	30	8,179	-37.9	-47.9	30	9.8
300	30	9,219	-45.9		30	10.7
250	30	10,411	-53.1		29	13.2
200	30	11,838	-55.9		29	15.1
175	30	12,688	-55.5		29	14.0
150	30	13,673	-55.0		28	13.0
125	30	14,839	-55.3		28	11.0
100	30	16,258	-56.8		28	8.5
80	30	17,673	-56.8		29	6.9
70	30	18,521	-55.9		29	5.2
60	30	19,504	-55.2		30	3.2
50	30	20,672	-54.4		32	1.6
40	29	22,111	-53.1		07	1.8
30	28	23,975	-50.7		09	3.3
25	28	25,166	-49.5		09	4.0
20	26	26,629	-47.6		09	3.6
15	22	28,530	-45.1		08	4.3
10	12	31,300	-39.5			
7						
5						

*** ST PAUL IS., ALASKA 1004 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	10	-3.0	-3.9	32	7.7
1000	31	41				
950	31	446	-5.0	-5.9	34	3.[illegible]
900	31	869	-7.1	-8.0	34	1.6
850	31	1,314	-9.0	-11.2	32	1.1
800	31	1,782	-10.9	-14.9	28	.7
750	31	2,276	-13.5	-16.6	26	.9
700	31	2,798	-16.4	-22.[illegible]	26	1.2
650	31	3,352	-19.5	-25.4	25	1.6
600	31	3,943	-23.2	-30.9	25	1.7
550	31	4,575	-27.3	-34.9	24	1.9
500	31	5,255	-31.9	-38.9	24	2.3
450	31	5,992	-36.8	-41.6	24	3.1
400	31	6,797	-42.2	-43.2	24	4.3
350	31	7,693	-47.3		24	4.5
300	31	8,[illegible]2	-50.1		23	4.1
250	31	9,901	-46.7		24	4.[illegible]
200	31	11,389	-45.2		25	4.[illegible]
175	31	12,280	-45.3		24	4.[illegible]
150	31	13,307	-46.0		24	4.1
125	31	14,519	-46.8		23	3.2
100	31	15,994	-47.9		23	3.4
80	31	17,464	-48.8		22	3.1
70	31	18,341	-48.9		21	2.5
60	31	19,354	-48.8		20	2.2
50	31	20,552	-48.9		19	2.1
40	31	22,017	-49.4		16	1.8
30	31	23,903	-49.0		14	1.9
25	30	25,102	-49.0		13	1.0
20	29	26,565	-48.5		10	1.3
15	29	28,467	-46.2		09	1.7
10	2[illegible]	31,234	-4[illegible]		08	1.8
7	26	33,674	-35.7		06	1.7
5	[illegible]	36,[illegible]	[illegible]			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	SALEM, ILL. 994 MB						SALEM, OREG. 1011 MB					
	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	174	11.1	8.0	19	.3	31	61	7.2	4.4	22	.9
1000	30	122					31	150	9.3	5.5	26	1.2
950	30	554	13.4	4.6	24	3.0	31	575	8.0	4.3	31	1.8
900	30	1,008	11.3	2.4	26	4.8	31	1,020	6.0	1.9	31	2.1
850	30	1,484	8.8	-.1	27	6.1	31	1,487	4.6	-2.3	30	3.0
800	30	1,983	6.0	-4.6	28	7.1	31	1,980	2.5	-5.7	31	3.0
750	30	2,509	3.2	-8.1	28	8.2	31	2,500	.0	-8.9	31	3.1
700	30	3,066	.5	-14.8	28	9.7	31	3,049	-3.0	-13.5	30	3.5
650	30	3,657	-2.8	-18.2	28	10.8	31	3,633	-6.3	-16.9	30	4.2
600	30	4,287	-6.8	-22.7	28	12.2	31	4,255	-9.9	-22.5	30	4.5
550	30	4,960	-11.2	-28.8	28	13.4	31	4,920	-14.3	-25.8	30	5.0
500	30	5,685	-16.2	-34.7	28	15.9	31	5,636	-19.4	-30.2	29	5.5
450	30	6,469	-21.8	-38.6	28	16.8	31	6,411	-24.7	-35.8	29	6.4
400	30	7,325	-28.2	-44.2	28	20.2	31	7,257	-31.1	-41.5	29	6.1
350	30	8,273	-35.0	-48.4	28	23.1	31	8,193	-38.0	-45.4	29	6.8
300	30	9,328	-43.0	-54.3	28	26.7	31	9,235	-45.6		29	6.9
250	30	10,534	-51.4		28	31.0	31	10,430	-52.9		31	8.5
200	30	11,963	-57.2		28	33.0	31	11,851	-57.6		31	8.4
175	30	12,805	-58.0		28	29.5	31	12,695	-57.1		30	8.1
150	30	13,778	-57.4		28	19.7	31	13,673	-56.3		29	7.2
125	30	14,928	-58.7		28	17.8	31	14,831	-56.6		29	5.8
100	30	16,324	-60.5		28	11.2	31	16,244	-57.0		28	4.5
80	30	17,715	-60.1		28	6.4	31	17,656	-57.2		27	2.4
70	30	18,549	-60.1		30	3.9	31	18,502	-56.8		28	1.6
60	30	19,515	-58.6		33	1.6	31	19,481	-56.1		30	1.1
50	30	20,667	-56.5		07	1.5	31	20,642	-55.4		33	.5
40	30	22,086	-55.3		08	3.3	31	22,070	-54.5		08	1.0
30	30	23,935	-52.2		09	3.9	31	23,920	-52.5		07	1.8
25	29	25,122	-50.1		08	4.2	30	25,097	-50.8		09	2.0
20	29	26,588	-47.9		08	5.3	30	26,558	-48.8		07	2.3
15	29	28,498	-45.1		09	4.7	27	28,454	-45.5		06	2.2
10	23	31,230	-39.8		10	3.2	21	31,172	-40.0		07	2.3
7	7	33,683	-36.7				7	33,548	-36.7			
5												

Standard pressure surface (mb)	SALT LAKE CITY, UTAH 868 MB					SAN DIEGO, CALIF. 1000 MB					SAN JUAN, P. R. 1015 MB					
	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.
SURFACE	31	1,288	8.9	2.0	15 / 2.7	31	124	12.4	9.6	23 / .8	31	6	25.0	20.2	15 / 2.1
1000	31	97				31	120				31	141	23.8	19.0	11 / 3.8
950	31	532				31	580	10.5	6.6	24 / 1.0	31	589	20.9	16.4	10 / 7.0
900	31	986				31	1,000	10.0	.4	28 / .9	31	1,035	18.0	12.8	10 / 7.0
850	31	1,463	11.8	-.7	16 / 3.7	31	1,475	9.1	-3.8	30 / 3.7	31	1,543	14.8	8.8	10 / 6.2
800	31	1,968	9.1	-3.5	18 / 4.2	31	1,976	7.4	-7.5	28 / 5.4	31	2,054	12.4	4.3	10 / 5.0
750	31	2,499	5.1	-5.8	18 / 3.1	31	2,505	5.3	-13.4	28 / 6.1	31	2,593	9.7	-.6	10 / 4.1
700	31	3,057	.7	-8.2	21 / 3.1	31	3,066	2.3	-18.3	27 / 7.3	31	3,165	7.4	-6.8	11 / 2.5
650	31	3,648	-3.7	-11.2	22 / 3.4	31	3,660	-1.0	-21.5	27 / 8.8	31	3,772	4.5	-10.8	10 / 1.5
600	31	4,274	-8.5	-15.2	21 / 3.6	31	4,295	-4.5	-25.1	27 / 10.7	31	4,420	1.0	-14.7	17 / .7
550	31	4,943	-13.6	-20.8	21 / 4.3	31	4,974	-9.0	-29.5	27 / 12.5	31	5,114	-3.3	-19.8	24 / 1.5
500	31	5,660	-18.9	-27.9	20 / 4.7	31	5,704	-14.3	-33.3	27 / 14.9	31	5,861	-7.9	-25.6	25 / 3.5
450	31	6,437	-24.4	-35.7	20 / 4.8	31	6,494	-20.1	-37.6	27 / 17.3	31	6,672	-13.1	-30.9	25 / 5.2
400	31	7,283	-31.0	-40.7	21 / 5.7	31	7,356	-26.7	-43.2	27 / 19.6	31	7,559	-19.3	-37.0	26 / 6.9
350	31	8,219	-38.2	-47.0	21 / 5.2	31	8,308	-33.9	-49.4	27 / 22.3	31	8,541	-26.5	-41.9	26 / 8.8
300	31	9,260	-45.9		21 / 6.0	31	9,367	-42.3	-53.6	27 / 23.6	31	9,633	-34.7	-49.4	26 / 13.0
250	31	10,453	-53.6		24 / 6.8	31	10,577	-50.8		27 / 26.0	31	10,881	-44.5		26 / 16.2
200	31	11,878	-56.6		25 / 8.3	31	12,006	-57.4		27 / 27.8	31	12,338	-55.8		27 / 18.5
175	30	12,725	-56.6		26 / 8.0	31	12,847	-58.7		27 / 26.3	31	13,177	-61.8		27 / 20.4
150	30	13,703	-56.5		26 / 8.4	31	13,815	-58.8		26 / 24.6	31	14,116	-68.2		28 / 18.0
125	30	14,859	-57.4		26 / 8.1	31	14,955	-61.0		26 / 20.5	31	15,200	-72.3		28 / 13.0
100	30	16,266	-58.3		26 / 6.2	31	16,333	-63.4		26 / 14.0	30	16,500	-75.5		30 / 5.7
80	30	17,667	-58.6		25 / 3.6	31	17,702	-63.4		27 / 6.4	30	17,795	-73.8		04 / 4.0
70	30	18,507	-58.4		25 / 2.8	31	18,524	-62.2		28 / 3.1	29	18,583	-70.1		06 / 5.6
60	30	19,480	-57.4		26 / 1.4	31	19,483	-59.9		06 / .2	29	19,511	-65.4		08 / 8.5
50	29	20,634	-56.5		09 / .4	31	20,625	-58.5		08 / 2.9	29	20,629	-62.8		09 / 11.6
40	30	22,054	-55.5		08 / 1.6	31	22,033	-56.9		08 / 4.8	29	22,014	-59.7		09 / 13.6
30	30	23,896	-53.1		07 / 2.9	30	23,869	-53.4		08 / 6.4	25	23,841	-53.4		09 / 13.5
25	25	25,080	-50.5		07 / 3.5	30	25,050	-51.0		08 / 5.5	25	25,026	-49.6		10 / 12.1
20	25	26,542	-48.5		07 / 3.6	29	26,515	-47.9		08 / 5.7	24	26,500	-46.2		09 / 9.8
15	21	28,450	-45.1		08 / 4.8	28	28,425	-45.5		08 / 5.8	23	28,427	-43.3		08 / 11.4
10	21	31,187	-40.5		10 / 3.4	25	31,156	-40.3		08 / 3.8	12	31,184	-38.7		
7						14	33,598	-35.9							
5						5	35,895	-34.6							

Standard pressure surface (mb)	SAN NICOLAS, CALIF. 987 MB					* SAULT STE MARIE, MICH. 987 MB					* SHEMYA, ALASKA 1007 MB					* SHREVEPORT, LA. 1005 MB					SPOKANE, WASH. 930 MB				
	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.
SURFACE						31	221	5.3	.8	06 / 1.1	31	38	1.5	-2.7	34 / 3.1	31	79	16.3	14.6	14 / 1.7	31	720	8.1	1.6	18 / 1.6
1000						31	109				31	95				31	120	17.5	13.9	15 / 2.2	31	113			
950						31	531	7.3	-1.8	06 / .1	31	506	-2.5	-4.1	34 / 4.3	31	560	17.3	11.4	17 / 5.4	31	541			
900						31	975	5.8	-3.4	27 / 1.2	31	932	-5.6	-7.1	34 / 4.5	31	1,021	15.4	8.4	21 / 5.6	31	990	10.4	2.0	21 / 2.1
850						31	1,441	3.5	-5.8	28 / 2.8	31	1,378	-8.4	-10.2	34 / 4.8	31	1,505	13.6	5.1	24 / 5.3	31	1,466	9.0	-.9	26 / 1.6
800						31	1,931	.5	-7.9	29 / 4.1	31	1,847	-10.3	-15.8	33 / 5.9	31	2,014	11.1	-1.0	26 / 5.6	31	1,965	5.7	-3.3	27 / 2.0
750						31	2,446	-2.0	-10.9	29 / 4.8	31	2,343	-11.9	-20.1	33 / 6.7	31	2,550	8.1	-4.8	27 / 6.1	31	2,490	1.8	-5.2	25 / 2.2
700						31	2,993	-4.4	-15.5	29 / 5.3	31	2,869	-14.0	-24.5	32 / 8.2	31	3,116	4.5	-8.4	28 / 6.9	31	3,042	-2.3	-9.0	25 / 2.7
650						31	3,573	-7.4	-18.8	29 / 6.5	31	3,428	-16.9	-27.0	32 / 9.4	31	3,715	.6	-11.9	28 / 8.7	31	3,627	-5.8	-12.7	25 / 3.4
600						31	4,193	-10.7	-22.9	28 / 7.1	31	4,025	-20.4	-29.1	32 / 10.3	31	4,353	-3.6	-16.5	28 / 10.2	31	4,250	-9.5	-18.2	25 / 4.3
550						31	4,857	-15.2	-27.1	28 / 7.4	31	4,664	-24.7	-33.1	32 / 10.9	31	5,034	-8.4	-21.5	28 / 11.8	31	4,917	-13.9	-22.9	25 / 4.4
500						31	5,570	-20.3	-31.9	28 / 8.2	31	5,351	-29.3	-37.5	32 / 13.1	31	5,767	-13.6	-27.5	28 / 13.3	31	5,634	-18.8	-28.6	24 / 5.2
450						31	6,342	-25.7	-37.2	28 / 9.2	31	6,096	-34.2	-41.3	31 / 14.4	31	6,560	-18.9	-31.5	28 / 15.9	31	6,411	-24.4	-33.8	25 / 4.9
400						31	7,184	-32.1	-42.8	28 / 11.4	31	6,911	-39.7	-44.9	31 / 16.1	31	7,420	-25.0	-38.5	27 / 18.6	31	7,258	-30.7	-40.4	24 / 5.0
350						31	8,117	-38.7	-45.9	27 / 13.3	31	7,815	-45.5		31 / 17.7	31	8,386	-32.4	-43.8	27 / 19.9	31	8,195	-38.0	-44.7	23 / 4.3
300						31	9,157	-45.9		28 / 14.4	31	8,829	-50.4		30 / 19.7	31	9,451	-40.8	-48.2	27 / 23.3	31	9,236	-46.0		23 / 4.3
250		NO MEANS DATA				31	10,353	-52.4		27 / 15.9	31	10,013	-51.4		30 / 19.8	31	10,669	-49.2		27 / 27.7	31	10,429	-53.6		24 / 5.4
200						31	11,789	-54.3		28 / 16.0	31	11,473	-48.5		29 / 17.7	31	12,102	-58.0		27 / 31.1	31	11,844	-58.1		27 / 4.7
175						31	12,646	-53.6		28 / 14.4	31	12,352	-48.7		29 / 16.6	31	12,937	-61.0		27 / 32.2	31	12,687	-57.0		28 / 4.7
150						31	13,639	-53.3		28 / 12.6	31	13,363	-49.5		29 / 14.8	31	13,893	-61.7		27 / 26.8	31	13,666	-55.8		27 / 4.2
125						29	14,809	-54.6		28 / 10.5	31	14,555	-50.5		29 / 12.8	31	15,020	-63.4		27 / 20.9	31	14,827	-55.9		26 / 3.2
100						29	16,235	-55.1		29 / 8.3	31	16,008	-51.5		29 / 9.8	31	16,380	-65.8		28 / 12.6	31	16,246	-56.2		27 / 3.9
80						29	17,659	-55.3		28 / 6.2	30	17,455	-51.9		29 / 7.4	31	17,732	-66.3		26 / 5.6	31	17,664	-56.1		28 / 2.9
70						29	18,512	-54.8		27 / 4.6	30	18,321	-51.8		29 / 5.7	31	18,546	-64.0		26 / 2.2	31	18,513	-56.1		28 / 2.0
60						29	19,501	-53.9		28 / 2.5	30	19,321	-51.6		29 / 4.2	31	19,498	-61.1		10 / 1.1	31	19,496	-55.2		30 / 1.0
50						29	20,675	-52.7		24 / .8	30	20,505	-51.3		28 / 2.0	31	20,637	-58.7		08 / 4.5	31	20,662	-54.5		33 / .2
40						27	22,112	-52.2		11 / 1.0	30	21,956	-51.0		28 / 1.2	30	22,046	-56.4		09 / 4.1	29	22,096	-53.7		03 / 1.0
30						10	23,980	-50.6		10 / 2.7	30	23,831	-50.4		32 / .6	30	23,890	-52.7		08 / 6.3	28	23,951	-52.0		07 / 1.5
25						09	25,173	-49.1		09 / 3.3	30	25,022	-49.8		02 / .3	30	25,074	-50.3		09 / 7.1	27	25,136	-50.6		07 / 2.1
20						27	26,643	-47.6		08 / 4.1	30	26,486	-48.9		09 / .7	29	26,543	-47.3		09 / 7.2	27	26,598	-48.1		08 / 2.0
15						26	28,553	-45.1		08 / 4.7	27	28,398	-46.7		09 / .7	28	28,459	-44.3		08 / 6.4	26	28,512	-45.3		09 / 3.2
10						24	31,298	-38.5		09 / 4.1	24	31,114	-42.7		04 / 1.4	28	31,205	-39.5		08 / 6.1	22	31,264	-39.8		09 / 3.1
7						12	33,776	-33.3		10 / 3.6	19	33,516	-38.6		36 / 1.0	24	33,686	-33.9		11 / 6.4	7	33,695	-34.2		
5						13	36,170	-28.6		07 / 2.7	10	35,893	-34.0			18	36,052	-29.6							
4						6	37,712	-27.6								7	37,670	-27.4							

Standard pressure surface (mb)	* SWAN ISLAND, N. I. 1012 MB					TAMPA, FLA. 1015 MB					TOPEKA, KANS. 981 MB					+ TRUK, CAROLINE IS. 1011 MB					* TUCSON, ARIZ. 922 MB				
	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.	No observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction / Speed M.p.h.
SURFACE	31	10	26.5	22.9	11 / 4.9	31	8	20.1	17.3	12 / .9	31	268	11.2	8.8	18 / .9	26	2	28.1	24.4	08 / 3.1	31	789	13.3	-4.2	15 / 2.3
1000	31	111	26.0	22.3	11 / 5.4	31	136	21.3	16.1	14 / 1.3	31	110				26	95	27.2	21.6	09 / 3.6	31	98			
950	31	562	22.3	19.8	12 / 7.1	31	580	19.6	12.0	17 / 2.2	31	541	13.3	6.9	19 / 1.8	26	548	23.7	19.6	10 / 6.0	31	536			
900	31	1,031	19.4	15.1	12 / 6.9	31	1,045	16.9	8.4	21 / 2.1	31	996	11.7	4.2	23 / 3.9	26	1,019	20.6	15.9	10 / 6.9	31	994	17.2	-2.5	17 / 1.9
850	31	1,522	16.4	10.8	12 / 6.4	31	1,530	13.9	3.1	23 / 3.6	31	1,473	10.5	-.2	25 / 5.5	26	1,512	17.8	12.4	10 / 6.8	31	1,479	14.5	-4.4	21 / 2.6
800	31	2,037	14.0	3.9	12 / 5.5	31	2,040	11.9	-2.3	25 / 4.9	31	1,977	8.3	-3.8	26 / 6.7	26	2,029	15.4	9.0	10 / 6.4	31	1,988	10.8	-6.9	21 / 4.6
750	31	2,579	11.1	1.3	12 / 4.9	31	2,578	9.4	-7.5	26 / 5.0	31	2,507	5.2	-7.2	27 / 8.1	26	2,575	12.7	5.1	10 / 5.9	31	2,521	7.1	-11.6	22 / 7.7
700	31	3,153	8.3	-6.2	11 / 3.4	31	3,147	6.0	-11.6	26 / 5.6	31	3,067	1.7	-10.9	27 / 9.2	26	3,151	9.5	1.6	10 / 6.0	31	3,085	3.4	-14.9	22 / 9.7
650	31	3,762	5.3	-10.7	12 / 2.4	31	3,750	2.8	-18.4	27 / 6.2	31	3,660	-2.1	-15.2	27 / 10.2	26	3,784	6.2	-2.1	10 / 6.1	31	3,682	-.3	-17.3	22 / 10.6
600	31	4,412	2.1	-16.1	08 / 1.8	31	4,393	-1.1	-18.9	28 / 8.5	31	4,291	-6.3	-20.7	28 / 11.7	26	4,416	2.6	-5.9	09 / 6.1	31	4,317	-4.3	-20.9	23 / 12.3
550	31	5,109	-1.7	-20.0	04 / 2.5	31	5,081	-5.6	-21.8	28 / 10.2	31	4,966	-11.0	-26.0	27 / 12.0	26	5,116	-.9	-10.5	09 / 5.7	31	4,997	-8.9	-25.6	24 / 13.8
500	31	5,861	-6.4	-25.2	02 / 2.9	31	5,822	-10.4	-28.1	28 / 11.2	31	5,690	-16.4	-32.0	27 / 13.1	26	5,872	-4.7	-16.3	09 / 5.8	31	5,727	-14.1	-31.1	24 / 16.0
450	31	6,677	-11.6	-30.2	36 / 4.0	31	6,625	-15.8	-33.0	28 / 12.8	31	6,474	-22.1	-36.7	28 / 14.2	26	6,694	-9.4	-22.1	09 / 6.0	31	6,518	-19.7	-35.7	25 / 17.3
400	31	7,568	-17.8	-35.2	34 / 4.7	31	7,502	-22.1	-38.4	28 / 14.4	31	7,330	-28.4	-43.1	28 / 14.7	26	7,595	-14.7	-28.7	08 / 5.6	31	7,381	-26.3	-40.7	25 / 19.8
350	31	8,536	-24.9	-41.4	33 / 5.7	31	8,473	-29.3	-45.0	28 / 17.8	31	8,276	-35.6	-48.6	28 / 16.4	26	8,596	-21.5	-35.8	08 / 5.1	31	8,330	-33.6	-46.4	25 / 22.6
300	31	9,656	-33.3	-48.4	32 / 7.9	30	9,551	-37.8	-51.6	29 / 19.3	31	9,328	-43.5	-49.8	27 / 19.3	26	9,710	-30.0	-44.2	09 / 4.0	31	9,396	-42.0	-49.5	25 / 26.2
250	31	10,910	-43.1		31 / 10.1	30	10,783	-47.3		29 / 23.1	31	10,533	-51.4		26 / 22.5	26	10,980	-40.7	-50.8	08 / 3.2	31	10,607	-50.7		25 / 29.5
200	31	12,376	-54.9		30 / 12.3	30	12,227	-57.1		29 / 26.2	31	11,962	-57.1		26 / 24.9	26	12,459	-53.3		06 / 2.8	31	12,036	-57.9		26 / 31.9
175	31	13,216	-61.6		29 / 12.0	30	13,062	-61.9		29 / 27.3	30	12,809	-57.3		27 / 21.9	26	13,305	-60.5		04 / 3.4	30	12,873	-59.2		26 / 28.7
150	31	14,156	-68.4		29 / 11.9	30	14,010	-64.3		29 / 25.1	29	13,788	-57.4		27 / 18.9	26	14,248	-68.2		02 / 4.6	29	13,840	-59.6		26 / 23.7
125	31	15,235	-73.7		30 / 8.6	30	15,120	-66.5		28 / 19.3	28	14,936	-58.8		27 / 14.7	26	15,321	-76.1		03 / 4.5	29	14,974	-62.4		26 / 19.0
100	31	16,527	-76.6		34 / 3.3	30	16,460	-69.1		28 / 12.4	28	16,333	-60.3		28 / 9.5	26	16,591	-80.6		05 / 4.0	28	16,340	-65.4		26 / 14.8
80	31	17,814	-75.0		07 / 5.3	30	17,789	-69.4		29 / 4.9	25	17,723	-60.0		28 / 5.3	25	17,850	-77.4		08 / 7.5	28	17,698	-64.8		26 / 6.8
70	31	18,596	-71.4		09 / 5.9	30	18,591	-67.0		29 / .9	25	18,559	-59.1		29 / 3.2	25	18,625	-72.5		09 / 11.1	28	18,517	-62.7		26 / 2.2
60	31	19,517	-67.5		09 / 7.4	30	19,531	-63.0		06 / 2.8	25	19,529	-57.8		33 / 1.7	25	19,545	-66.8		10 / 12.4	27	19,472	-60.9		15 / 1.1
50	31	20,628	-63.0		09 / 9.9	30	20,662	-60.1		07 / 6.1	25	20,683	-56.4		06 / 1.1	24	20,661	-61.7		10 / 9.2	27	20,611	-58.8		09 / 2.8
40	31	22,015	-59.0		08 / 12.2	28	22,062	-57.4		09 / 8.6	24	22,106	-54.7		08 / 3.2	24	22,060	-56.9		09 / 9.6	27	22,019	-56.8		08 / 4.2
30	30	23,841	-53.8		09 / 12.0	28	23,900	-52.9		09 / 8.8	24	23,959	-51.6		09 / 4.2	23	23,894	-52.5		31 / .7	27	23,858	-53.0		08 / 5.9
25	28	25,018	-50.9		09 / 11.9	28	25,084	-50.2		08 / 9.9	24	25,147	-50.0		09 / 4.9	23	25,081	-49.2		26 / 3.1	25	25,044	-50.9		06 / 6.4
20	28	26,486	-46.7		09 / 10.3	27	26,552	-46.9		09 / 9.5	24	26,614	-47.3		08 / 4.9	22	26,552	-46.9		25 / 2.4	25	26,506	-48.0		09 / 5.8
15	27	28,407	-44.0		09 / 9.9	26	28,467	-44.1		08 / 8.4	22	28,525	-44.9		07 / 4.9	22	28,468	-44.6		17 / 1.9	23	28,408	-45.2		07 / 5.6
10	24	31,157	-38.9		09 / 10.5	16	31,240	-38.8			10	31,260	-39.8			17	31,209	-40.6		12 / 3.8	23	31,147	-39.7		07 / 5.7
7	13	33,630	-35.5													5	33,665	-38.2			18	33,631	-33.7		09 / 7.0
5																					5	35,988	-30.7		

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
*** VANDENBERG AFB, CALIF. 1004 MB**						
SURFACE	30	100	9.3	8.6	33	1.4
1000	30	131	9.6	8.3	34	1.8
950	30	557	9.4	4.0	35	5.7
900	30	1,007	9.5	.9	35	4.9
850	30	1,480	8.0	-2.5	34	5.3
800	30	1,979	6.0	-7.6	33	6.1
750	30	2,505	3.2	-9.9	33	6.6
700	30	3,061	.3	-14.1	32	7.6
650	30	3,652	-3.0	-19.8	32	9.4
600	30	4,281	-6.8	-23.2	31	10.4
550	30	4,955	-10.9	-27.4	30	11.9
500	30	5,680	-16.1	-31.6	30	14.1
450	30	6,464	-21.9	-35.6	30	15.3
400	30	7,320	-28.4	-41.3	30	16.9
350	30	8,260	-35.3	-46.4	30	19.1
300	30	9,320	-42.9		30	21.8
250	30	10,530	-50.5		29	24.4
200	30	11,962	-56.5		28	24.7
175	30	12,808	-57.3		28	22.4
150	30	13,781	-58.3		28	19.7
125	30	14,923	-60.3		28	16.7
100	30	16,309	-61.9		27	12.0
80	30	17,688	-61.8		28	5.4
70	30	18,517	-60.7		27	2.5
60	30	19,480	-59.1		23	.7
50	30	20,628	-57.8		09	1.5
40	30	22,039	-56.7		09	3.9
30	29	23,874	-53.8		08	4.9
25	29	25,053	-51.4		09	6.4
20	28	26,510	-48.9		08	6.2
15	28	28,416	-45.4		08	5.2
10	23	31,150	-40.2		07	4.2
7	17	33,384	-36.2		06	4.2
VICTORIA, TEXAS 1009 MB						
SURFACE	31	33	20.8	19.0	13	2.2
1000	31	106	21.6	19.1	14	3.6
950	31	551	19.5	15.8	16	7.8
900	31	1,016	18.0	9.3	17	7.7
850	31	1,505	16.4	2.6	18	7.1
800	31	2,019	14.1	.3	20	5.9
750	31	2,561	11.7	-5.6	23	4.9
700	31	3,134	8.0	-10.0	25	4.6
650	31	3,741	3.7	-12.3	26	5.8
600	31	4,385	-1.1	-16.7	27	7.2
550	31	5,072	-6.3	-21.5	27	9.7
500	31	5,810	-11.4	-27.3	27	11.9
450	31	6,610	-17.1	-30.7	27	13.6
400	31	7,478	-23.5	-36.6	27	17.3
350	31	8,449	-30.3	-42.9	27	20.5
300	31	9,523	-38.7	-49.2	27	24.3
250	31	10,751	-48.1		27	28.4
200	30	12,187	-57.7		27	32.3
175	30	13,022	-61.7		27	32.5
150	30	13,970	-63.8		27	28.0
125	30	15,082	-66.3		27	21.3
100	30	16,426	-68.6		27	13.8
80	30	17,761	-69.1		27	5.6
70	29	18,563	-67.3		27	1.4
60	28	19,503	-63.3		10	1.9
50	27	20,634	-59.4		08	5.7
40	27	22,037	-57.3		09	7.1
30	27	23,876	-52.6		09	8.1
25	27	25,060	-50.5		09	9.2
20	26	26,524	-47.6		09	9.3
15	26	28,442	-44.4		08	9.2
10	23	31,180	-39.8		08	8.2
7	8	33,624	-36.0			
WAKE IS., PACIFIC AREA 10.5 MB						
SURFACE	31	5	26.8	22.9	09	5.2
1000	31	137	25.6	21.9	09	6.7
950	31	587	21.6	19.5	09	7.6
900	31	1,055	18.7	15.1	10	7.3
850	31	1,544	15.7	11.6	09	7.4
800	31	2,058	13.4	7.0	09	6.9
750	31	2,600	11.1	1.8	09	6.6
700	31	3,173	8.3	-3.3	08	6.1
650	31	3,783	5.5	-9.9	08	6.3
600	31	4,433	1.8	-15.1	08	5.6
550	31	5,129	-2.6	-18.5	08	4.5
500	31	5,878	-7.4	-22.6	07	3.9
450	31	6,690	-12.7	-28.7	06	3.1
400	31	7,579	-18.7	-35.5	03	3.3
350	31	8,563	-26.0	-41.5	01	3.8
300	31	9,656	-35.0	-47.8	34	5.0
250	31	10,902	-44.5		32	7.8
200	31	12,360	-55.7		32	10.2
175	31	13,198	-62.1		31	11.6
150	31	14,136	-68.5		32	9.9
125	31	15,216	-73.9		33	6.5
100	31	16,510	-76.7		36	3.7
80	30	17,797	-74.7		07	4.4
70	30	18,581	-70.9		08	6.4
60	29	19,504	-67.3		09	8.8
50	28	20,616	-62.2		09	10.3
40	28	22,004	-59.6		08	12.2
30	27	23,824	-55.0		09	13.5
25	27	25,000	-51.0		09	13.6
20	26	26,461	-47.9		09	13.2
15	26	28,371	-45.0		09	13.4
10	18	31,097	-40.5		09	15.6
*** WALLOPS IS., VA., NASA 10.4 MB**						
SURFACE	31	4	13.9	11.8	28	.4
1000	31	118	14.1	7.5	27	1.5
950	31	552	13.7	5.6	27	4.3
900	31	1,006	11.5	3.0	27	5.3
850	31	1,482	8.9	.1	27	6.5
800	31	1,982	5.8	-2.3	27	7.1
750	31	2,507	3.1	-6.5	27	8.0
700	31	3,063	-.1	-10.7	27	9.3
650	31	3,653	-3.1	-15.1	27	10.5
600	31	4,283	-6.5	-20.1	27	12.2
550	31	4,958	-10.7	-24.7	27	13.4
500	31	5,684	-15.7	-29.9	27	14.3
450	31	6,471	-21.2	-34.6	27	15.6
400	31	7,329	-27.4	-40.1	27	17.2
350	31	8,280	-34.5	-45.1	27	18.4
300	31	9,337	-42.3	-49.9	27	19.6
250	30	10,546	-50.3		27	20.6
200	30	11,983	-55.6		27	22.6
175	30	12,831	-56.8		27	20.1
150	30	13,807	-57.4		27	18.3
125	30	14,956	-56.5		27	15.6
100	30	16,351	-59.7		27	9.6
80	30	17,750	-60.1		27	5.6
70	27	18,585	-59.2		26	2.7
60	24	19,541	-57.7		24	.3
50	24	20,706	-56.6		09	2.5
40	24	22,129	-54.5		09	4.4
30	24	23,988	-51.3		09	5.0
25	24	25,179	-49.0		08	5.1
20	24	26,644	-46.8		08	5.3
15	21	28,370	-43.7		10	3.5
10	14	31,334	-37.7		10	3.1
7	7	33,817	-34.0			
WASHINGTON DULLES INT. AP 10 MB						
SURFACE	29	85	11.1	7.3	31	.1
1000	29	148				
950	29	549	12.4	3.9	32	2.5
900	29	1,002	10.3	..	31	3.7
850	29	1,476	7.9	..	30	5.0
800	29	1,974	5.2	-3..	29	5.7
750	29	2,498	2.5	-7..	28	6.9
700	29	3,053	-.5	-11..	27	7.9
650	29	3,643	-3.7	-14..	26	8.1
600	29	4,271	-7.3	-18.5	26	9.3
550	29	4,943	-11.6	-23.7	27	10.9
500	29	5,667	-16.5	-30.1	27	12.5
450	29	6,451	-22.1	-36.9	27	14.1
400	29	7,306	-28.4	-41.7	27	16.0
350	29	8,252	-35.5	-46.1	26	16.7
300	29	9,305	-43.3	-52.6	27	18.7
250	29	10,511	-50.9		27	20.6
200	29	11,944	-55.8		27	22.6
175	29	12,795	-55.6		27	19.1
150	29	13,776	-56.0		27	17.8
125	29	14,933	-57.4		26	14.6
100	28	16,339	-59.1		27	11.2
80	28	17,737	-59.2		26	6.6
70	28	18,575	-59.0		26	3.6
60	28	19,541	-57.7		22	1.5
50	28	20,584	-56.1		17	1.1
40	24	22,118	-54.4		10	3.2
30	24	23,973	-51.5		09	4.3
25	24	25,163	-49.7		08	4.8
20	2	26,632	-47.5		08	5.1
15	18	28,539	-44.1		09	5.1
10	15	31,293	-38.8		09	4.1
7	7	33,756	-33.7			
MAYCROSS, GA. 1010 MB						
SURFACE	31	44	16.1	14.7	22	.7
1000	31	130	17.9	13.9	23	1.2
950	31	571	18.1	10.1	24	3.3
900	31	1,033	15.7	6.9	25	3.8
850	31	1,515	12.3	3.6	26	4.2
800	31	2,022	10.0	-1.7	26	5.9
750	31	2,556	7.2	-7.1	27	7.9
700	31	3,120	4.3	-11.8	27	7.7
650	31	3,720	1.0	-14.6	27	9.8
600	31	4,359	-3.1	-19.0	27	11.4
550	31	5,042	-7.4	-22.8	28	12.8
500	31	5,778	-12.2	-27.3	28	14.1
450	31	6,575	-17.3	-33.5	28	16.6
400	31	7,448	-23.6	-39.5	27	18.5
350	31	8,413	-30.7	-45.9	27	21.2
300	31	9,485	-39.3	-52.3	28	22.9
250	31	10,708	-48.6		28	26.8
200	31	12,146	-57.5		28	28.8
175	31	12,983	-60.7		28	30.0
150	31	13,938	-62.4		28	25.4
125	31	15,061	-63.8		28	19.4
100	31	16,423	-65.7		27	12.8
80	31	17,775	-66.2		27	7.3
70	31	18,588	-64.5		29	2.5
60	31	19,536	-61.8		05	1.7
50	31	20,678	-58.9		08	4.4
40	31	22,082	-56.3		09	6.5
30	30	23,926	-52.7		09	7.4
25	30	25,109	-50.6		09	8.2
20	29	26,575	-47.3		09	7.7
15	29	28,491	-44.2		08	7.4
10	25	31,235	-39.7		08	6.2
7	10	33,706	-35.0			
WINNEMUCCA, NEV. 867 MB						
SURFACE	31	1,312	5.1	.1	36	.6
1000	31	132				
950	31	561				
900	31	1,008				
850	31	1,478	7.9	-1.7	35	1.0
800	31	1,977	5.8	-4.0	33	1.1
750	31	2,502	2.2	-6.0	30	1.1
700	31	3,055	-1.9	-8.9	25	1.1
650	31	3,640	-5.8	-13.1	23	1.8
600	31	4,263	-10.1	-18.3	22	1.8
550	31	4,928	-14.2	-24.7	23	1.2
500	31	5,644	-19.0	-30.9	24	1.5
450	31	6,420	-24.7	-36.3	22	1.5
400	31	7,266	-31.1	-41.4	23	.7
350	31	8,202	-38.1	-46.7	28	2.2
300	31	9,243	-45.6		30	4.7
250	31	10,438	-53.1		29	5.9
200	30	11,866	-56.7		28	7.8
175	30	12,714	-56.3		27	6.7
150	30	13,694	-56.2		27	7.5
125	30	14,849	-57.4		27	6.1
100	30	16,256	-58.6		26	4.6
80	30	17,656	-58.9		26	2.6
70	30	18,495	-58.3		25	1.6
60	30	19,467	-57.4		24	.9
50	30	20,622	-56.5		05	.7
40	30	22,041	-55.5		07	1.3
30	30	23,883	-53.6		08	2.3
25	30	25,061	-51.7		08	3.2
20	29	26,518	-49.3		07	3.4
15	29	28,421	-46.1		07	4.6
10	26	31,162	-41.2			
WINSLOW, ARIZ. 849 MB						
SURFACE	31	1,487	7.7	-5.7	19	1.6
1000	31	116				
950	31	551				
900	31	1,004				
850	31	1,479				
800	31	1,983	9.7	-4.7	22	4.5
750	31	2,515	6.1	-7.4	22	7.7
700	31	3,076	2.3	-11.0	22	9.2
650	31	3,670	-2.0	-15.8	22	9.4
600	31	4,301	-6.6	-19.9	23	11.1
550	31	4,975	-11.1	-25.9	23	12.1
500	31	5,700	-16.1	-32.3	24	14.6
450	31	6,485	-21.6	-36.6	24	15.6
400	31	7,342	-28.1	-41.5	25	17.2
350	31	8,289	-35.2	-47.6	25	21.1
300	31	9,342	-43.2	-50.6	26	22.8
250	31	10,547	-51.6		26	24.5
200	31	11,978	-56.7		26	23.6
175	31	12,823	-57.5		26	21.8
150	31	13,795	-58.2		26	20.2
125	30	14,944	-59.9		26	16.4
100	30	16,330	-62.1		26	12.6
80	29	17,703	-62.4		26	6.4
70	29	18,531	-60.9		27	3.0
60	29	19,492	-60.0		08	.9
50	27	20,634	-58.6		07	3.0
40	26	22,043	-56.5		08	3.9
30	24	23,894	-53.0		08	5.0
25	22	25,073	-50.9		09	4.9
20	21	26,537	-48.2		09	4.5
15	21	28,442	-45.8		08	4.7
10	15	31,174	-40.8		10	5.7
YAKUTAT, ALASKA 1014 MB						
SURFACE	31	12	.7	-.1	10	2.1
1000	31	124	3.1	1.2	11	3.2
950	31	539	.9	-1.0	14	5.9
900	31	971	-2.0	-3.7	15	7.0
850	31	1,423	-4.5	-7.7	15	7.3
800	31	1,899	-6.9	-11.6	16	6.7
750	31	2,400	-9.5	-14.3	17	6.2
700	31	2,930	-12.6	-16.9	18	7.0
650	31	3,493	-15.5	-21.2	19	8.0
600	31	4,094	-18.7	-26.3	19	9.0
550	31	4,738	-22.3	-30.0	19	10.4
500	31	5,433	-26.4	-34.4	20	11.7
450	31	6,187	-31.6	-39.4	20	12.2
400	31	7,010	-37.3	-43.2	20	13.7
350	31	7,924	-43.0	-43.6	20	15.7
300	31	8,947	-48.7		21	15.0
250	31	10,136	-51.9		22	12.4
200	31	11,591	-49.5		23	9.3
175	31	12,466	-49.5		22	8.3
150	31	13,477	-49.3		22	8.6
125	31	14,671	-49.7		21	7.2
100	31	16,129	-50.4		21	6.4
80	31	17,583	-51.1		21	4.8
70	31	18,446	-51.4		21	3.7
60	31	19,446	-51.6		21	2.3
50	30	20,630	-51.3		21	1.3
40	30	22,080	-51.5		12	1.1
30	27	23,947	-51.1		10	1.7
25	25	25,139	-50.1		10	2.1
20	22	26,608	-48.7		09	2.7
15	20	28,503	-46.0		08	2.8
10	18	31,242	-40.4		08	4.2
7	7	33,742	-33.8			
YAP, CAROLINE IS. + 1007 MB						
SURFACE	31	14	27.8	23.5	10	3.1
1000	31	78	27.1	22.8	10	2.5
950	31	532	23.8	19.9	10	4.0
900	31	1,003	20.8	16.5	10	4.1
850	31	1,496	17.8	12.9	10	4.1
800	31	2,014	15.3	9.7	10	3.9
750	31	2,554	12.6	6..	10	4.1
700	31	3,136	9.4	2.2	10	4.4
650	31	3,748	6..	-2..	10	4.9
600	31	4,400	2.6	-5.9	09	4.6
550	31	5,099	-1.1	-11.2	09	4.5
500	31	5,854	-5.2	-8..	10	4.9
450	31	6,675	-9.6	-2..8	09	4.8
400	31	7,576	-15.2	-27.6	08	4.5
350	31	8,575	-22.0	-35.5	09	3.7
300	31	9,687	-30.4	-43.3	09	3.4
250	31	10,957	-40.5	-52.0	11	5.1
200	31	12,436	-53.3		11	5.8
175	31	13,282	-60.4		06	6.1
150	31	14,225	-68.4		07	6.4
125	31	15,298	-76.1		06	7.9
100	31	16,367	-81.2		07	8.4
80	31	17,826	-78.4		08	9.5
70	31	18,598	-72.8		08	12.3
60	31	19,516	-67.3		09	14.3
50	30	20,629	-62.0		09	14.5
40	30	22,022	-57.7		09	9.7
30	30	23,858	-52.8		09	2.2
25	30	25,041	-50.2		10	.9
20	27	26,510	-46.2		13	1.7
15	24	28,436	-43.5		14	3.6
10	23	31,185	-39.8		12	4.0
7	13	33,612	-36.7			
YUCCA FLAT, NEV. 877 MB						
SURFACE	31	1,198	8.3	1.3	29	1.1
1000	31	96				
950	31	530				
900	31	982				
850	31	1,458	11.8	-1.9	29	1.5
800	31	1,963	8.3	-4.0	23	1.6
750	31	2,492	4.4	-6.3	23	2.0
700	31	3,049	.1	-9.1	22	2.6
650	31	3,639	-4.0	-12.6	23	2.2
600	31	4,265	-8.1	-17.0	22	2.9
550	31	4,936	-12.3	-23.9	25	4.2
500	31	5,657	-17.3	-29.2	27	6.0
450	31	6,439	-22.7	-35.3	27	7.5
400	31	7,291	-29.5	-41.0	27	9.2
350	31	8,232	-36.9	-46.4	27	10.9
300	31	9,279	-44.3		28	13.9
250	31	10,482	-51.4		28	17.5
200	31	11,916	-55.4		28	16.9
175	30	12,767	-55.8		27	16.5
150	30	13,748	-56.4		27	14.3
125	29	14,901	-58.3		27	12.1
100	29	16,301	-60.2		26	8.1
80	28	17,691	-60.1		25	4.4
70	28	18,526	-59.2		23	2.5
60	28	19,495	-58.0		18	1.1
50	28	20,646	-57.2		09	2.8
40	28	22,062	-56.1		07	3.5
30	28	23,900	-53.8		08	5.1
25	27	25,077	-51.7		08	5.0
20	26	26,532	-49.2		06	4.7
15	22	28,431	-46.8		07	3.8
10	14	31,145	-41.8			
YUMA, ARIZ. 995 MB						
SURFACE	20	131	18.7	4.8	33	.4
1000	20	85				
950	20	527	19.8	2.1	29	3.1
900	20	990	16.9	-.6	29	2.9
850	20	1,474	14.0	-3.5	26	2.5
800	20	1,982	10.4	-5.8	22	3.2
750	20	2,515	6.3	-9.2	21	3.9
700	20	3,077	2.8	-15.3	22	5.7
650	20	3,673	-.4	-18.9	22	7.5
600	20	4,308	-4.4	-23.1	23	9.4
550	20	4,987	-9.2	-26.3	24	11.1
500	20	5,717	-14.6	-30.1	25	12.9
450	20	6,506	-20.3	-34.5	25	14.4
400	20	7,367	-26.9	-40.2	25	17.7
350	20	8,319	-34.1	-46.0	25	21.2
300	20	9,378	-42.0	-51.2	25	22.7
250	20	10,590	-50.4		25	25.1
200	17	12,032	-57.1		26	28.0
175	12	12,862	-56.9			
150	8	13,840	-59.9			

See reference note at end of table

the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G. c. t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun. MAY 1971

TUCSON, ARIZ.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 1.56	1.66	2.74	1.83	*	1.83	2.74	3.66	1.56
May									
1-----	.82	0.92	1.03	1.30	1.41	1.21	1.05	0.92	0.82
2-----	.89	1.00	1.11	1.26	1.44	1.25	1.10	.98	.87
3-----	.92	1.02	1.13	1.29	1.43	1.25	1.12	1.01	.92
4-----	.82	.90	1.03	1.29	1.37	1.17	1.02	.91	.81
5-----	.76	.85	.96	1.11	1.32	1.13	.90	.77	.66
6-----	.69	.77	.88	1.08	----	----	----	----	----
7-----	.80	.87	----	----	1.38	----	----	----	----
8-----	----	----	----	1.28	1.35	1.16	1.03	.92	.83
9-----	----	----	1.03	1.30	1.33	1.19	1.02	.90	.79
11----	.76	.87	.99	1.21	----	----	----	----	----
13----	.59	.71	.84	1.03	----	----	----	----	----
14----	----	----	----	----	----	1.09	.95	.84	.75
15----	.79	.87	.98	1.18	1.30	1.15	.98	.87	.74
16----	.84	.94	1.06	1.29	1.37	1.19	1.04	.91	.80
17----	.78	.87	.98	1.23	1.31	----	----	----	----
18----	----	----	----	1.27	1.42	1.25	----	----	----
19----	----	----	.98	1.18	----	1.11	.96	.85	.74
20----	.80	.88	1.00	1.18	1.36	1.16	.98	.86	.74
21----	----	----	----	----	----	----	----	.80	.70
22----	.83	.93	1.05	1.28	1.35	1.14	.92	.82	.71
23----	.67	.77	.90	1.18	1.34	1.08	.89	.76	.66
24----	.72	.83	.94	1.16	1.33	1.09	.89	.77	.67
25----	.73	.83	.94	1.20	----	----	.93	----	----
26----	.72	.83	.95	1.22	1.36	1.13	.96	.83	.74
27----	.81	.92	1.04	1.29	1.44	1.09	.93	.82	.72
28----	.75	.83	.96	1.20	1.35	1.16	1.01	.88	.74
29----	.66	.72	.80	----	----	1.17	1.01	.89	.80
30----	.81	.91	1.07	1.28	----	1.16	.99	.87	.77
31----	.65	.71	.80	1.08	----	1.10	.92	.79	.69
Aver-age	0.76	0.86	.98	1.15	1.36	1.16	0.98	0.86	0.76

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
May									
1-----	----	----	(1.00)	(1.06)	(1.38)	(1.18)	(0.97)	(0.81)	(0.71)
2-----	† 0.79	† 0.88	1.05	1.23	1.44	1.20	1.04	.92	.83
3-----	.95	1.04	1.15	1.28	1.44	1.27	1.11	1.04	.96
4-----	----	----	----	----	HD1.12	HD1.01	HD .78	HD .55	HD .42
5-----	(.78)	(.84)	(.97)	(1.11)	----	----	----	----	----
6-----	----	----	----	----	(1.33)	----	----	----	----
8-----	.78	.89	----	----	----	----	(1.04)	----	----
9-----	.91	1.01	1.12	1.26	1.44	(1.24)	----	(.96)	(.86)
10----	(.88)	(.99)	(1.08)	(1.22)	(1.38)	----	----	----	----
11----	.73	.84	.94	1.12	(1.35)	----	----	----	----
12----	(.71)	(.77)	(.93)	----	----	----	----	----	----
13----	(.64	(.75)	(1.01)	1.21	1.40	----	----	----	----
14----	(.59)	(.73)	(.90)	----	----	----	----	----	----
15----	----	(.65)	(.83)	(1.00)	----	(.95)	----	----	(.56)
16----	.77	.89	1.03	1.19	1.40	(1.19)	----	.93	.79
17----	(.73)	(.86)	----	----	(1.32)	----	----	----	----
18----	----	----	1.06	1.21	1.42	1.16	97	.78	68
19----	.89	.97	1.08	1.23	1.39	1.18	1.04	.93	83
20----	79	.89	1.01	1.17	1.37	D(1.00)	D (.82)	D (.68)	D (.58)
21----	----	.93	1.05	1.19	----	1.13	.96	.80	.68
22----	.78	.87	.99	1.15	1.35	HD(1.06)	.92	.79	.63
23----	H (.52)	H (.64)	(.81)	(.99)	----	1.14	----	----	----
24----	.84	.93	1.04	1.14	1.38	1.21	1.07	95	86
25----	82	.93	1.03	1.18	----	----	----	----	----
26----	70	80	93	1.06	----	----	86	73	61
27----	.79	.87	1.00	1.17	1.38	1.19	1.03	.87	76
28----	----	----	----	----	(1.31)	(1.02)	(.89)	----	----
29----	.87	.95	1.07	1.22	D(1.21)	D(1.00)	----	D (.77)	D (.68)
30----	.82	.89	.99	1.12	----	----	(.93)	(.80)	----
31----	.78	.86	.93	1.11	1.29	(1.13)	(.95)	----	(.55)
Aver-age	0.81	0.91	1.03	1.18	1.39	1.19	0.98	0.87	0.76

OMAHA, NEBR.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
May									
2-----	HS0.83	HS .90	HS1.05	HS1.20	----	1.17	0.98	0.84	0.72
5-----	----	----	HS .88	----	----	----	----	----	----
12----	----	.95	1.07	1.21	HS1.36	HS1.17	HS .95	HS .83	HS .71
13----	.73	.84	.97	1.14	1.32	HS .99	HM .77	HS .67	HS .52
14----	.54	.75	.91	1.07	1.27	HS1.00	HS .81	HS .64	HS .50
15----	----	----	----	1.06	1.26	HS1.02	HS .78	HS .60	HS .50
16----	----	----	.90	1.17	1.25	HS1.02	HS .84	HS .64	HS .49
19----	----	----	.94	----	----	----	----	----	----
20----	.75	.87	.97	----	----	----	----	----	----
21----	----	HS .79	----	----	----	----	----	----	----
22----	----	----	.78	----	----	----	----	----	----
26----	----	----	----	----	----	HS1.08	HS .92	HS .78	HS .68
27----	----	----	.97	1.14	1.44	1.10	.94	.76	.70
28----	.77	.86	.98	1.12	1.32	1.10	.90	.82	.69
29----	----	----	HS .88	----	----	----	----	----	----
Aver-age	0.75	0.85	0.96	1.14	1.32	1.07	0.88	0.72	0.62

MADISON, WIS.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	Sun's zenith distance P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
May									
3-----	S 0.82	S 0.91	S 1.05	S 1.19	S 1.35	S 1.13	S 0.96	S 0.82	S 0.71
8-----	----	----	W .87	S 1.07	----	----	----	----	----
9-----	----	----	----	----	S 1.28	S 1.03	S 90	S 76	S 65
12----	----	----	----	----	----	----	----	S 89	S 81
13----	S .75	S 86	S 97	S 1.13	S 1.28	----	----	----	----
14----	S .80	S 90	S 1.02	S 1.19	S 1.32	S 1.07	M 83	M 67	M 59
16----	----	----	S 91	S 1.10	S 1.34	S 1.14	S 93	----	----
21----	M .67	M .78	M 91	S 1.09	----	----	----	----	----
27----	----	S .89	S 1.05	S 1.20	S 1.47	----	----	----	----
28----	S 74	S 83	S 96	S 1.04	S 1.35	S 1.13	S 98	S 90	S 80
29----	S 67	S 78	S 91	S 1.09	----	----	----	----	----
Aver-age	0.74	0.85	0.96	1.12	1.34	1.10	0.92	0.81	0.71

( ) Cloudy Percent
* Values corresponding to true solar noon
BD Blowing Dust
BN Blowing Sand
D Dust
DI Intense Dust
DM Moderate Dust
DS Slight Dust
F Fog
GF Ground Fog
H Haze
HI Intense Haze
HM Moderate Haze
HS Slight
I Intense Haze-indeterminable
K Smoke
KI Intense Smoke
KM Moderate Smoke
KS Slight Smoke
M Moderate Haze-indeterminable
N Sand
S Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	751	764	772	745	754	544	454	574	757	743	549	759	680	652	693	795	---	813	809	804	772	810	579	838	802	743	---	585	713	797	821	720
AMES IOWA	377	608	729	464	331	250	112	704	700	372	434	769	714	706	694	737	330	153	366	743	497	487	121	143	196	561	785	772	722	619	524	507
ANNETTE ALASKA	567	448	284	618	620	161	455	538	338	139	636	188	602	609	687	703	475	146	511	663	137	424	188	497	724	238	512	269	690	746	746	470
APALACHICOLA FLORIDA	622	603	672	691	664	606	563	529	614	569	603	234	648	168	314	548	682	682	662	466	693	654	639	582	587	550	637	460	691	701	690	581
ARGONNE NAT. LAB.	636	188	677	132	204	477	251	656	633	571	310	640	694	639	569	674	623	428	547	553	688	614	364	371	111	215	675	719	683	682	439	505
ASTORIA OREGON	500	593	194	274	157	681	670	378	611	705	686	256	310	564	289	391	540	362	368	580	613	223	718	262	334	283	514	198	346	424	173	426
ATLANTA GEORGIA	708	501	740	740	696	639	527	464	690	404	504	333	135	---	103	650	737	712	631	467	738	699	671	581	361	760	645	640	537	699	769	583
BARROW ALASKA	443	462	487	534	645	668	717	572	561	634	555	577	499	525	562	533	650	456	542	543	481	567	631	508	494	452	523	549	587	509	567	549
BETHEL ALASKA	430	375	---	301	---	471	501	433	664	617	620	403	182	401	529	589	355	478	414	523	368	366	---	406	385	453	403	---	317	326	361	432
BISMARCK N.DAK.	709	611	594	737	712	738	606	739	435	78	765	752	762	496	785	618	739	247	706	740	432	104	257	388	818	807	789	759	558	---	128	587
BOISE IDAHO	659	574	591	473	747	573	651	523	731	677	698	491	532	758	603	544	675	722	476	376	313	532	766	688	---	582	601	404	751	583	469	592
BROOKINGS SOUTH DAK.	493	640	606	586	432	623	614	609	466	208	660	634	639	617	532	626	481	99	274	621	502	443	86	67	243	679	680	596	322	288	239	471
BROWNSVILLE TEXAS	640	638	681	503	633	618	524	545	533	441	---	730	270	673	752	728	753	612	517	574	617	558	515	275	449	531	670	619	586	448	633	576
BURLINGTON VERMONT	849	280	85	131	369	737	767	553	598	756	749	190	213	740	808	577	---	808	619	588	153	551	852	640	415	113	183	804	825	748	822	551
CAPE HATTERAS N.C.	676	586	632	705	647	619	608	413	636	675	689	671	362	335	255	216	685	704	647	625	131	660	744	657	665	600	688	396	364	547	427	557
CARIBOU MAINE	356	430	88	159	125	344	391	608	591	646	631	476	236	455	678	403	253	565	433	509	483	116	297	731	159	246	164	565	683	698	623	424
CHARLESTON S.C.	630	558	708	710	672	653	625	243	643	256	403	360	567	599	84	595	680	665	---	656	329	689	610	607	462	634	656	250	154	417	696	527
CLEVELAND OHIO	260	---	570	---	325	402	---	506	625	---	---	216	446	687	547	---	666	623	---	---	---	723	705	298	325	127	385	---	659	---	---	---
COLUMBIA MISSOURI	594	533	731	435	390	336	386	610	600	192	358	585	735	724	722	637	634	491	643	737	382	237	216	432	669	303	717	758	719	702	640	543
DAVIS CALIFORNIA	353	243	539	237	448	499	445	209	685	698	696	677	693	738	726	770	764	737	686	732	705	740	726	732	720	655	191	170	308	388	618	565
DODGE CITY KANSAS	627	705	712	629	717	609	739	545	318	572	118	789	746	764	692	675	696	---	701	697	715	729	708	711	762	553	508	522	284	647	769	632
E. LANSING MICHIGAN	440	279	705	500	465	645	552	670	493	639	191	514	674	748	685	627	667	544	460	592	505	740	632	334	99	165	557	739	755	739	622	548
EL CENTRO CALIF. NPF	639	651	667	660	583	613	535	666	651	543	594	632	620	652	674	644	675	683	691	688	675	680	670	675	660	678	707	283	681	678	683	640
EL PASO TEXAS	592	725	554	504	623	620*	693	643	726	743	560	547	730	710	719	701	706	786	755	739	704	702	780	768	731	779	611	707	729	764	768	691
ELY NEVADA	695	676	632	132	379	490	460	316	590	574	---	712	572	546	716	841	573	810	738	577	319	382	680	722	636	791	442	655	402	367	283	557
EPPLEY NEWPORT R.I.	493	409	25	240	646	100	580	169	59	119	---	---	86	680	638	39	482	633	432	605	212	386	713	648	452	577	583	675	549	160	261	402
FAIRBANKS ALASKA	538	528	413	511	540	392	192	410	539	416	497	378	529	577	399	377	639	616	426	431	578	590	551	585	595	534	620	381	517	608	564	499
FLAMING GORGE UTAH	729	621	746	587	169	559	399	360	338	359	765	758	527	638	697	147	424	417	567	317	773	514	364	756	724	790	733	566	404	225	742	539
FORT WORTH TEXAS	611	652	656	580	447	342	564	492	137	367	531	470	728	707	697	676	644	636	---	712*	398	231	350	719	723	611	588	502	176	224	416	520
FRESNO CALIFORNIA	549	478	290	491	403	345	102	323	614	657	604	688	666	724	713	746	752	729	689	740	575	733	731	731	732	462	164	438	589	678	751	577
GAINESVILLE FLORIDA	470	583	677	733	679	658	636	495	589	615	520	460	677	188	301	583	602	790	620	640	658	470	489	508	451	583	470	414	602	714	696	567
GENEVA NEW YORK	379	211	50	560	337	308	543	20	126	573	510	191	240	608	532	362	598	573	446	262	431	556	635	299	334	96	163	504	607	594	618	396
GLASGOW MONTANA	602	940	538	668	605	473	702	691	466	688	683	698	592	598	710	531	164	---	711	419	150	359	529	676	729	738	700	594	532	122	142	548
GRAND JUNCTION COLO.	724	718	730	462	657	554	516	320	344	594	713	624	724	648	670	616	752	549	784	663	762	467	320	770	740	---	753	557	568	414	565	609
GREAT FALLS MONTANA	674	630	591	438	289	45	679	639	700	---	731	742	396	702	601	519	154	326	648	491	291	394	721	634	737	704	686	579	489	155	198	520
GREENSBORO N.C.	644	402	515	694	626	310	430	545	569	686	517	230	275	474	87	443	678	691	583	542	572	721	702	471	318	747	583	50	68	212	738	488
INDIANAPOLIS INDIANA	---	206	691	415	---	355	100	641	525	---	178	316	655	689	651	620	658	621	342	645	658	608	447	200	125	584	592	576	684	713	612	504
ITHACA NEW YORK	569	225	72	521	443	294	719	93	132	739	638	246	187	790	624	483	712	693	537	356	538	596	732	386	383	137	167	479	626	683	733	469
LAKE CHARLES LA.	674	648	641	538	292	208	314	234	409	416	216	---	499	638	616	678	618	531	590	397	494	656	420	300	530	372	625	293	649	611	574	489
LAKELAND FLORIDA	572	644	659	703	656	644	586	624	564	568	392	520	638	294	220	660	692	675	686	552	575	655	651	461	597	288	638	628	583	698	677	581
LANDER WYOMING	663	641	547	429	108	245	538	469	213	359	715	731	561	728	698	454	485	301	593	435	400	223	478	736	706	547	642	568	431	182	523	495
LARAMIE WYOMING	639	690	686	497	225	360	596	364	328	206	318	728	732	604	497	447	424	471	445	369	377	255	258	644	450	550	623	662	498	487	---	481
LAS VEGAS NEVADA	693	665	708	621	572	299	476	633	662	685	706	669	663	712	714	746	772	759	730	744	698	353	734	731	737	749	752	347	563	675	523	648
LEXINGTON KENTUCKY	618	482	398	588	129	121	175	309	551	537	271	148	272	684	302	654	650	655	567	---	679	642	505	546	526	671	327	536	532	665	701	481
LITTLE ROCK ARKANSAS	662	640	677	514	187	244	610	602	191	288	347	102	715	688	674	673	626	539	674	680	673	337	440	250	711	671	172	511	660	630	354	508
LOS ANGELES CALIF.	362	687	603	708	314	158	352	556	670	615	312	367	625	421	639	691	773	744	729	680	680	624	673	698	600	322	706	332	549	345	726	557
LOS ANGELES CALIF. U	382	644	575	619	---	---	362	392	624	565	385	449	571	410	639	720	757	729	720	708	597	491	702	720	636	201	629	195	233	192	635	534
MADISON WISCONSIN	624	358	712	172	559	656	544	572	708	685	356	639	718	726	617	721	397	310	483	611	735	591	329	352	89	320	749	745	743	714	387	546
MANHATTAN KANSAS	528	595	669	559	664	624	97	412	246	228	129	736	689	716	686	600	628	201	550	584	24	187	544	295	733	566	700	681	378	348	675	493
MATANUSKA ALASKA	259	278	390	539	237	261	217	---	---	---	348	376	294	572	536	---	---	461	---	---	---	---	---	---	588	323	261	373	560	241	165	---
MEDFORD OREGON	339	333	232	194	316	648	580	445	674	664	624	307	624	681	429	512	593	642	562	387	539	707	719	609	234	580	409	235	549	365	196	482
MIAMI FLORIDA	455	375	564	605	609	630	588	606	503	505	590	584	367	498	469	215	501	669	645	565	452	511	361	453	572	541	623	527	577	604	633	529
MIDLAND TEXAS	468	696	656	474	695	649	716	439	689	632	452	633	749	713	579	687	567	757	576	508	535	673	761	766	765	417	360	493	171	751	616	601
NASHVILLE TENNESSEE	672	458	607	677	221	213	443	348	627	251	233	101	329	691	471	701	700	672	599	631	725	523	646	456	---	691	410	596	560	719	711	520
NEW YORK CENTRAL PRK	525	191	113	335	638	118	595	25	151	525	632	252	50	745	571	54	728	701	622	412	68	520	775	567	424	605	492	662	590	69	225	419

SOLAR RADIATION TOTALS - Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
NORTH OMAHA NEBRASKA	494	728	612	530	293	114	117	665	201	213	325	726	705	695	688	698	378	150	579	719	389	226	431	105	628	724	758	755	617	278	651	490
OAK RIDGE TENNESSEE	666	372	477	676	366	82	232	541	538	555	318	183	118	693	157	594	665	662	628	434	704	607	670	476	708	711	534	341	422	561	719	497
OKLAHOMA CITY OKLA.	623	643	385	550	614	444	658	484	106	424	468	683	693	691	533	645	469	458	704	694	523	156	424	710	697	602	463	269	508	323	515	521
PALMER AAES ALASKA	224	248	448	464	232	282	250	565	537	348	392	356	333	580	541	604	269	465	549	449	574	423	389	611	521	352	255	381	497	271	180	406
PHOENIX ARIZONA	646	668	668	656	572	386	322	587	659	654	638	486	622	639	661	669	664	706	692	690	687	678	676	685	678	694	678	654	599	685	673	635
PORTLAND MAINE	377	273	33	104	464	384	621	433	87	363	636	402	71	583	660	97	429	640	383	564	353	91	718	669	128	384	203	428	703	226	276	380
RAPID CITY S.DAK.	578	626	534	611	488	666	547	613	244	183	677	692	682	447	681	448	530	508	566	559	575	79	240	601	628	533	609	683	100	221	292	498
RENO NEVADA	474	351	350	240	436	145	351	329	579	617	361	578	520	658	671	696	685	683	625	652	216	645	661	425	501	307	203	253	386	415	395	465
RICHLAND 25 NW WASH.	565	509	677	691	576	470	694	650	710	712	707	516	745	683	377	423	---	736	334	608	751	742	700	704	431	527	744	755	423	256	156	586
RIVERSIDE CALIFORNIA	436	596	581	387	154	161	562	691	708	499	491	628	513	723	668	542	802	808	775	779	317	652	761	765	765	683	454	251	429	318	707	568
RUSTON LOUISIANA	681	646	308	630	175	156	481	653	278	87	419	132	745	709	566	714	683	483	606	513	703	624	565	301	734	695	373	256	672	694	509	509
SAINT CLOUD MINN.	417	705	699	667	683	701	651	714	704	640	539	726	729	985	584	727	364	153	145	623	559	442	37	69	276	687	767	770	600	375	325	541
SALT LAKE CITY	719	708	711	492	291	507	445	373	404	440	729	653	503	750	712	467	617	736	672	424	437	677	682	746	648	787	737	664	414	250	515	578
SAN ANTONIO TEXAS	642	699	697	488	439	382	443	235	335	453	431	688	619	721	710	691	669	638	623	476	369	471	393	438	498	519	549	635	557	157	367	517
SANTA MARIA CALIF.	487	417	519	307	481	155	454	680	678	656	389	550	667	694	723	734	736	734	729	632	745	691	687	628	632	526	296	528	238	344	726	563
SAULT STE MARIE MICH	97	674	726	666	320	722	716	680	714	708	527	290	709	745	566	746	545	229	305	268	548	732	205	81	101	422	776	769	719	460	471	524
SEATTLE-TACOMA WASH.	476	623	660	91	134	491	672	216	647	659	682	271	324	604	352	200	700	561	310	360	705	719	419	359	422	448	735	733	118	257	209	457
SPOKANE WASHINGTON	537	489	630	481	201	370	634	599	656	650	645	518	548	622	269	371	519	629	---	373	671	705	619	677	364	560	646	733	611	208	195	524
STERLING VIRGINIA	681	174	357	754	581	273	119	132	682	731	703	176	97	730	387	153	715	751	671	546	---	678	794	369	378	655	---	310	125	125	695	467
SWAN ISLAND W.I.	606	614	568	570	491	595	585	574	625	591	613	602	470	593	279	281	512	617	638	617	597	560	615	604	547	592	564	520	560	507	564	557
TALLAHASSEE FLORIDA	615	612	638	653	611	601	519	188	418	323	522	232	590	231	206	610	643	603	545	296	642	433	600	596	356	448	467	400	651	653	647	502
TAMPA FLORIDA	627	656	689	738	675	671	628	661	586	658	553	580	670	371	205	630	718	677	691	694	652	609	648	588	659	574	620	660	689	736	720	630
TUCSON ARIZONA	670	682	691	684	660	515	521	663	681	681	654	---	---	---	684	700	690	735	710	710	611	711	703	698	625	709	703	713	688	713	709	676
WAKE ISLAND PACIFIC	686	713	671	715	708	588	669	708	442	706	686	608	712	715	695	702	720	672	679	701	591	654	711	703	682	704	641	706	676	699	722	677

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

U Indicates Urban sites.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska — MAY 1971

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	63	106	106	197	132	125	78	225	226	141	159	148	89	199	197	229	66	165	226	193	241	159	131	210	215	113	63	114	212	72	25	149

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (λ 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	13 26	19 06	21 66	15 62	10 41	8 99	5 09	21 90	20 83	11 72	14.32	23.68	20.83	17.04	20 83	21.31	11.24	0 15	12 78	22 96	15 74	14 91	4 13	6 27	8 10	17 40	23 91	24 08	21 46	18 41	17 56	15 96

These data are from an U - V Epply total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code as defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atm-cms

Station	Day of month																															Mean Dy
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
BISMARCK, N. DAK.	00403	00377	00389	00401	00408	-	-	-	05398	-	00395	00364	00316	03380	00402	00336	00368	04415	00420	00410	04378	-	-	05388	05397	00388	00376	00341	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BOULDER, COLO.	-	-	-	-	-	-	-	-	-	-	-	00376	00370	04354	-	-	05394	04451	00410	05367	00374	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-	-	[illegible]
ARIELO, MAINE	-	-	-	-	-	-	-	-	-	-	-	-	05356	05378	00332	05341	05399	05308	05321	35284	-	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FAIRBANKS, ALASKA	[illegible]	[illegible]	[illegible]	-	-	[illegible]	-	05403	05436	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GREEN BAY, WIS.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
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MAUNA LOA, HAWAII	-	-	[illegible]	-	[illegible]	-	[illegible]	-	-	[illegible]	[illegible]	-	-	[illegible]	-	-	[illegible]	-	[illegible]	-	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	-	-	-	[illegible]
NASHVILLE, TENN.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WALLOPS ISLAND, VA.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible] Standard temper

Chart I. A. Normal Daily Average Temperature (°F. 1931-60), May.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), **May 1971.**

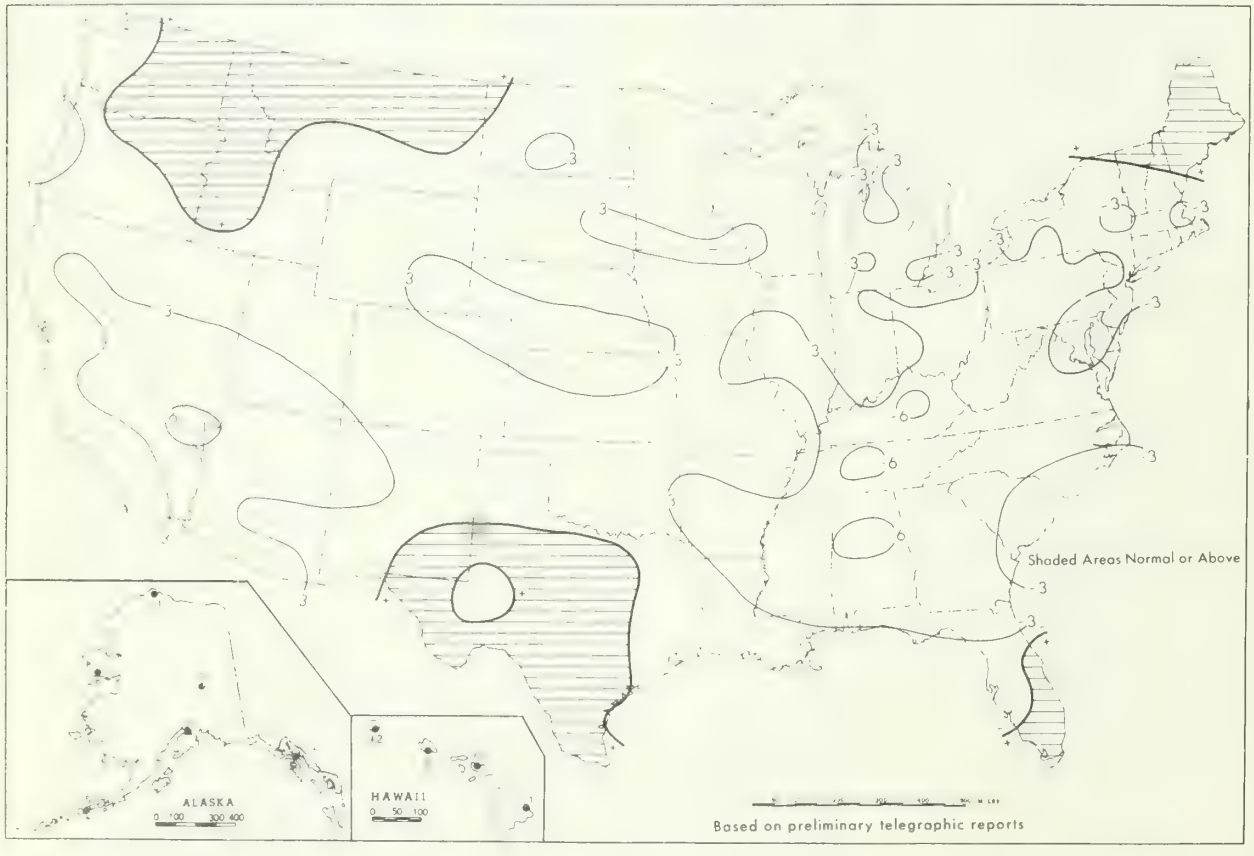


Chart II. Total Precipitation (Inches), **May 1971.**

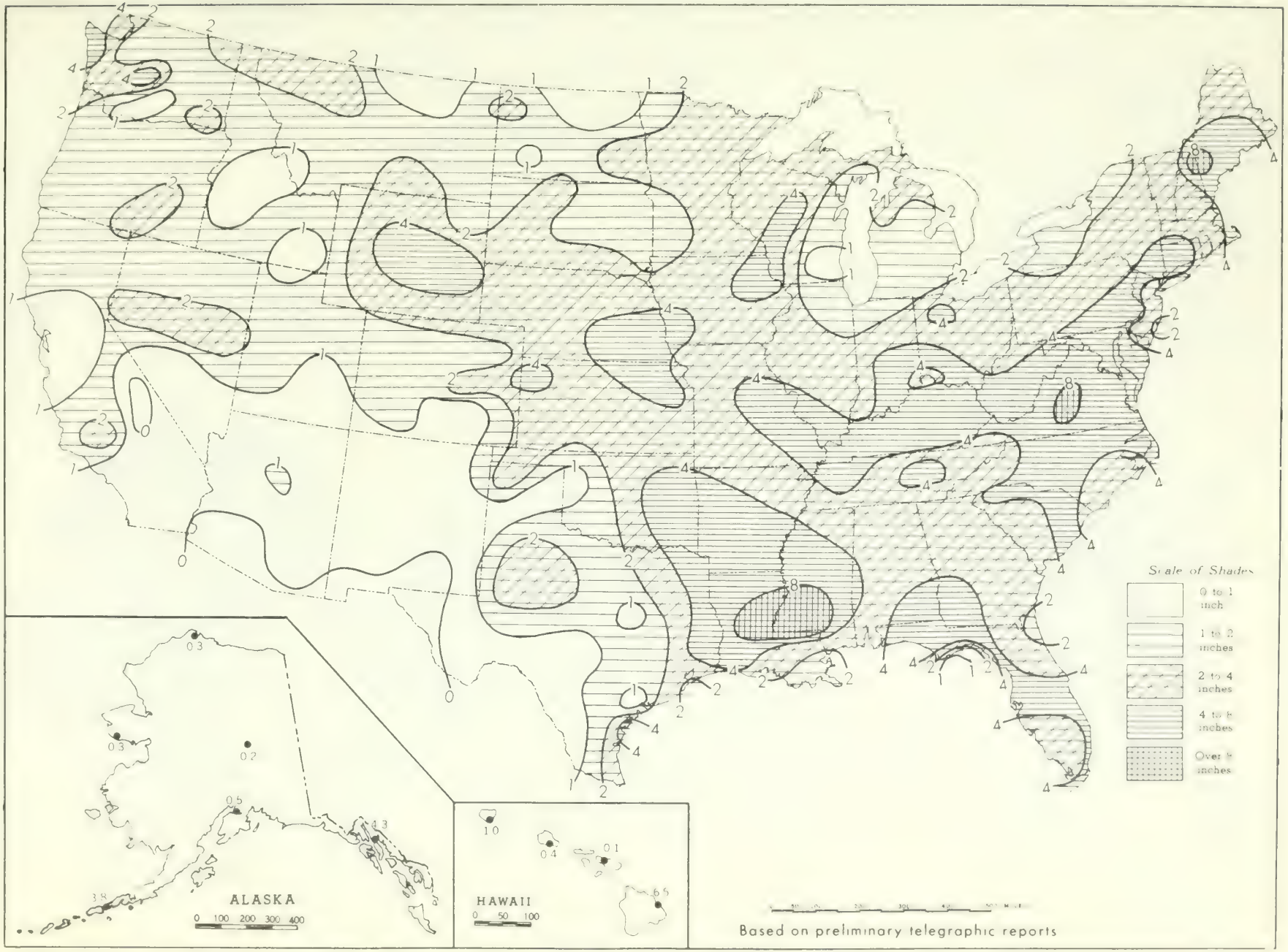


Chart III Percentage of Normal Precipitation, **May 1971.**

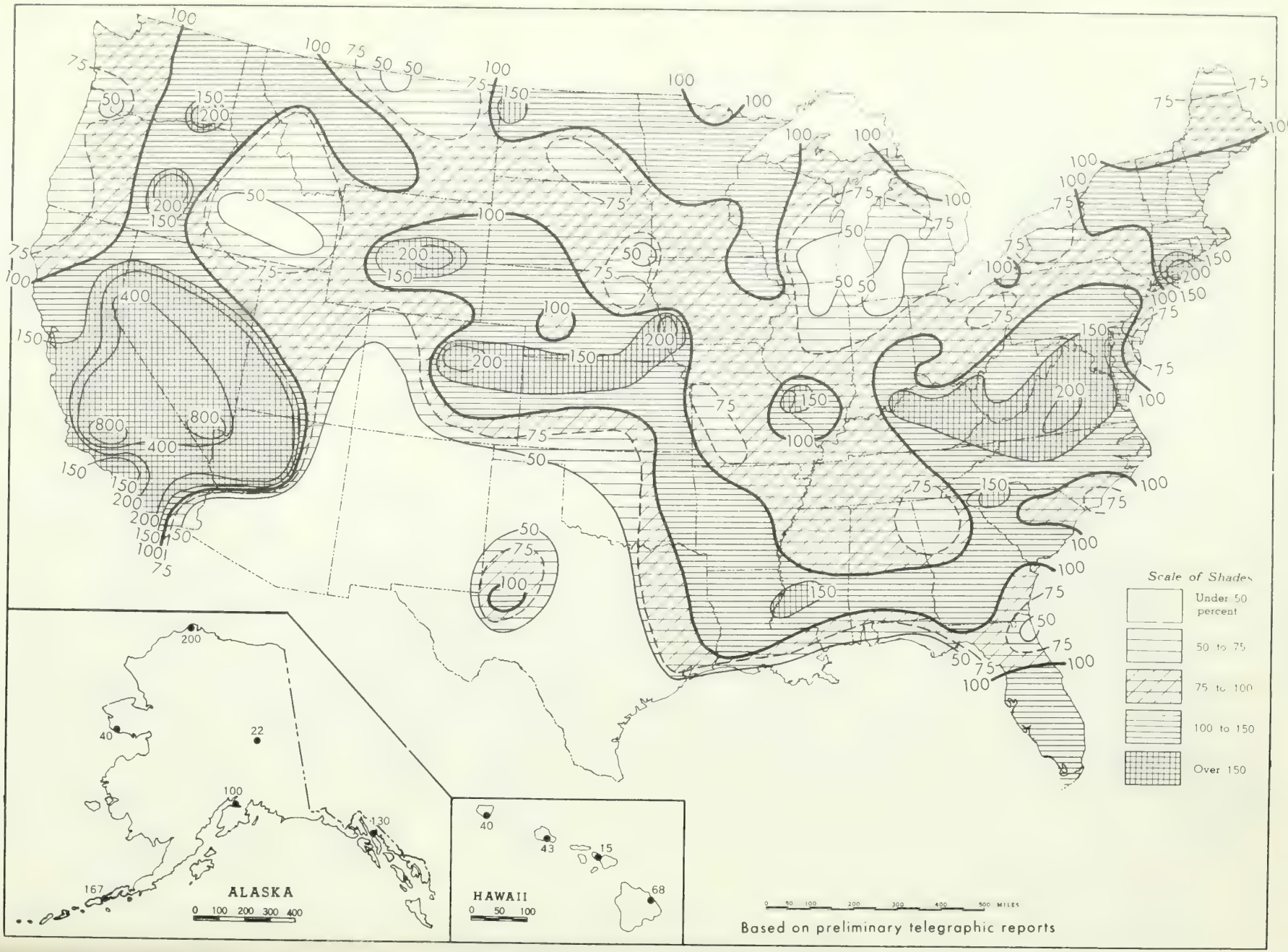
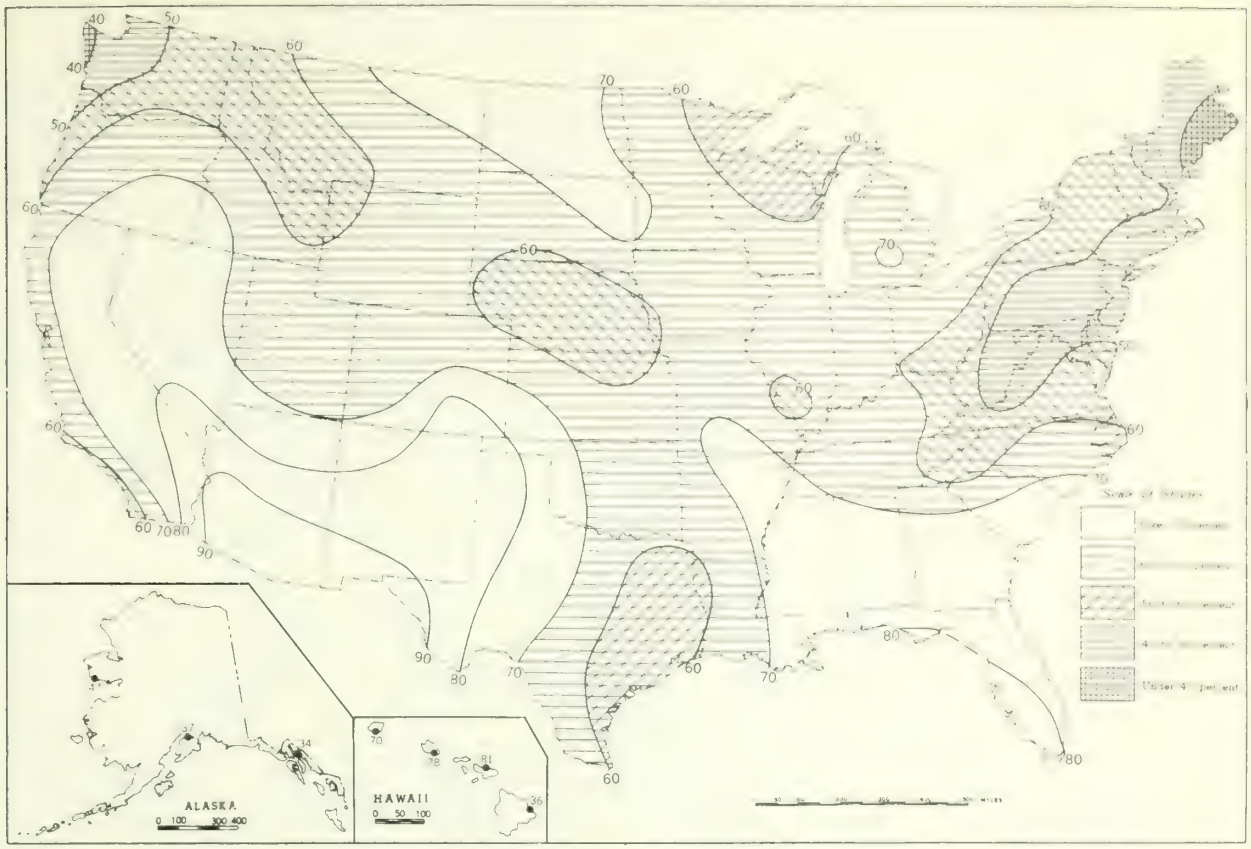
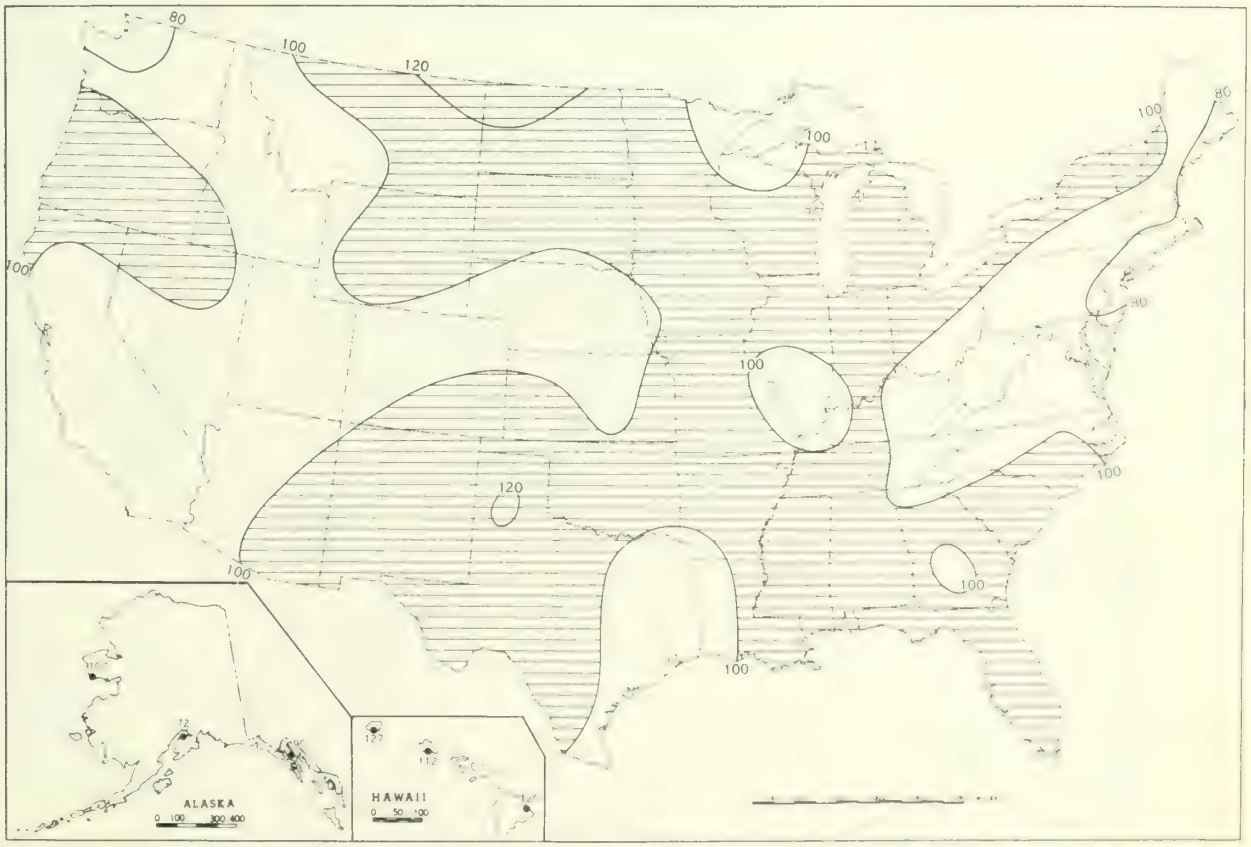


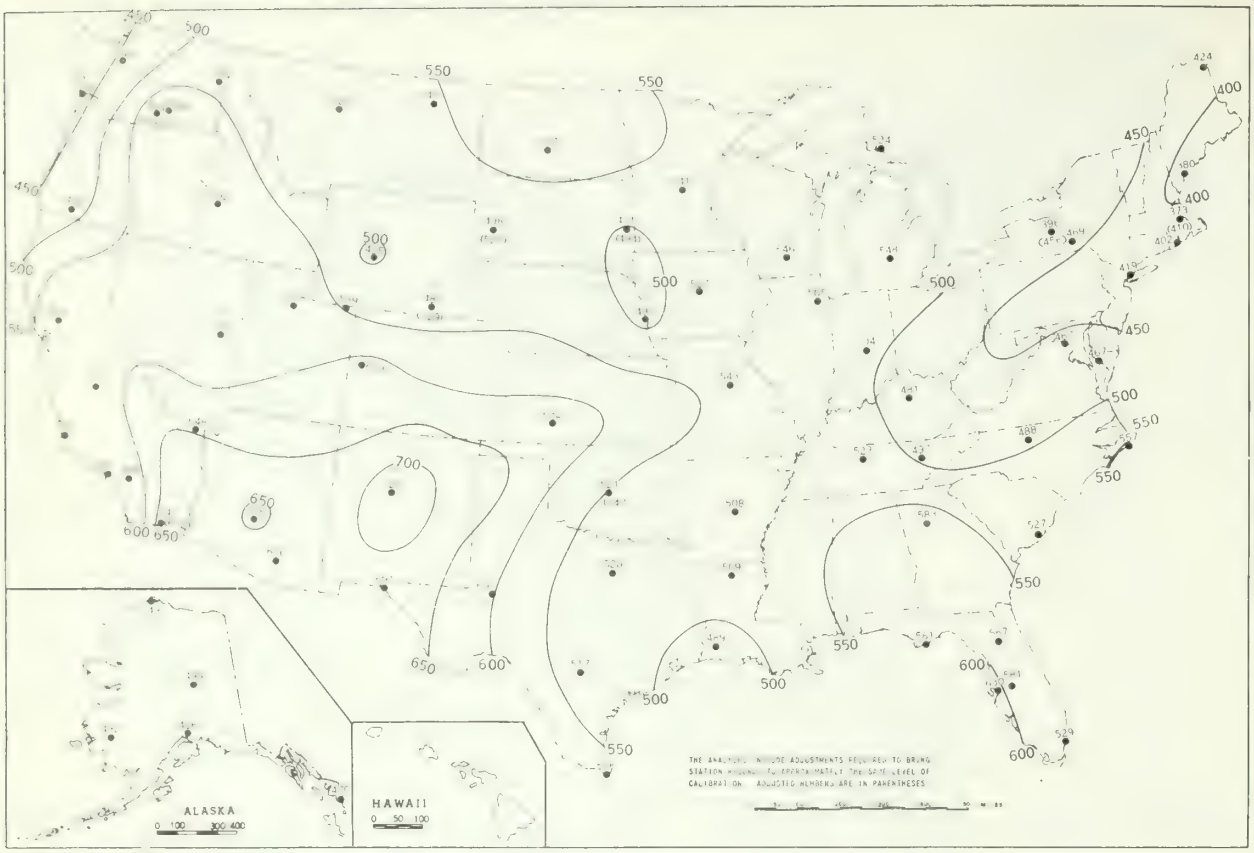
Chart VI. A. Percentage of Possible Sunshine, May 1971.



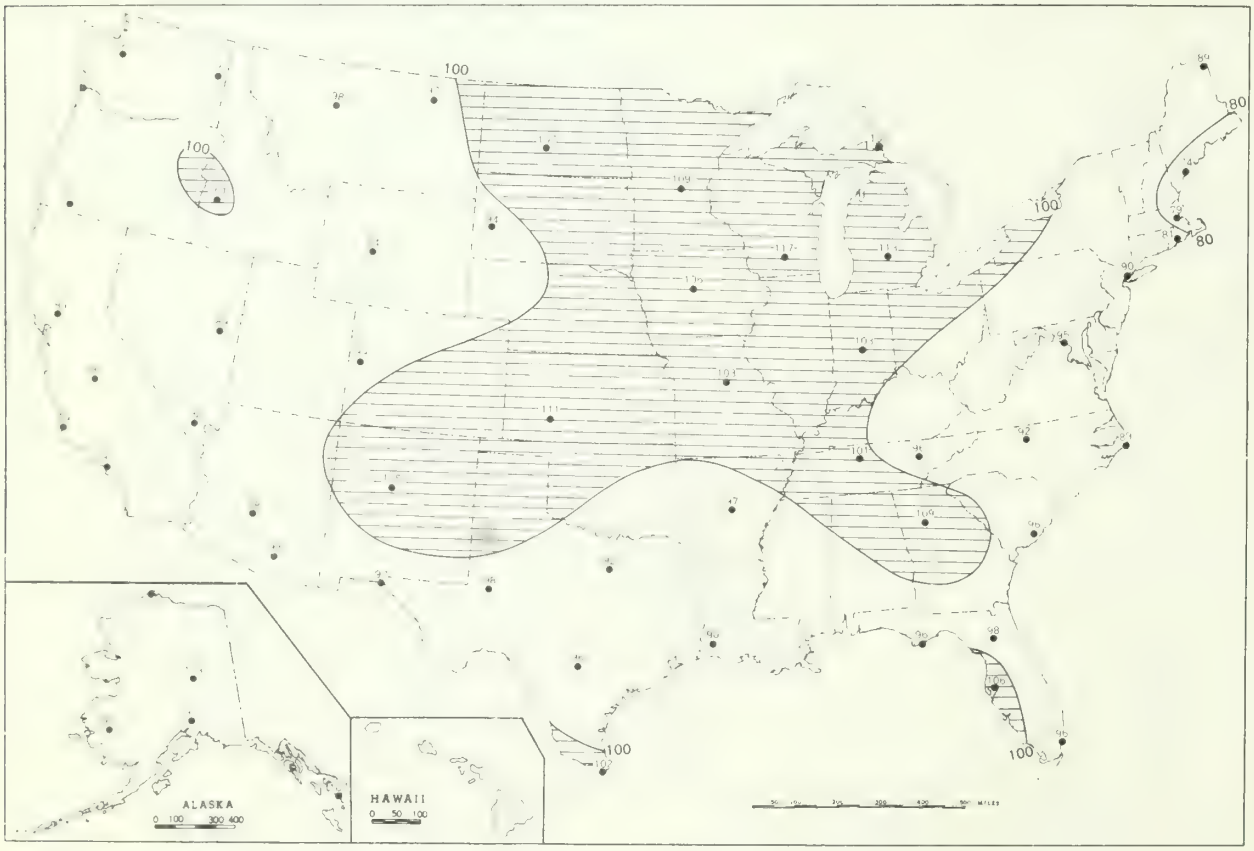
B. Percentage of Mean Monthly Sunshine, May 1971.



A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

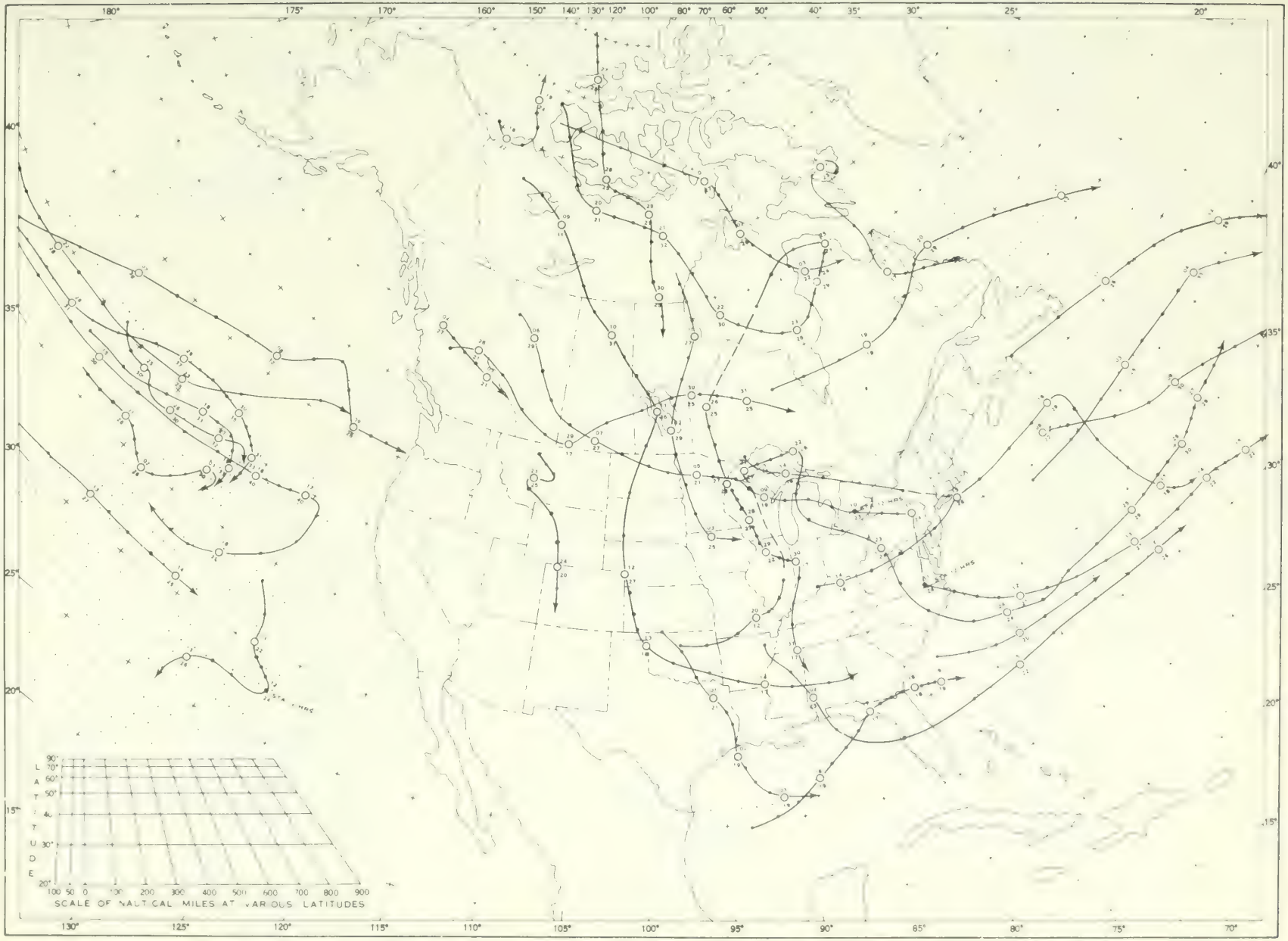


B. Percentage of Mean Daily Solar Radiation, May 1971.



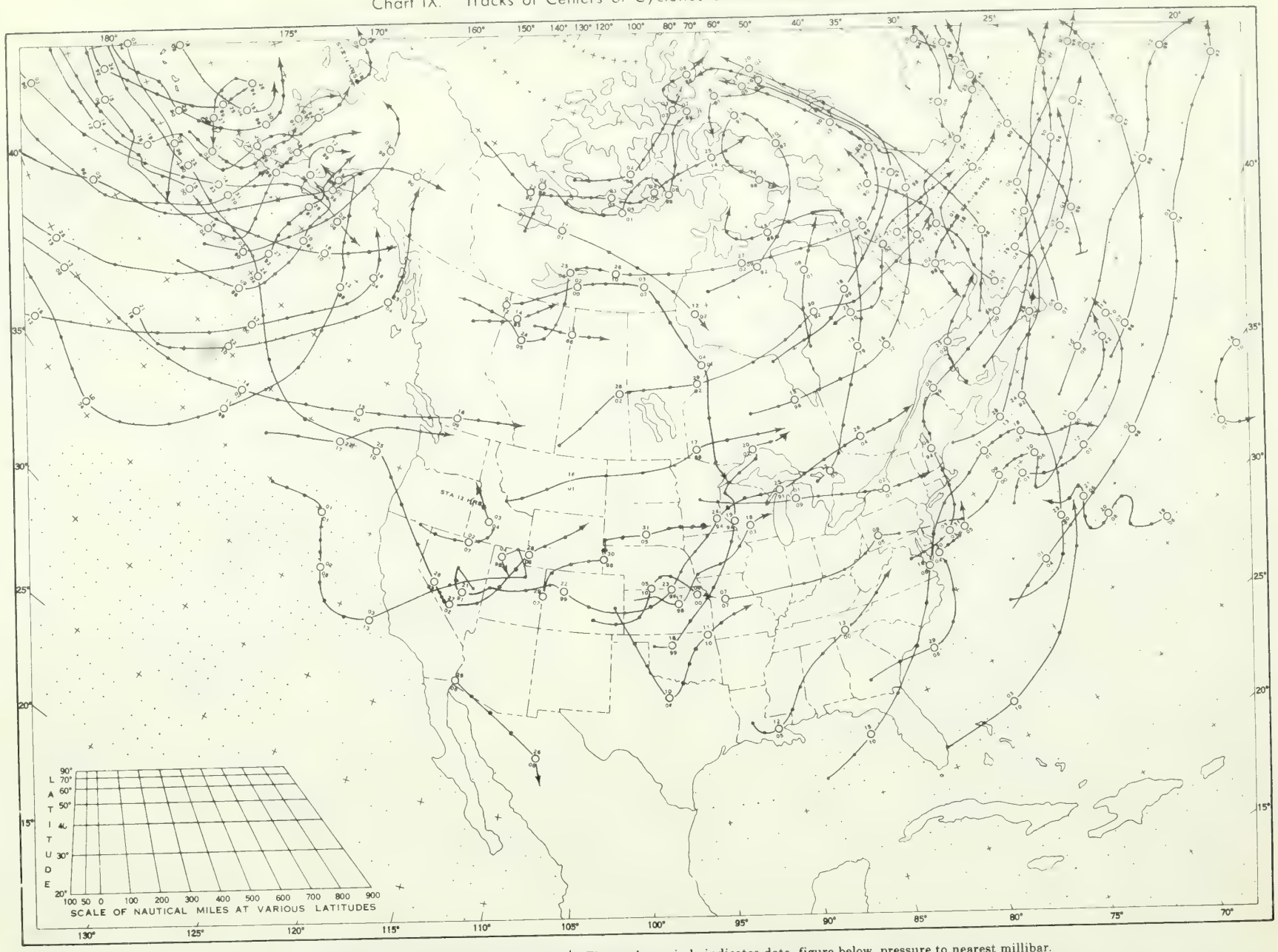
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, **May 1971.**



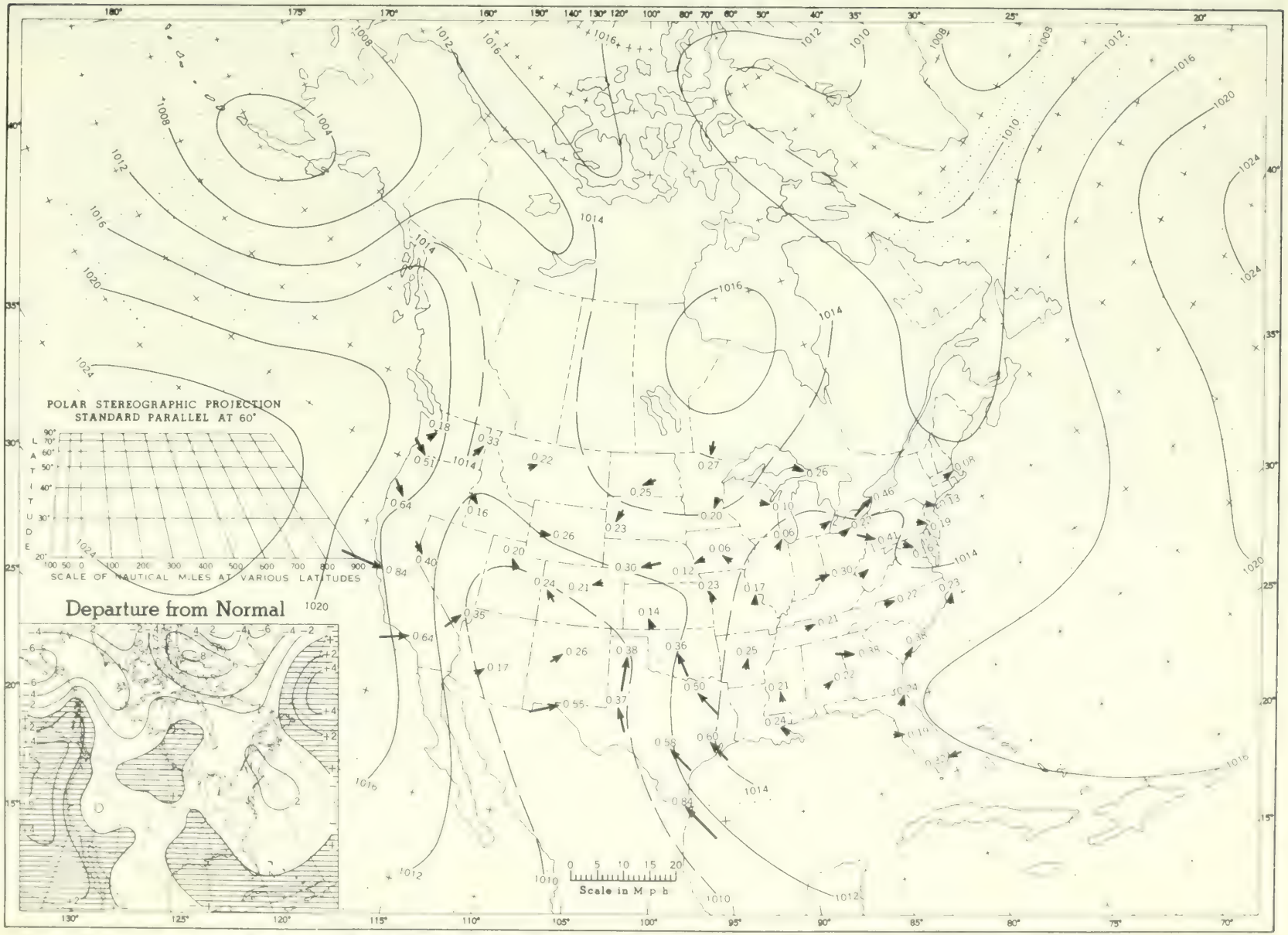
Circle indicates position of center at 7:00 a.m. e.s.t. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, May 1971.



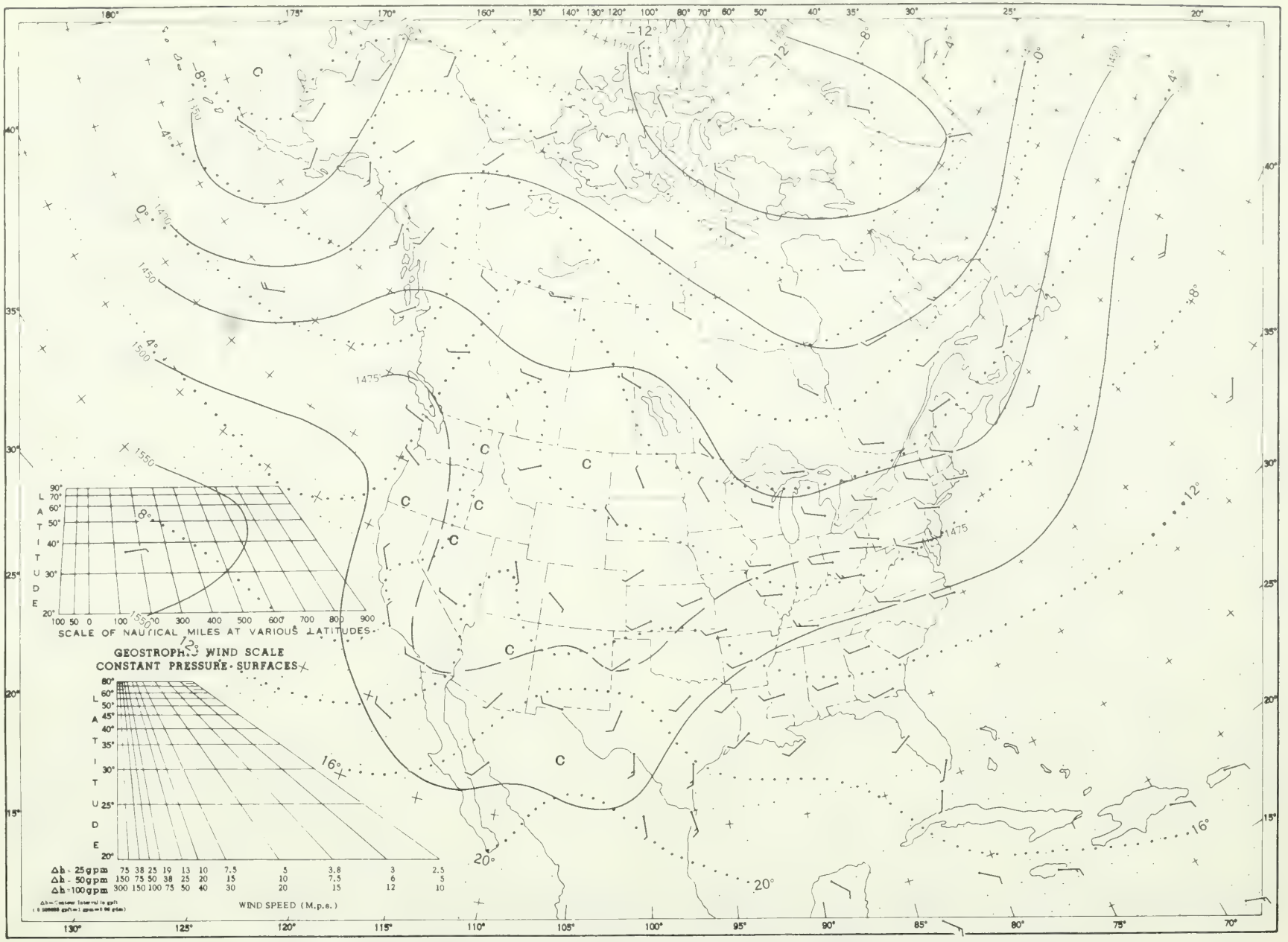
Circle indicates position of center at 7:00 a.m. **e.s.t.** Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, **May 1971.** Inset Departure of Average Pressure (mb) from Normal, **May 1971.**



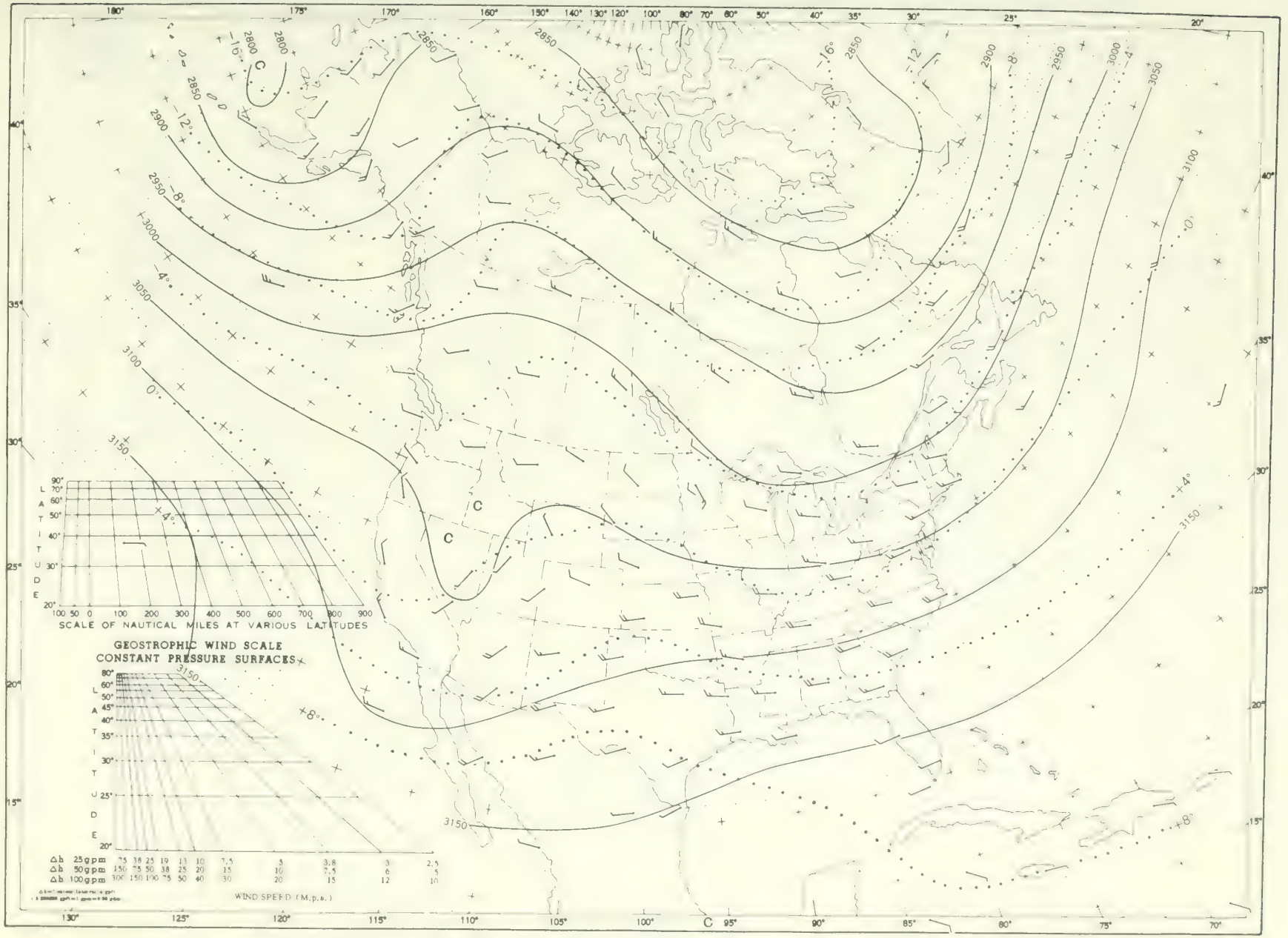
Average sea level pressures are obtained from eight daily 3 hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI 350-mb Surface, 1200 G.m.t., May 1971. Average Height and Temperature, and Resultant Winds



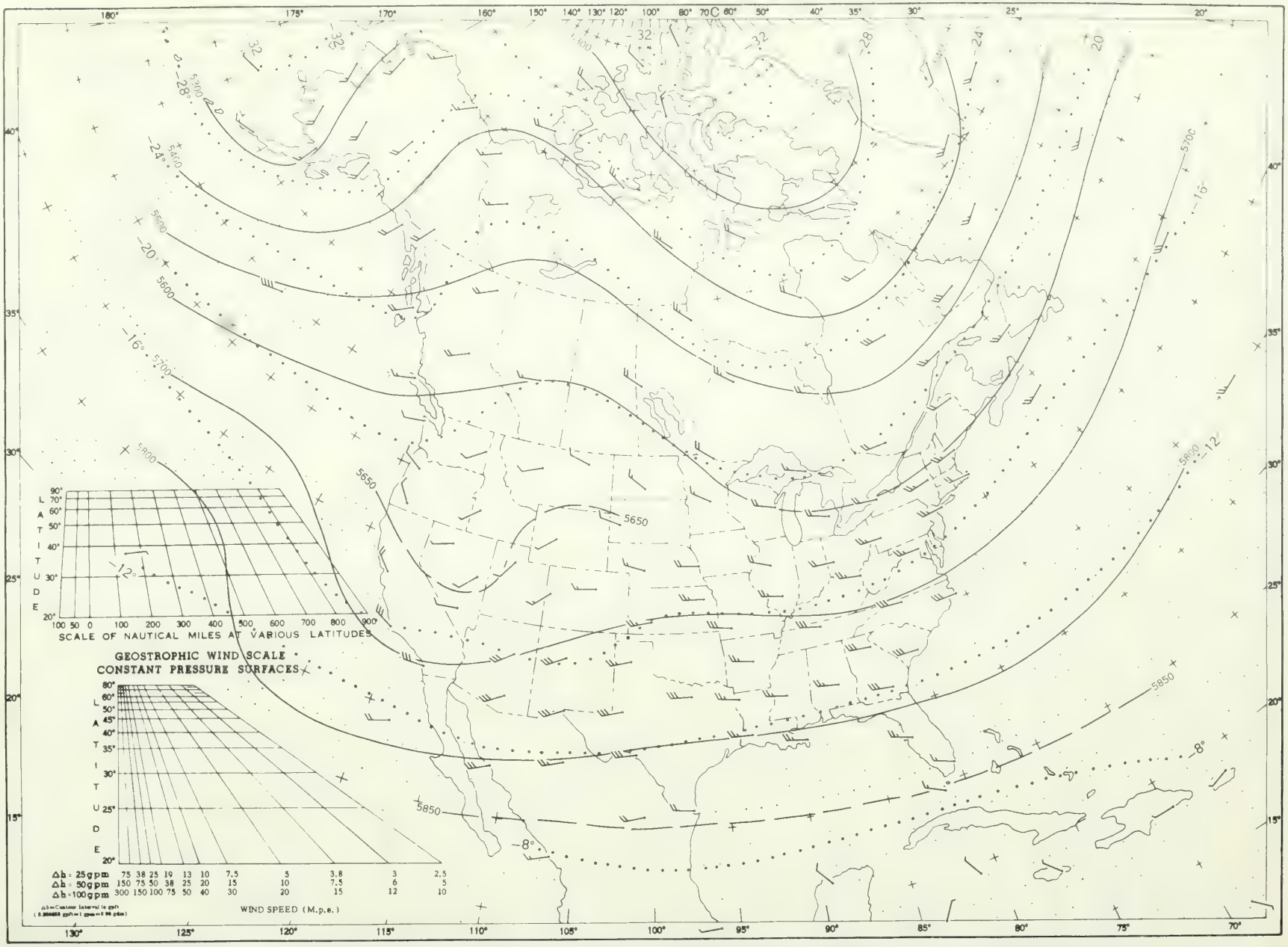
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII 700-mb Surface, 1200 G.m.t., May 1971. Average Height and Temperature, and Resultant Winds



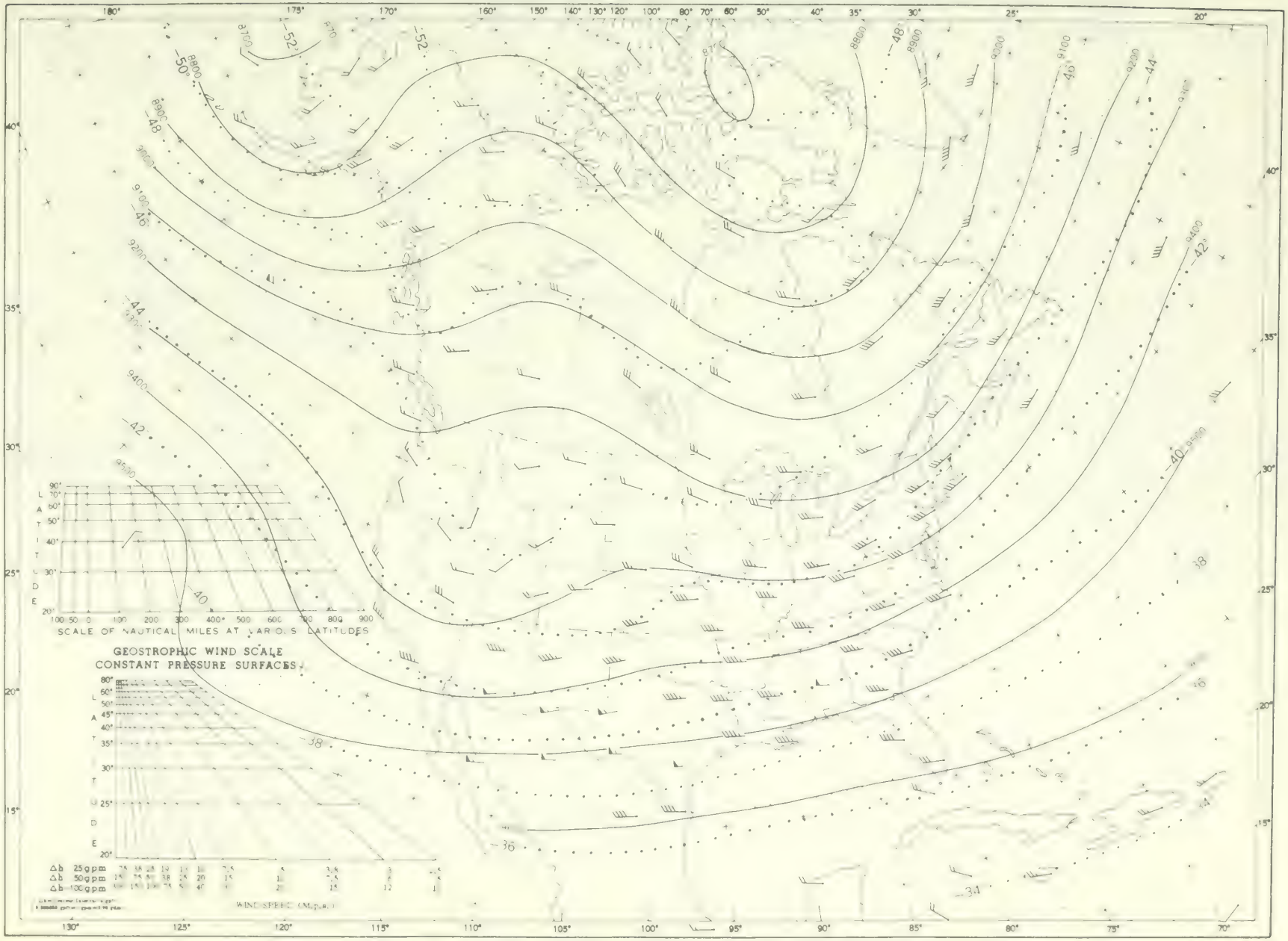
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII 500-mb Surface, 1200 G.m.t., May 1971. Average Height and Temperature, and Resultant Winds



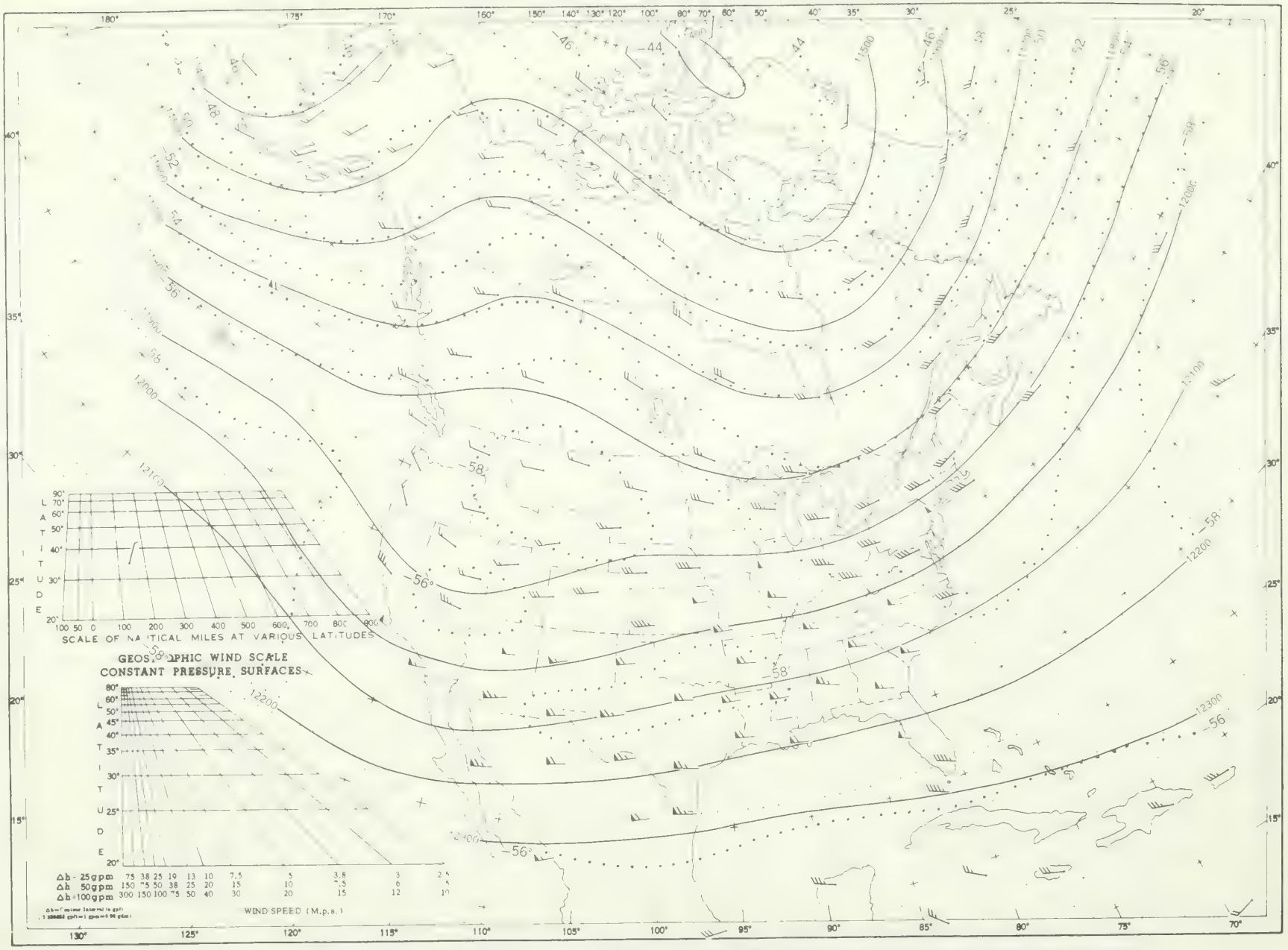
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300 mb Surface, 1200 G.m.t., **May 1971.** Average Height and Temperature, and Resultant Winds



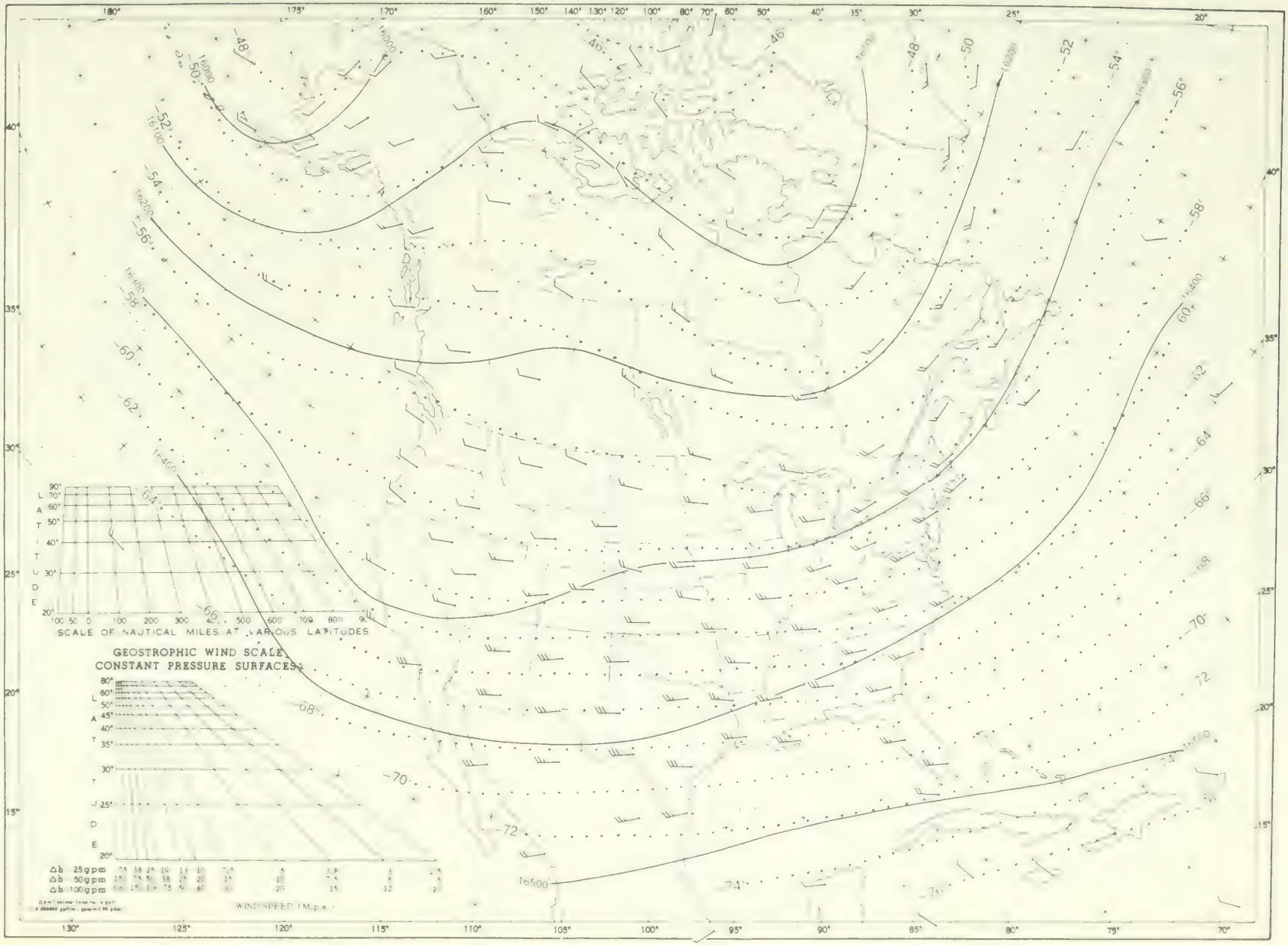
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb Surface, 1200 G.m.t., May 1971. Average Height and Temperature and Resultant Winds

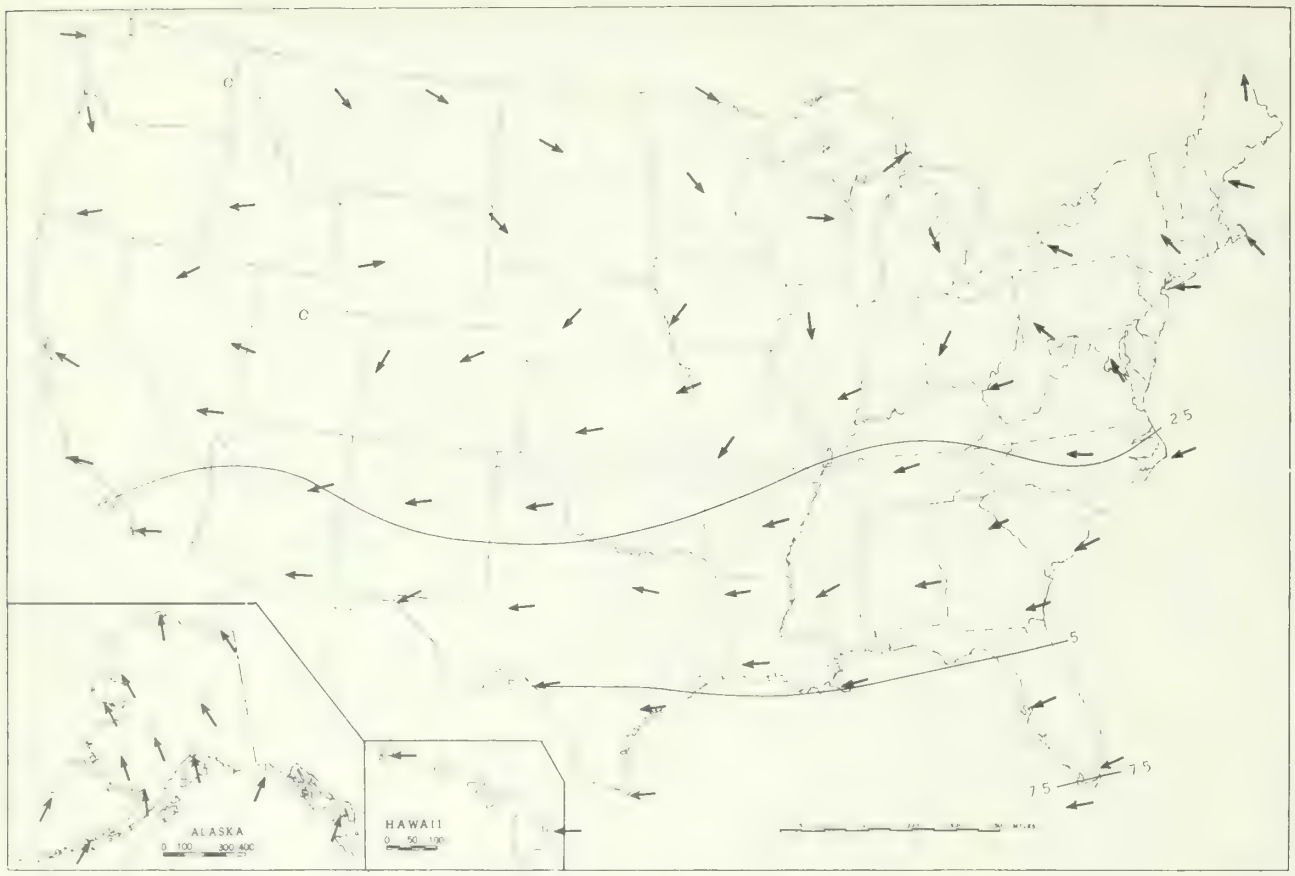


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

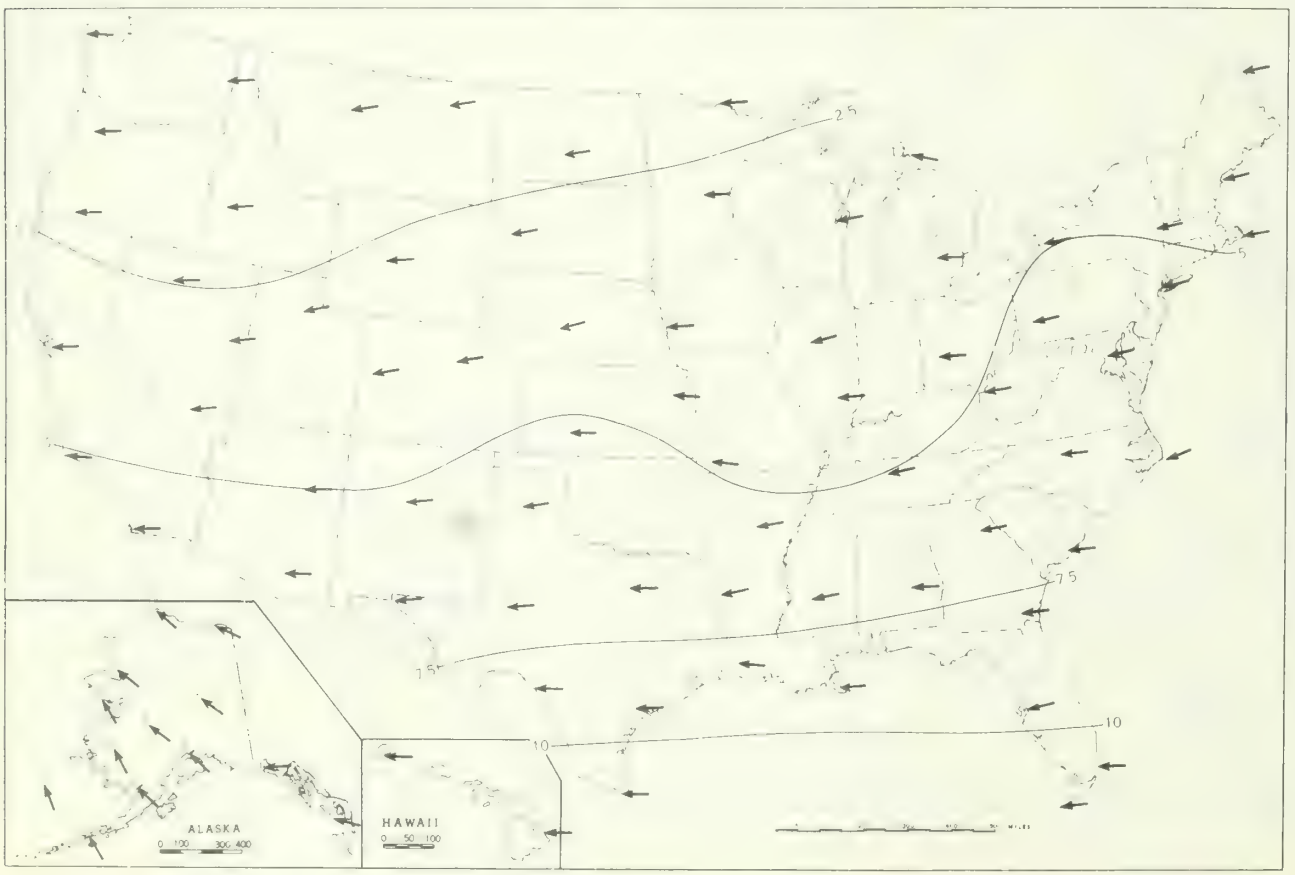
Chart XVI 100 mb Surface, 1200 G.m.t., May 1971. Average Height and Temperature, and Resultant Winds



Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.



B. 30-mb. Surface, 1200 G.m.t., May 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service



JUNE
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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

SUBSCRIPTION PRICE: Monthly 20 cents and annual 40 cents per copy; yearly subscription, including monthly and annual issues, $2.50 domestic, $3.50 foreign. Checks and money orders should be made payable to the Superintendent of Documents. Remittance and correspondence regarding subscriptions should be sent to "Superintendent of Documents, Government Printing Office, Washington, D. C. 20402."

I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina, 28801.

William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 6 JUNE 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. June temperatures averaged warmer than normal over most of the Nation. The exceptions include the Far Northwest and parts of the Southwest.
2. Tornadoes and summer afternoon and evening thunderstorms, typical of any June, were widespread over the central and eastern parts of the Nation.
3. Duststorms occurred in some agriculatural areas that received little or no rain.

TEMPERATURE--June temperatures averaged below normal in the Far Northwest, slightly below normal in the Southwest, and near or above normal over the rest of the Nation. A large area from eastern Nebraska to Lower Michigan and from Minnesota to the Ohio River averaged 3° to 6° warmer than normal.

The Far Northwest averaged slightly cooler than normal throughout the entire month. The Southwest was cooler than normal the first half of June but warmer than normal in the last half. Temperatures in parts of Nevada dropped to the low thirties on one or two mornings early in June. Flagstaff, Ariz., registered 27° on June 2. Midmonth found a warming trend in the Southwest. Temperatures in the interior valleys of California and the southwestern deserts soared to 100° or higher. Blythe, Calif., registered 116° on the afternoon of the 16th. On the 22d, both Needles and Blythe registered 114°.

Subfreezing weather occurred in the Rocky Mountains on several mornings in the first half of June. Leadville, Colo., recorded 29° on June 7. One of the coldest temperatures was 18° at Fraser, Colo., on June 5. In contrast, above-normal temperatures prevailed over the northern and central Great Plains throughout the month and over the southern Great Plains until the last week. Maximums reached the eighties or higher from the Dakotas to the Gulf of Mexico on June 3 and reached 100° or above at a few Texas stations, mostly in the first part of June. Cooler weather came to Texas in the last week of the month. The heat over the central Great Plains was especially intense on June 24 and 26. Russell, Kans., recorded 109° on the 24th and Valentine, Nebr., registered 105° on the 26th. The mercury reached 100° or higher at most Nebraska stations on June 26. The heat spread to the Great Lakes region late in the month. Traverse City and Bay City, both in Michigan, registered 100° on June 27, 28, and 29 and 90-degree weather covered New England on the last day of the month. High relative humidity made the hot weather more oppressive. The Southeast was hot and humid through most of the month. Temperatures were variable but averaged slightly above normal over most of this area.

PRECIPITATION--Summer-type precipitation in June included scattered thunderstorms, some with large hail, strong winds, and torrential rains, and a few tornadoes. Most of the severe weather occurred in the central and southeastern parts of the Nation in the hot, humid air that lay over these areas.

Scattered thundershowers dampened much of the northeast quarter of the Nation early in June. Heavier showers soaked the central Great Plains. Tornadoes and severe thunderstorms occurred in the warm, moist air that covered the central Great Plains and the Mississippi River Valley. Hail from 1 inch in diameter to as large as baseballs pelted some localities. Numerous tornadoes struck mid-United States. A thunderstorm at Hastings, Nebr., was accompanied by hail as large as golf balls and wind gusts reaching 81 m.p.h. A number of tornadoes struck the northern and central Great Plains late June 4. Large hail and heavy thundershowers occurred in northern Illinois June 6 and heavy rains in Pennsylvania and West Virginia sent a number of streams to near bankfull.

Showers and thunderstorms became widespread in the warm, humid air that moved northward over the central and eastern portions of the country in the second week of June. Hail as large as baseballs fell in some spots. Heavy rains from South Dakota to Kansas produced flash flooding along many small streams, substantial rises on several major streams, and saturated adjacent lowlands. Strong winds accompanied some of the thunderstorms. The high winds downed trees and powerlines and tornadoes destroyed buildings at scattered locations. Although the storms were most severe from the Dakotas and Minnesota to Texas, the thunderstorm activity was widespread from the central and southern Great Plains to the Southern Atlantic Coastal States. Hail as large as baseballs caused glass damage at Frankfurt, Ind., June 12. On the same day, hail accumulated to 6 inches in depth 12 miles north of Sidney, Nebr., and heavy rains flooded highways 10 miles east of Sidney.

Summer thunderstorms continued over much of the middle United States in the last half of June. Hail, high winds, and torrential rains accompanied some of the thunderstorms. Evansville, Ind., received 1.65 inches of rain in about 20 minutes on the afternoon of June 15. Rain of this intensity falls in streams instead of drops. It is sometimes referred to as a "cloudburst." Many of the June thunderstorms occurred in the afternoons and evenings and became less intense and more scattered in the early mornings.

Duststorms occurred in some agricultural areas that received little or no rain. The dust in some of the storms reduced the visibility to less than 200 yards.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature — Monthly extremes						Precipitation — Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
[illegible]	[illegible]	101	15	Russellville 2	[illegible]	[illegible]	[illegible]	8.40	Gulf Shores P O	.92
[illegible]	Susitna Meadows	[illegible]	25	Summit Nike Site	9	2	Kodiak NAS	8.50	Cape Lisburne	.03
Arizona	Willow Beach	[illegible]	[illegible]	Alpine	13	2	[illegible]	.94	156 Stations	.00
[illegible]	[illegible]	106	26	[illegible]	54	3	Little Rock WSO	7.66	Nashville Exp Station	.34
	Death Valley	118	[illegible]	[illegible]	[illegible]	1	Klamath	4.70	266 Stations	.00
Colorado	[illegible]	109	25	[illegible]	15	1	Holyoke	2.98	10 Stations	.00
[illegible]	2 Stations	98	30	Coventry	33	2	Brooklyn	3.62	New Haven	.38
[illegible]	2 Stations	93	29-	4 Stations	49	18	Newark University Farm	3.07	Lewes 1 SW	.29
Florida	Mayo	101	15	Archbold Biologic Sta	50	1	Moore Haven Lock 1	13.86	Apalachicola WSO	.94
	Savannah WSO	102	15	Blairsville Exp Sta	41	1	Brunswick FAA AP	9.83	Gainesville	.65
[illegible]	Keawakapu Beach 260.2	92	2	[illegible]	29	2	Mount Waialeale 1047	15.27	11 Stations	.00
Idaho	[illegible]	[illegible]	[illegible]	Galena	24	29	Pierce	5.99	Idaho Falls FAA AP	.60
Illinois	Barrington 1 SE	102	28	Aurora College	40	9	Flora 5 NW	7.05	2 Stations	.49
Indiana	Gary	106	28	Mich. City Philips AP	40	10	Bowling Green 3 NE	8.31	Bedford	1.08
Iowa	Sidney	103	24	3 Stations	43	2	Sioux Center	11.84	Burlington Radio KBUR	.94
Kansas	[illegible]	112	26	Winona	42	15	Cottonwood Falls	14.16	Russell Springs	.56
Kentucky	[illegible]	102	[illegible]	[illegible]	43	1	Sebree	7.87	Paducah Sewage Plant	1.66
[illegible]	[illegible]	100	25-	2 Stations	[illegible]	24-	Houma	9.94	Curtis 1 SSE	.42
[illegible]	Saco	99	30	2 Stations	26	6	Bridgton 3 NNW	3.77	Millinocket	.93
[illegible]	[illegible]	96	[illegible]	[illegible]	40	11	Emmitsburg 2 SE	4.78	Salisbury FAA Airport	.96
[illegible]	Chester 2	100	30	Barre Falls Dam	31	1	Adams	4.92	Hyannis 2 NNE	.21
[illegible]	[illegible]	103	28	[illegible]	26	9	Alpena WSO	5.88	Manistee	.63
Minnesota	[illegible]	100	[illegible]	Crane Lake Ranger Sta	27	1	St Peter 2 SW	11.50	Argyle 4 E	1.70
Mississippi	[illegible]	101	15	3 Stations	49	1	Vancleave	8.89	Baldwyn	.86
Missouri	3 Stations	101	[illegible]	[illegible]	46	1	Bernie	7.47	Festus 2 NW	.17
[illegible]	Hardin	103	21	[illegible]	22	28	Ekalaka	8.13	Hardin	.07
Nebraska	McCook	106	27	2 Stations	39	8	Laurel	10.74	Haigler	.75
[illegible]	[illegible]	114	22	Sheldon	19	2	McDermitt 4 S	2.50	18 Stations	.00
[illegible]	[illegible]	96	30	Mount Washington	18	5	Mount Washington	4.89	Walpole 2	1.03
New Jersey	4 Stations	94	24-	Sussex 1 SE	42	1	Greenwood Lake	3.37	Jersey City	.30
[illegible]	Rodeo	106	24	Hickman	17	1	Tucumcari 3 NE	4.86	31 Stations	.00
[illegible]	[illegible]	98	30	[illegible]	26	6	Arcade	9.38	Cutchogue	.30
[illegible]	5 Stations	98	29-	3 Stations	39	1	Highlands 2 S	9.43	Henderson 2 NNW	.49
North Dakota	[illegible]	94	28	4 Stations	33	2	Halliday	11.27	Hoga 1 E	2.17
Ohio	Toledo Blade	104	29	Canfield 1 S	36	10	Waterloo	8.18	W Fork Mill Creek Dam	.90
[illegible]	Boise City 2 E	107	25	2 Stations	47	2	Calvin	8.35	Waurika	.35
Oregon	Ontario KSRV	102	22	2 Stations	22	11	Valsetz	5.58	Hampton	1
Pennsylvania	[illegible]	99	28	[illegible]	30	1	Donegal	9.26	Devault 1 W	.16
Puerto Rico	[illegible]	98	13	Adjuntas Substation, P. R.	55	13	Hacienda Constanza, P. R.	11.44	Caguas 2 WNW, P. R.	.00
Rhode Island	Providence WSO	92	30	Kingston	39	2	North Scituate 4 W	2.42	Block Island WSO	.60
South Carolina	[illegible]	100	15	Union 8 SW	47	1	Bamberg	11.60	Laurens	.82
South Dakota	3 Stations	105	27-	[illegible]	36	30	Summit	9.44	Longvalley	.04
[illegible]	Savannah	103	26	2 Stations	42	1	Newbern	7.12	Franklin Sewage Plant	1.10
[illegible]	[illegible]	107	28-	Mount Locke	40	22	Eagle Pass	14.71	Sierra Blanca	.00
Utah	[illegible]	112	26	Soldier Creek	19	6	Garland	2.57	14 Stations	.00
[illegible]	[illegible]	96	30	2 Stations	28	1	Mount Mansfield	3.53	Newfane	1.11
Virginia	2 Stations	99	28	Burkes Garden	41	1	North Fork Reservoir	9.05	Parramore Beach L B S	.16
[illegible]	Little Goose Dam	99	23	Mazama	26	9	Palmer 3 ESE	7.01	Dallesport FAA Airport	.13
[illegible]	[illegible]	98	29-	2 Stations	38	1	Williamson 2	8.08	2 Stations	.78
[illegible]	2 Stations	99	29-	2 Stations	28	8	Chilton	7.29	New London	1.45
Wyoming	2 Stations	102	27-	Crandall Creek	19	2	Alva 5 SE	5.76	Dixon	.00

Note: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See [illegible]

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In	In			In.	In	M.p.h.		M.p.h.							%
ALABAMA												8																				
BIRMINGHAM	620	994.2	1016.4	89	66	77.9	- 1.5	98	14	55	1	13	0	66	71	6.57	2.56	3.65	13	16	0.0	0	1.2	29	26	SE	27+	6	16	8	5.6	71
HUNTSVILLE	624	993.6	1016.1	90	66	78.0	- 0.6	97	26	56	1	13	0	66	71	1.34	- 2.03	0.36	10	15	0.0	0	1.4	26	28	2	6+	7	17	6	5.4	
MOBILE	211	1009.5	1017.1	93	72	82.4	0.9	98	14	65	1	29	0	70	74	2.88	- 3.35	1.39	13	17	0.0	0	3.4	24	26	30	13	4	15	11	6.2	
MONTGOMERY	183	1009.5	1016.6	91	69	79.9	0.5	97	26	59	1	23	0	70	76	3.18	- 0.99	0.90	13	18	0.0	0	2.4	24	30	W	15	5	19	6	5.5	63
ALASKA																																
ANCHORAGE	114	1007.1	1012.2	58	44	51.2	- 4.5	73	6	37	6+	2	0	40	67	0.37	- 0.61	0.11	10	1	0.0	0	5.0	18	30	17	1	3	3	24	8.2	33
ANNETTE	110	1011.2	1015.3	59	46	52.5	- 1.8	70	18	41	4+	1	0	44	75	3.61	- 2.06	0.73	15	0	0.0	0	3.4	15	25	14	20	2	8	20	7.6	
BARROW	31	1015.9	1016.5	39	31	35.1	2.0	57	23	25	3	0	20	32	90	0.12	- 0.24	0.09	3	0	0.2	5	9.1	7	29	7	10+	10	5	15	5.8	
BARTER ISLAND	39	1013.9	1015.8	41	33	36.9	2.7	56	16	27	29+	0	15	34	91	0.18	- 0.33	0.07	5	0	1.2	2	7.0	7	29	9	9	5	12	13	6.4	
BETHEL	125	1004.7	1010.5	57	43	50.0	- 1.6	72	21	35	2	2	0	43	80	0.73	- 0.45	0.13	16	0	T	0	3.5	24	31	18	15	0	8	22	8.6	
BETTLES	644	986.1	1011.0	72	50	61.2		88	24	33	14	18	0	45	56	0.76		0.41	5	3	0.0	0	1.2	5	25	35	13	4	19	7	5.8	
BIG DELTA	1268			71	48	59.1		85	23	35	30	16	0			1.26		0.55	8	2	0.0	0			36	20	1	6	14	10	6.1	
COLD BAY	96	1008.1	1011.8	45	36	40.5	- 4.8	60	21	33	13+	0	0	37	89	6.67	4.72	2.10	18	0	0.5	T	6.2	23	46	16	14	0	3	27	9.2	
FAIRBANKS	436	992.2	1009.1	75	52	63.4	5.0	89	24	39	4+	22	0	39	43	0.31	- 1.08	0.12	8	0	0.0	0	1.7	3	30	21	1	3	15	12	6.5	
GULKANA	1572	954.6	1011.4	66	42	53.8		85	23	32	7	12	1	35	53	1.29		0.48	6	3	0.0	0	7.8	18	38	15	1	4	9	17	7.0	
HOMER	67	1009.5	1012.0	53	40	46.6		64	24	32	22	0	1	41	80	1.17	0.12	0.38	11	0	0.0	0	3.0	22	23	24	5+	2	3	25	8.4	
JUNEAU	12	1013.5	1014.3	63	43	53.2	0.9	77	25+	31	3	5	1	46	80	1.74	- 1.65	0.84	11	0	0.0	0	1.1	13	23	12	19	6	4	20	7.2	46
KING SALMON	49	1008.1	1010.1	55	40	47.3	- 4.1	66	23+	33	2	0	0	38	74	1.48	0.08	0.26	18	2	T	T	6.7	17	30	17	14	0	3	27	9.3	
KOTZEBUE	10	1009.8	1010.3	55	40	47.4	3.6	83	26	29	13+	5	6	40	79	0.24	- 0.25	0.14	4	0	0.2	T	4.6	28	31	28	28	9	10	11	5.7	
MC GRATH	344	996.6	1009.1	70	48	58.7	2.2	88	24	38	4	17	0	45	63	1.03	- 0.63	0.34	16	7	0.0	0	1.1	26	23	10	1	1	11	18	7.7	
NOME	13	1008.8	1009.5	56	41	48.4	2.5	78	28+	31	14+	6	2	41	76	0.85	- 0.08	0.25	10	1	0.0	T	0.8	21	35	4	1	7	8	15	6.4	46
ST. PAUL ISLAND	22	1010.5	1011.3	40	32	36.2	- 4.6	50	30	26	11	0	16	35	95	0.73	- 0.42	0.21	14	0	T	3	2.1	27	32	13	22	0	4	26	9.2	
SHEMYA	122	1005.1	1008.7	44	39	41.6	- 0.2	48	27	27	9	0	2	37	84	1.88	0.56	0.95	13	0	T	0	5.6	21	48	23	13	0	2	28	9.5	
SUMMIT	2401	926.2	1011.3	58	38	48.2		81	25+	30	2	7	4	37	68	2.25		0.95	14	5	1.2	6	5.6	24	28	22	21	4	5	21	7.5	
TALKEETNA	345			64	41	52.6	- 2.5	82	25+	32	4	11	1			2.38	0.61	0.97	13	2	0.0	0			17	21	1					
UNALAKLEET	15	1009.1	1009.8	54	44	48.8		70	30	33	14+	1	0	43	80	0.37		0.17	7	2	0.0	T	2.7	21	28	11	4	1	7	22	8.3	
YAKUTAT	28	1013.9	1014.9	55	40	47.9	- 2.6	75	5	29	4	3	3	43	86	2.40	- 2.66	1.85	16	0	0.0	0	1.6	20	18	15	23+	3	2	25	8.4	
ARIZONA																																
FLAGSTAFF	7006	789.4	1013.8	78	40	58.7	- 0.8	92	23	23	3	2	7	24	28	0.00	- 0.69	0.00	0	0	0.0	0	5.5	22	23	23	27	24	3	3	2.4	
PHOENIX	1117	970.5	1008.4	101	70	85.3	1.7	111	22	56	3	28	0	37	18	0.00	- 0.09	0.00	0	1	0.0	0	2.4	26	36Y	W	2	23	4	3	1.6	94
TUCSON	2584	923.5	1008.8	97	66	81.2	- 1.5	105	22+	50	3	27	0	34	20	T	- 0.29	T	0	0	0.0	0	3.5	24	38	E	24	24	3	3	1.9	93
WINSLOW	4895	850.7	1010.7	93	55	73.6	- 0.7	103	24+	40	1	19	0	24	17	0.00	- 0.26	0.00	0	1	0.0	0	5.5	22	40	20	2	21	5	4	2.9	
YUMA	194	1001.7	1008.7	100	69	84.5	- 1.5	112	21	56	3	26	0	46	29	0.00	- 0.01	0.00	0	0	0.0	0	4.5	21	25	S	23	28	2	0	.7	97
ARKANSAS																																
FORT SMITH	447	998.6	1014.8	90	68	78.7	0.1	95	26+	62	9	16	0	68	72	3.20	- 1.15	1.52	8	10	0.0	0	1.3	20	30	SE	27	10	11	9	5.4	77
LITTLE ROCK	257	1005.8	1015.1	90	68	79.3	0.4	96	18+	61	9	18	0	70	77	7.66	4.05	2.93	9	11	0.0	0	4.0	23	52	SE	27	8	17	5	5.1	81
CALIFORNIA																																
[illegible]	475	995.6	1012.8	91	64	77.7	0.6	102	16	51	1	19	0	51	41	0.00	- 0.09	0.00	0	0	0.0	0	5.7	34	29	34	26	23	5	2	1.5	
BISHOP	4108	871.3		90	50	70.4	0.6	100	23	33	1	20	0			0.00	- 0.09	0.00	0		0.0	0						22	6	2	2.2	
BLUE CANYON	5280			67	49	58.1	- 1.1	78	15	33	1	0	0			2.01	1.08	1.96	2		T	1			23	18	26	17	8	5	3.3	
EUREKA U	43			59	50	54.3	- 1.2	64	22	45	1	0	0			1.51	0.77	1.09	10		0.0	0			24	NW	7	3	11	16	7.4	61
FRESNO	328	1001.4	1013.1	92	57	74.4	- 0.3	103	16	45	1	22	0	49	44	0.00	- 0.07	0.00	0	0	0.0	0	7.8	30	25	NW	26	27	2	1	1.1	98
LONG BEACH	25	1013.2	1014.6	77	59	68.2	0.7	93	20	50	1	2	0	56	71	T	- 0.03	T	0	0	0.0	0	3.5	21	16	18	27+	14	9	7	4.7	
LOS ANGELES	97	1010.5	1014.1	70	59	64.7	- 0.1	77	21+	50	1	0	0	58	81	0.00	- 0.05	0.00	0	0	0.0	0	6.6	25	25Y	W	3	9	14	7	5.2	
LOS ANGELES U	270			77	61	68.8	0.8	93	15	54	1	1	0			0.00	- 0.06	0.00	0		0.0	0			15	SW	3	18	7	5	3.2	54
MT SHASTA R	3544	892.0	1015.0	73	46	59.0	- 1.3	85	30	33	2	0	0	44	61	0.41	- 0.84	0.21	3		0.0	0	0.4	3								
OAKLAND	6	1016.3	1016.5	67	54	60.5	- 2.3	81	16	50	2+	0	0	51	76	T	- 0.12	T	0	0	0.0	0	9.3	27	23	27	13	13	10	7	4.4	
RED BLUFF	342	1000.3	1012.9	87	59	73.2	- 3.0	100	21+	46	2	10	0	47	44	0.58	- 0.13	0.28	4	2	0.0	0	1.8	16	25	SE	22	17	6	7	3.3	89
SACRAMENTO	17	1012.9	1013.7	87	54	70.5	0.0	100	21+	45	1	12	0	49	55	0.01	- 0.09	0.01	1	0	0.0	0	6.4	20	24	SW	27+	22	5	3	2.1	94
SANDBERG R	4517	862.5		75	52	63.7	- 1.1	88	15	35	1	0	0	41	50	0.00	- 0.03	0.00	0		0.0	0	8.5	34	37	34	19+	23	4	3	1.7	
SAN DIEGO	13	1013.5	1014.6	70	60	64.9	- 1.3	79	20	54	1	0	0	55	73	0.01	- 0.04	0.01	1	0	0.0	0	4.3	25	18	W	12	8	12	10	6.0	58
SAN FRANCISCO	8	1015.9	1016.6	68	52	60.1	- 1.2	83	17+	48	6+	0	0	49	73	T	- 0.11	T	0	0	0.0	0	11.5	28	26	27	28+	16	7	7	4.0	
SAN FRANCISCO U	52			63	51	57.3	- 1.8	80	17	48	7+	0	0			T	- 0.14	T	0		0.0	0			27	W	9					73
SANTA MARIA	236			68	49	58.6	- 1.0	84	21	38	1	0	0			T	- 0.14	T	0		0.0	0						18	10	2	3.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days sunrise to sunset: Clear, 0.3	No. of days sunrise to sunset: Partly cloudy, 4-7	No. of days sunrise to sunset: Cloudy, 8-10	Sky cover (tenths): sunrise to sunset	Possible sunshine
	Ft.	Mb	Mb	F.	F	F.	F	F		F.				F	%	In.	In	In			In	In.	M.p.h.		M.p.h							%
CALIFORNIA																																
STOCKTON	22	1013.5	1014.7	88	56	72.3	- 0.5	102	17	45	1	15	0	49	51	0.01	- 0.06	0.01	1	0	0.0	0	9.3	29	25	28	27	20	8	2	2.3	
COLORADO																																
ALAMOSA	7536	774.1		79	40	59.2	- 0.8	88	25+	28	5+	0	5			0.08	- 0.41	0.03	5		0.0	0						14	15	1	3.7	
COLORADO SPRINGS	6145	811.7	1010.9	82	53	67.8	3.1	95	25+	45	5	5	0	39	39	0.39	- 1.20	0.30	5	13	0.0	0	1.5	7	35	18	8	11	15	4	4.5	
DENVER	5283	835.8	1009.5	86	52	69.0	2.5	98	25	43	5	11	0	42	44	0.23	- 1.21	0.12	5	13	0.0	0	1.5	14	42	S	30	9	18	3	4.7	73
GRAND JUNCTION	4843	850.3	1008.7	90	58	74.1	2.8	103	24+	45	6	16	0	33	24	0.03	- 0.39	0.03	1	2	0.0	0	3.1	15	28	W	10+	17	7	6	3.7	81
PUEBLO	4684	854.0	1009.2	92	55	73.4	2.3	104	25+	43	5	18	0	39	34	0.66	- 0.56	0.40	6	7	0.0	0	1.0	24	43	SW	23+	12	16	2	4.3	83
CONNECTICUT																																
BRIDGEPORT	7	1015.6	1016.2	78	61	69.5	1.5	88	8	48	2	0	0	57	67	0.39	- 3.01	0.18	6	3	0.0	0	3.5	20	25	10	28+	10	12	8	5.1	
HARTFORD	169	1008.8	1015.2	85	57	71.0	2.3	98	30	44	6+	7	0	55	60	0.71	- 2.99	0.29	4	3	0.0	0	3.0	19	23	N	8+	8	16	6	5.5	73
DELAWARE																																
WILMINGTON	74	1012.9	1016.0	83	64	73.4	2.0	92	25	50	1	2	0	63	73	2.50	- 1.57	1.22	8	9	0.0	0	1.6	19	21	31	21+	5	9	16	6.8	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	290	1004.7	1016.2	84	62	72.6		92	30+	51	1	5	0	64	78	2.81		1.45	7	8	0.0	0	0.9	18	29	34	6	2	15	13	6.6	
WASHINGTON NATIONAL	10	1013.5	1016.0	85	67	75.9	1.7	92	27+	59	1	10	0	64	68	1.72	- 1.49	0.58	8	9	0.0	0	1.8	18	33	NE	28	6	10	14	6.4	54
FLORIDA																																
APALACHICOLA U	13			88	74	81.2	1.0	94	21	67	1	9	0			0.94	- 4.36	0.46	7	9	0.0	0			22	NE	25	10	16	4	4.7	92
DAYTONA BEACH	31	1016.3	1017.7	89	69	78.7	0.3	96	21+	59	1	12	0	68	76	4.73	- 1.08	3.19	16	19	0.0	0	1.5	19	26	12	28	2	15	13	6.6	
FORT MYERS	15	1017.3	1017.8	89	72	80.4	- 0.4	93	3	64	1	14	0	71	78	6.18	- 2.78	2.40	17	19	0.0	0	0.7	11	29	6	3	4	19	7	6.0	
JACKSONVILLE	26	1015.9	1017.1	90	67	78.8	- 2.0	98	15	57	1	20	0	69	79	5.52	- 0.81	1.29	12	19	0.0	0	2.4	23	32	SW	27	3	20	7	5.9	67
KEY WEST	4	1016.6	1017.2	88	78	83.0	1.2	89	30+	73	11	0	0	72	71	2.77	- 1.20	0.73	16	16	0.0	0	4.3	13	23	W	14	3	19	8	6.2	82
LAKELAND U	214			89	71	80.2	- 0.4	93	20+	66	2	14	0			2.97	- 4.23	0.75	17		0.0	0										72
MIAMI	7	1017.3	1017.6	88	75	81.0	0.2	91	22+	70	12+	9	0	71	76	11.65	4.28	3.94	16	14	0.0	0	2.0	7	28	20	12	2	16	12	6.8	
ORLANDO	108	1013.2	1017.6	91	72	81.7	0.4	95	21+	66	1	25	0	69	71	4.39	- 2.57	1.88	18	17	0.0	0	1.9	23	29	29	19	3	17	10	6.8	
PENSACOLA	112	1013.2	1017.2	90	72	81.0	- 0.1	94	15+	65	1	15	0	72	78	5.10	- 0.33	1.22	11	18	0.0	0	2.9	24	25	34	13	7	15	8	5.5	
TALLAHASSEE	55	1014.6	1016.9	92	67	79.4	- 0.8	99	15	57	1	25	0	67	72	7.44	0.90	2.14	15	15	0.0	0	1.6	25	32	23	26	4	21	5	5.9	
TAMPA	19	1017.3	1017.4	90	73	81.2	0.6	96	20	62	1	17	0	69	70	2.54	- 4.74	1.00	11	18	0.0	0	2.8	26	25	28	23	4	11	15	6.8	63
WEST PALM BEACH	15	1016.9	1017.7	90	72	80.9	- 0.1	95	16+	66	1	17	0	70	75	9.03	1.50	3.41	16	19	0.0	0	1.3	12	35	20	22+	1	19	10	6.8	
GEORGIA																																
ATHENS	802	987.8	1016.1	89	67	77.9	0.3	96	26+	54	1	14	0	68	77	4.40	0.52	1.28	12	15	0.0	0	0.6	28	23	19	7	7	12	11	6.0	
ATLANTA	1010	980.0	1015.9	87	67	77.2	0.6	93	26	57	1	10	0	66	73	3.33	- 0.50	0.72	15	12	0.0	0	2.4	28	44	W	16	6	15	9	5.9	65
AUGUSTA	136	1010.5	1015.8	91	66	78.7	- 0.2	100	15	51	1	19	0	68	76	3.51	0.47	1.81	7	10	0.0	0	0.9	19	25	27	8	6	13	11	6.0	
COLUMBUS	385	1002.7		91	69	80.0	0.6	96	15+	58	1	22	0	68	72	4.22	0.54	1.40	11	16	0.0	0	1.3	28	55	29	25	7	17	6	5.3	
MACON	354	1003.7	1016.5	93	69	80.8	0.1	99	6	53	1	25	0	68	72	6.72	3.38	1.45	16	15	0.0	0	1.2	25	30	NW	20	9	12	9	5.1	68
ROME	637			91	65	78.0	1.6	98	26	52	1	17	0			1.75	- 2.01	0.59	13		0.0	0										
SAVANNAH	46	1014.6	1016.4	92	69	80.5	0.8	102	15	57	1	21	0	68	71	6.98	1.89	2.71	13	14	0.0	0	2.4	23	26	NW	17	8	9	13	6.1	77
HAWAII																																
HILO	27	1017.3	1018.3	83	67	75.0	0.7	87	16	63	4	0	0	66	76	2.79	- 4.00	0.72	18	0	0.0	0	1.1	10	19	E	16	3	9	18	7.2	43
HONOLULU	7	1017.3	1017.7	84	71	77.3	- 0.6	86	29+	65	16	0	0	63	64	2.46	2.13	2.25	4	0	0.0	0	12.7	5	31	NE	5	5	19	6	5.6	76
KAHULUI	48	1014.9	1017.2	86	69	77.3	0.1	89	17	61	29	0	0	65	68	0.21	0.03	0.21	2	0	0.0	0	12.6	5	31	E	8	13	12	5	4.4	84
LIHUE	103	1013.9	1019.1	83	73	77.9	1.3	85	12+	64	14	0	0	68	73	2.98	1.52	2.17	14	0	0.0	0	10.0	6	25	E	9	2	20	8	6.4	61
IDAHO																																
BOISE	2838	914.0	1013.0	77	53	64.9	- 0.9	98	22	44	17	2	0	41	47	1.58	0.69	0.76	7	2	0.0	0	2.5	33	27	SW	12	9	12	9	5.4	70
LEWISTON	1413			74	51	62.3	- 2.5	95	22	44	17	2	0			2.53	0.80	0.69	14		0.0	0						4	9	17	7.1	
POCATELLO	4454	862.2	1012.7	75	45	60.2	- 2.6	94	21	34	30	2	0	42	54	1.26	0.30	0.41	8	1	T	T	6.2	23	29	SW	14	12	10	8	4.7	77
ILLINOIS																																
CAIRO U	314			89	71	80.1	2.2	99	25	62	2	13	0			5.72	1.59	2.00	7		0.0	0			41	SW	27	8	18	4	5.0	65
CHICAGO O HARE	658	990.2	1014.2	85	62	73.5	- 2.5	97	28	48	9	10	0	60	64	2.62	- 1.34	0.86	11	12	0.0	0	1.5	21	36	31	24	8	16	6	5.3	
CHICAGO MIDWAY	607	992.2	1014.3	87	65	75.8	5.3	101	28+	49	9	13	0	60	61	2.18	- 1.89	0.54	11	10	0.0	0	1.7	19	34	NE	18	10	11	9	5.3	73

See footnotes at end of table

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State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets		Resultant speed	Resultant direction	Fastest mile							
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb	Mb	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ILLINOIS																																
MOLINE	582	992.6	1013.6	88	65	76.6	5.2	99	19	56	9	13	0	63	65	2.36	- 2.01	0.88	6	7	0.0	0	3.5	20	41	SW	11	6	16	8	5.8	63
PEORIA	652	990.5	1014.1	90	64	76.8	5.1	100	19	50	9	15	0	61	62	0.98	- 3.10	0.61	5	6	0.0	0	3.4	19	31	SW	11	5	11	14	6.2	83
ROCKFORD	724	987.5	1013.8	86	62	74.2	4.5	98	28	49	9	10	0	62	68	2.37	- 1.93	1.15	7	9	0.0	0	2.5	19	29	30	6	8	14	8	5.4	
SPRINGFIELD	588	991.9	1013.7	91	67	79.0	5.0	100	26+	54	9	20	0	62	59	0.96	- 3.49	0.50	7	6	0.0	0	4.8	20	41	W	11	10	12	8	5.2	80
INDIANA																																
EVANSVILLE	381	1001.7	1015.3	90	69	79.3	3.5	99	27	60	10	16	0	69	73	6.89	3.15	3.26	8	10	0.0	0	2.1	21	27	SE	28	9	15	6	5.2	79
FORT WAYNE	791	986.1	1015.7	85	64	74.5	3.9	97	28	49	10	7	0	62	69	3.55	- 0.62	1.56	8	8	0.0	0	3.1	23	28	SW	7+	4	17	9	6.1	77
INDIANAPOLIS	792	986.8	1015.4	85	66	75.6	4.5	94	27	55	10	5	0	64	69	3.39	- 1.23	2.08	11	10	0.0	0	3.1	20	55	W	11	11	10	9	5.4	76
SOUTH BEND	773	987.1	1014.5	85	63	73.9	4.9	98	28	49	9	7	0	60	66	1.13	- 2.65	0.32	10	10	0.0	0	3.2	23	35	27	20	5	13	12	6.2	
IOWA																																
BURLINGTON	692			87	65	76.4	4.3	98	27	55	9	10	0	65	67	0.94	- 4.07	0.67	5	5	0.0	0	3.7	20	35	24	11	5	17	8	5.7	
DES MOINES	938	979.0	1013.0	87	67	76.8	5.8	98	27+	54	2	10	0	64	67	4.31	- 0.40	1.50	12	12	0.0	0	3.9	19	37	SW	6	4	16	10	5.6	82
DUBUQUE	1056	975.6		83	63	73.2	5.3	96	19	52	9	3	0			2.51	- 1.70	0.94	13		0.0	0						6	11	13	6.3	
SIOUX CITY	1095	972.6	1011.6	86	65	75.4	4.0	100	26	47	2	8	0	63	68	3.65	- 0.68	1.20	9	11	0.0	0	3.9	16	38	W	18	5	14	11	6.1	73
WATERLOO	868	982.1	1013.3	82	61	71.6	1.5	93	28+	49	8	4	0	62	74	3.14	- 1.69	1.00	12	10	0.0	0	3.3	19	40	2	24+	4	17	9	6.3	
KANSAS																																
CONCORDIA	1470	959.7	1011.2	88	65	76.3	2.1	103	24	54	3	11	0	63	67	3.98	- 0.22	1.86	11	13	0.0	0	7.3	17	54	S	10	11	12	7	5.1	84
DODGE CITY	2582	922.1	1010.5	91	64	77.1	2.7	103	24	53	1	16	0	57	56	3.93	0.90	1.27	11	14	0.0	0	9.4	18	52	SW	11	14	12	4	4.3	81
GOODLAND	3654	886.2	1009.8	88	58	73.2	3.5	107	26+	46	5+	12	0	53	57	2.35	- 0.31	0.85	9	12	0.0	0	5.5	15	35	36	29	11	16	3	4.2	
TOPEKA	877	981.7	1012.7	88	67	77.5	2.8	96	25	55	3	10	0	66	70	3.10	- 1.41	1.44	8	8	0.0	0	5.6	19	28	W	10+	7	12	11	5.8	71
WICHITA	1321	965.5	1011.9	90	68	78.9	2.4	102	24	60	1	15	0	61	58	2.70	- 1.51	1.16	12	12	0.0	0	9.3	18	51	SW	2	8	12	10	5.8	65
KENTUCKY																																
COVINGTON	869	984.8	1015.7	86	65	75.8	4.0	97	27	54	10	8	0	63	67	5.18	1.29	1.45	12	7	0.0	0	2.6	21	40	24	7	5	13	12	6.3	
LEXINGTON	966	981.4	1016.3	84	63	73.7	0.1	93	27	53	10	2	0	64	76	7.84	3.12	3.08	11	9	0.0	0	2.3	21	21	29	30	6	14	10	6.2	
LOUISVILLE	477	998.0	1015.2	87	66	76.5	3.1	97	27	56	10	9	0	65	70	2.64	- 1.35	1.08	8	7	0.0	0	2.2	21	27	NE	14	6	13	11	6.2	68
LOUISIANA																																
ALEXANDRIA	92	1012.5	1016.8	91	68	79.6	- 0.1	96	13	65	19+	19	0	70	78	0.87	- 3.42	0.35	5	14	0.0	0	2.6	22	20	23	20	7	15	8	5.3	
BATON ROUGE	64	1013.9	1016.8	91	71	80.8	- 0.1	95	14+	66	4+	25	0	70	75	2.32	- 1.77	0.80	9	13	0.0	0	2.6	22	32	13	26	6	16	8	5.8	
LAKE CHARLES	9	1015.2	1016.4	92	72	82.1	0.9	95	14+	69	7+	27	0	72	78	2.23	- 2.49	0.79	7	11	0.0	0	4.4	18	26	17	18	3	17	10	6.4	
NEW ORLEANS	4	1016.3	1017.2	91	69	80.0	- 0.1	95	14+	61	1	20	0	70	75	8.02	3.59	2.26	17	13	0.0	0	1.9	23	48	5	27	9	12	9	5.9	
SHREVEPORT	254	1006.1	1015.4	93	70	81.7	1.1	98	13	67	16+	27	0	69	70	0.97	- 2.37	0.72	5	4	0.0	0	5.3	19	27	34	15	5	17	8	5.6	70
MAINE																																
CARIBOU	624	989.8		72	47	59.3	0.3	87	20	31	6	0	1			2.62	- 1.45	0.78	13		T	0						9	7	14	6.2	
PORTLAND	43	1011.9	1014.2	76	53	64.3	2.2	96	30	39	2	1	0	52	66	1.09	- 2.09	0.43	4	3	0.0	0	2.8	23	24	SW	29	9	15	6	5.3	72
MARYLAND																																
BALTIMORE	14	1011.2	1016.5	84	64	74.0	1.5	94	25	54	17	6	0	62	71	2.92	- 0.37	1.21	7	6	0.0	0	1.2	21	34	SW	3	6	9	15	6.5	58
MASSACHUSETTS																																
BLUE HILL OBS R	629			78	56	66.8	1.7	93	30	47	15+	2	0			1.21	- 2.54	0.56	4		0.0	0			34	SW	3					77
BOSTON	15	1013.9	1014.9	79	59	69.1	1.3	94	30	48	2	4	0	53	61	1.74	- 1.74	0.56	5	5	0.0	0	2.8	23	29	NE	8+	10	15	5	5.0	78
WORCESTER	986	979.7	1016.3	77	54	65.6	1.0	92	30	43	15	1	0	50	60	1.88	- 1.96	0.65	4	3	0.0	0	4.6	26	25	32	8	8	17	5	5.1	
MICHIGAN																																
ALPENA	689	989.8	1014.7	77	51	63.9	3.3	98	28	36	10+	1	0	54	71	5.88	3.21	2.35	10	9	0.0	0	1.4	13	35	SW	7	8	13	9	5.5	66
DETROIT	619			84	61	72.1	2.4	101	28	42	10	6	0	59	65					8			1.9	21	40	28	6					
DETROIT METRO	633	990.9	1014.5	83	59	70.8	2.9	99	28+	46	10	6	0	59	69	2.17	- 1.14	0.60	10	7	0.0	0	1.9	23	35	W	7	7	10	13	5.9	66
FLINT	771	987.1	1014.5	81	58	69.5	2.9	96	28	42	10	4	0	58	69	2.43	- 0.69	0.97	8	8	0.0	0	3.3	23	35	26	6	6	15	9	5.7	
GRAND RAPIDS	784	985.8	1014.5	83	59	70.9	3.4	96	28	40	10	6	0	59	67	2.01	- 1.30	0.75	9	6	0.0	0	3.3	22	41	W	6	7	13	10	5.7	73
HOUGHTON LAKE	1149	973.2	1014.7	79	55	67.0	4.4	93	29+	35	10	3	0	57	70	2.84	- 0.28	0.88	10	8	0.0	0	1.5	24	17	14	9+	6	14	10	5.9	
LANSING	841	983.4	1014.7	83	58	70.4	3.0	95	28+	39	10	5	0	59	68	5.13	1.79	1.70	8	9	0.0	0	3.0	23	40	W	6	7	13	10	5.5	79
MARQUETTE U	677			71	51	61.3	1.2	96	28	35	1	1	0			4.12	0.66	1.44	13		0.0	0			25	SW	29	6	13	11	6.1	63

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CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90 F. or above	Temperature: No. of days Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days .01 inch or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days (sunrise to sunset) Clear 0.3	No. of days (sunrise to sunset) Partly cloudy 4.7	No. of days (sunrise to sunset) Cloudy 8.10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
MICHIGAN	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In	In			In	In	M.p.h.		M.p.h.							%
MUSKEGON	625	991.9	1014.6	80	57	68.6	1.9	92	29	41	10	4	0	57	69	0.98	- 1.72	0.22	8	9	0.0	0	3.5	21	44	24	6	8	12	10	5.4	
SAULT STE MARIE	721	987.8	1014.1	73	48	60.7	1.7	89	28	32	1	0	1	50	69	2.86	- 0.44	0.86	11	7	0.0	0	1.0	21	23	SE	10	7	10	13	6.4	57
MINNESOTA																																
DULUTH	1428	962.8	1013.7	74	49	61.7	2.9	84	6	35	9	0	0	51	71	3.25	- 1.02	1.02	15	10	0.0	0	3.0	10	38	SW	5	4	11	15	7.0	52
INTERNATIONAL FALLS	1179	969.9	1012.4	76	53	64.4	4.5	89	4	39	1	0	0	54	73	2.67	- 1.20	0.64	12	8	0.0	0	0.5	17	21	28	18+	7	7	16	6.7	
MINNEAPOLIS	834	982.7	1012.5	81	62	71.5	4.7	96	27	50	1	2	0	59	64	3.52	- 0.48	0.74	11	9	0.0	0	1.6	17	32	SE	4	6	11	13	6.6	67
ROCHESTER	1297	966.1	1012.8	82	61	71.4	4.4	92	28+	46	8	3	0	61	73	4.95	0.49	2.02	11	11	0.0	0	3.8	19	46	34	24	4	14	12	6.5	
ST CLOUD	1034	975.3	1012.7	80	59	69.2	4.0	96	27	45	1	3	0			6.49	2.00	3.48	11		0.0	0						4	11	15	6.9	
MISSISSIPPI																																
JACKSON	310	1005.1	1016.6	92	68	79.9	0.1	96	14	61	1	27	0	69	75	3.40	- 0.39	1.34	13	16	0.0	0	2.1	23	33	SE	7	7	17	6	5.4	74
MERIDIAN	290	1005.8	1016.7	92	67	79.7	0.2	100	14	57	1	26	0	69	75	2.58	- 1.49	0.84	10	11	0.0	0	1.7	24	21	26	19	4	22	4	5.8	
MISSOURI																																
COLUMBIA REGIONAL	887	982.7	1014.4	88	67	77.5	3.5	99	25	58	3	11	0	64	66	2.70	- 1.64	1.45	7	9	0.0	0	4.9	19	30	S	12	5	15	10	6.3	78
KANSAS CITY	742	986.5	1012.6	89	70	79.4	3.5	99	18	59	3	13	0	66	65	3.20	- 1.37	1.38	6	6	0.0	0	5.6	19	30	SE	28	8	16	6	5.4	69
ST JOSEPH	811			90	66	78.3	4.3	98	26+	55	3	16	0	63	61	2.00	- 3.93		7	0	0.0		5.7	17	39	34	30	7	16	7	5.4	
ST LOUIS	535	994.9	1014.7	90	68	78.9	4.8	98	27	58	9	18	0	68	71	2.43	- 1.86	1.00	9	11	0.0	0	3.9	20	34	SW	12	6	15	9	5.7	67
SPRINGFIELD	1268	970.5	1014.9	90	65	77.6	3.4	99	25	58	1	16	0	63	66	3.64	- 1.38	1.14	10	11	0.0	0	5.3	18	38	NW	2	11	13	6	4.9	81
MONTANA																																
BILLINGS	3567	889.6	1011.7	78	51	64.3	- 0.8	97	23	44	30	2	0	46	57	0.70	- 1.85	0.21	8	6	0.0	0	3.2	30	36	NW	29	8	13	9	5.5	70
GLASGOW	2284	930.6	1011.1	78	52	65.0	2.7	93	25	45	15	2	0	46	54	1.26	- 1.72	0.73	10	3	0.0	0	0.5	22	37	12	9	4	15	11	6.5	
GREAT FALLS	3662	886.6	1011.9	75	49	62.0	2.1	94	23	41	28+	2	0	40	49	0.62	- 2.28	0.44	5	4	0.0	0	6.9	24	33	SW	25	4	11	15	6.9	67
HAVRE	2584	920.4	1011.0	77	50	63.4	2.4	95	22	39	2	3	0	42	50	1.75	- 0.98	0.87	9	7	0.0	0	4.7	25	34	SW	14	6	10	14	6.4	79
HELENA	3828	879.4	1013.5	70	44	57.0	- 2.5	87	22	33	29	0	0	39	55	0.93	- 1.30	0.29	9	5	0.0	0	3.8	27	42	W	25	4	9	17	7.0	60
KALISPELL	2965	910.3	1014.4	68	42	54.8	- 3.8	87	22	32	16	0	1	44	68	3.59	1.38	1.35	15	5	0.0	0	2.0	18	24	16	1	0	15	15	7.5	
MILES CITY	2629	919.4	1010.7	80	56	68.0	2.4	98	23	48	28	4	0	51	60	2.12	- 0.59		11	12	0.0		2.5	32									
MISSOULA	3190	903.5	1014.8	72	44	58.3	- 0.2	92	22	33	16	1	0	45	66	1.74	- 0.17	0.68	13	7	T	0	3.8	32	29	NW	23+	1	16	13	7.0	63
NEBRASKA																																
GRAND ISLAND	1841	946.8	1011.1	88	64	76.0	5.0	104	24	54	1	13	0	58	58	5.62	1.83	3.25	7	9	0.0	0	5.2	16	38	33	4	10	10	10	5.3	
LINCOLN U	1150			88	68	78.0	4.9	102	24	60	7+	11	0			1.75	- 2.75	0.89	6		0.0	0			41	SW	6	11	8	11	5.4	75
NORFOLK	1544			87	62	74.2	3.3	101	26	49	2	9	0			5.95	1.69	2.20	12		0.0	0						8	14	8	5.7	
NORTH PLATTE	2775	915.7	1011.3	83	57	70.2	1.1	96	26+	47	5	5	0	58	70	5.84	2.59	2.25	11	15	0.0	0	4.6	13	43	N	30	9	17	4	4.9	74
OMAHA	977	977.3	1011.7	90	66	77.8	4.7	103	26+	52	2	17	0	62	62	3.30	- 1.23	2.19	9	12	0.0	0	3.5	17	56	NW	18	6	14	10	5.8	83
SCOTTSBLUFF	3957	877.8	1010.7	83	55	69.3	2.4	101	26	46	5	8	0	52	60	2.47	- 0.63	1.08	11	14	0.0	0	2.2	11	28	17	11	11	12	7	4.8	
VALENTINE	2587			85	57	71.3	3.8	105	26	50	5	7	0			1.46	- 1.69	0.53	15		0.0	0			58	SW	4	11	11	8	5.1	65
NEVADA																																
ELKO	5050	843.9	1013.2	75	41	58.1	- 1.9	92	21	34	2+	1	0	38	53	1.01	0.30	0.30	7	4	T	T	3.1	25	24	27	26	15	8	7	4.1	
ELY	6253	808.3	1010.6	78	40	59.1	0.5	91	22	29	2+	2	3	33	42	0.09	- 0.41	0.07	3	4	0.0	0	4.7	22	42	S	10	14	12	4	3.9	86
LAS VEGAS	2162	934.0	1008.5	98	68	83.3	0.4	111	22	51	1	26	0	28	14	T	- 0.04	T	0	0	0.0	0	7.3	20	36	SW	26	23	5	2	1.6	98
RENO	4404	865.6	1013.3	79	40	59.7	- 0.4	90	22+	29	2	4	2	38	45	0.09	- 0.28	0.05	2	0	0.0	0	2.4	28	29	W	17	18	6	6	3.5	83
WINNEMUCCA	4301	867.6	1012.7	81	43	62.4	0.9	98	22	30	3+	8	2	37	44	1.60	0.84	1.00	5	1	0.0	0	3.3	27	27	SW	18	16	4	10	4.4	88
NEW HAMPSHIRE																																
CONCORD	342	1002.7	1015.1	81	50	65.5	1.0	95	30	32	6	2	1	52	65	1.67	- 1.93	0.53	5	3	0.0	0	2.2	24	38	W	8	9	18	3	4.9	73
MT WASHINGTON OBS	6262			52	38	45.0	0.1	64	30	18	5	0	7			4.89	- 1.61	2.25	11	4	0.0	0			89Y	NW	5	4	6	20	7.8	42
NEW JERSEY																																
ATLANTIC CITY	64	1013.9	1016.3	79	60	69.7	- 0.3	91	8	47	18+	3	0	60	74	0.69	- 2.14	0.51	5	5	0.0	0	2.4	18	20	7	14	6	12	12	6.0	61
ATLANTIC CITY U	11			73	63	67.9	- 1.1	83	26	52	2	0	0			0.61	- 2.43	0.44	6							29	W	8				
NEWARK	7	1014.9	1015.8	83	66	74.8	3.5	94	7	55	2	6	0	58	60	1.48	- 1.96	0.72	7	3	0.0	0	1.8	21	22	32	8	7	11	12	6.0	
TRENTON U	56			81	63	72.3	1.3	90	25+	53	2	3	0			1.48	- 2.12	0.60	7		0.0	0			24	NW	6	7	12	11	6.0	63

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JUNE 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In.	In			In.	In.	M.p.h.		M.p.h.							%
NEW MEXICO																																
ALBUQUERQUE	5311	837.5	1009.4	91	57	73.8	- 1.1	99	26	42	4	18	0	27	20	0.02	- 0.55	0.01	2	3	0.0	0	1.6	20	43	SW	18	20	7	3	3.2	82
CLAYTON	4969			87	56	71.5	1.3	97	24	50	30	11	0			2.95	1.47	1.20	10		0.0	0						14	13	3	4.0	
ROSWELL	3612			96	61	78.1	1.0	100	29	49	1	30	0			0.18	- 0.87	0.16	2		0.0	0			34	N	14					82
NEW YORK																																
ALBANY	275	1004.7	1015.4	80	53	66.3	- 1.0	91	30	38	6	1	0	54	65	2.81	- 0.44	1.24	9	6	0.0	0	2.0	20	57	NW	8	6	14	10	6.1	70
BINGHAMTON	1590	958.7	1016.7	76	56	66.3	2.8	86	30+	45	11+	0	0			1.73	- 2.12	0.85	7	4	0.0	0	2.7	24	28	SW	25	4	18	8	6.3	76
BUFFALO	705	989.8	1015.3	76	59	67.6	2.8	89	29+	45	10	0	0	57	71	4.25	1.71	1.65	11	13	0.0	0	4.1	23	30	SW	29	4	14	12	6.6	74
NEW YORK U	132	1012.9	1015.8	83	66	74.2	2.8	93	8+	55	2	5	0	59	63	2.31	- 1.00	1.06	7	2	0.0	0	1.1	22	27	SW	21					62
NEW YORK KENNEDY	13	1015.2	1016.2	80	64	72.1	2.0	93	26	54	2	4	0	59	67	1.71	- 1.64	0.96	8	4	0.0	0	4.0	18	26	34	8	7	13	10	5.8	
NEW YORK LA GUARDIA	11	1015.2	1016.2	80	64	72.1	0.6	92	7	54	2	3	0	58	64	2.21	- 1.17	0.76	7	3	0.0	0	2.4	18	33	NW	21	7	14	9	5.6	
ROCHESTER	547	994.9	1014.9	79	56	67.5	0.6	93	30	41	11	3	0	58	74	3.52	0.96	1.13	11	14	0.0	0	1.8	25	26	W	8	8	9	13	6.2	64
SYRACUSE	410	1000.3	1015.1	80	56	67.9	0.6	94	30	39	1	4	0	56	68	3.26	0.30	1.08	8	8	0.0	0	1.6	26	28	SW	25	5	13	12	6.3	66
NORTH CAROLINA																																
ASHEVILLE	2140	942.4	1017.3	83	61	72.4	2.3	91	27	46	1	1	0	63	79	5.00	1.48	1.55	14	15	0.0	0	1.2	34	32	34	15	4	10	16	6.9	71
CAPE HATTERAS R	7	1016.3	1016.5	82	67	74.6	- 0.6	89	30	54	1	0	0	69	84	1.58	- 2.56	0.60	8	3	0.0	0	2.7	20	23	22	26	5	10	15	6.6	59
CHARLOTTE	736	989.2	1016.2	87	66	76.5	- 0.6	94	6	59	1	9	0	67	76	5.09	1.48	1.25	15	10	0.0	0	0.6	22	23	NW	14	7	11	12	6.3	77
GREENSBORO	897	985.4	1016.4	85	65	74.7	- 0.1	93	28	54	1	5	0	66	79	2.99	- 0.48	0.88	10	10	0.0	0	0.4	25	23	N	12	4	13	13	7.0	62
RALEIGH	434	1001.0	1016.5	87	64	75.4	0.3	94	28	53	11	10	0	67	79	2.79	- 0.91	1.13	7	8	0.0	0	0.6	19	37	22	30	9	11	10	5.7	61
WILMINGTON	28	1015.2	1016.4	89	68	78.0	0.3	95	5	58	1	14	0	70	81	5.60	1.34	2.08	10	10	0.0	0	2.1	18	24	NW	16	7	7	16	6.3	66
NORTH DAKOTA																																
BISMARCK	1647	952.6	1011.3	77	54	65.7	1.2	84	22+	44	1	0	0	58	76	3.86	0.46	0.98	15	14	0.0	0	1.2	12	37	SE	4	4	10	16	7.1	61
FARGO	896	979.3	1011.5	78	57	67.5	2.7	90	27	45	8+	1	0	60	77	3.51	0.47	0.78	9	6	0.0	0	1.2	12	43	S	4	3	13	14	6.7	58
WILLISTON	1899	943.8	1011.1	77	53	64.8	1.7	87	22	38	1	0	0	53	69	3.88	0.57	1.34	11	11	0.0	0	0.9	24	33	E	23	1	14	15	7.1	61
OHIO																																
AKRON	1208	971.6	1015.5	83	61	71.6	2.2	97	28	47	10	2	0	60	69	4.61	0.35	1.87	13	12	0.0	0	2.3	24	35	36	4	6	12	12	6.2	
CINCINNATI ABBE OB	761			86	65	75.9	2.5	98	27	54	10	8	0			2.58	- 1.60	0.86	11		0.0	0			20	NW	11					57
CLEVELAND	777	987.1	1015.8	81	61	71.0	3.2	95	28	46	10	4	0	58	65	3.79	0.36	1.53	12	9	0.0	0	2.1	24	36	SW	29+	3	11	16	6.7	65
COLUMBUS	812	986.1	1015.6	85	62	73.5	2.7	94	28	47	10	7	0	61	66	4.16	0.00	1.76	10	9	0.0	0	2.0	20	38	N	13	6	11	13	6.0	58
DAYTON	1002	980.0	1015.5	85	64	74.6	3.1	98	27	50	10	7	0	62	67	2.39	- 1.71	1.70	10	7	0.0	0	2.3	23	28	E	25	8	11	11	5.6	78
MANSFIELD	1295			83	60	71.3	3.5	97	28	44	10	3	0	61	71	1.29	- 2.94	0.31	10	7	0.0	0	3.7	23	35	19	28	5	15	10	6.1	
TOLEDO	669	989.8	1014.7	84	59	71.3	3.0	99	28	43	10	6	0	59	67	2.64	- 1.15	1.01	12	11	0.0	0	1.9	23	36	NW	6	8	12	10	6.0	69
YOUNGSTOWN	1178	973.9	1015.8	81	58	69.6	2.5	95	28	44	10	2	0	60	72	2.46	- 1.12	1.10	10	9	0.0	0	1.6	23	33	34	5	7	11	12	6.2	
OKLAHOMA																																
OKLAHOMA CITY	1285	967.8	1013.2	90	67	78.6	0.6	97	17	63	8+	18	0	64	65	5.15	0.68	2.50	11	11	0.0	0	8.7	17	52	N	2	10	10	10	5.2	76
TULSA	650	989.8	1013.6	90	69	79.4	2.1	97	25	63	9+	18	0	69	73	3.27	- 1.42	1.44	11	12	0.0	0	7.9	18	34	NE	22	8	11	11	5.6	75
OREGON																																
ASTORIA	8	1017.6	1018.3	62	48	54.6	- 2.7	80	21	41	30+	0	0	47	79	2.97	- 0.05	1.06	19	0	0.0	0	3.9	22	26	18	24	0	8	22	8.7	
BURNS U	4151	872.7	1014.4	70	43	56.8	- 3.0	87	22+	33	2	0	0	41	57	0.98	0.10	0.36	10		0.0	0	3.6	28				9	9	12	5.8	
EUGENE	359	1004.4	1018.0	70	45	57.8	- 3.1	87	21	37	28	0	0	48	74	3.10	1.68	1.52	10	0	0.0	0	2.2	26	23	20	18	2	12	16	7.4	
MEACHAM	4050	877.1	1015.9	60	41	50.7	- 3.0	83	22	36	29+	0	0			3.67	1.22	1.02	9		0.0	0			15	32	23	6	9	15	6.3	
MEDFORD	1298	968.8	1016.2	76	47	61.4	- 2.8	92	21	41	29+	1	0	46	62	0.97	- 0.05	0.57	9	0	0.0	0	4.2	32	21	31	13	9	7	14	5.7	
PENDLETON	1482	962.1	1015.5	75	52	63.3	- 2.5	98	22	44	29	2	0	47	59	1.73	0.56	0.91	9	0	0.0	0	4.1	26	25	28	6	5	9	16	6.9	
PORTLAND	21	1016.3	1017.5	70	51	60.2	- 1.8	90	21	45	29+	1	0	47	65	1.76	0.09	1.04	13	0	0.0	0	2.0	30	23	SW	22	2	8	20	8.0	54
SALEM	196	1010.5	1017.8	70	47	58.2	- 2.4	88	21	41	30+	0	0	48	72	2.47	1.02	1.33	12	0	0.0	0	1.9	25	25	25	22	2	9	19	7.8	
SEXTON SUMMIT R	3836	884.9	1016.5	64	43	53.5	- 2.2	80	21	32	1	0	1			1.69	0.16	0.97	6		0.5	T			30	22	24	9	11	10	5.6	
PACIFIC AREA																																
GUAM TAGUAC R	361	998.3		87	73	79.6	- 0.6	90	20	70	25	1	0			5.06	- 0.81	0.86	29	0	0.0	0			20	E	15+	0	7	23	8.6	
JOHNSTON	7	1014.6	1015.1	82	76	78.9	- 1.4	84	16	71	11	0	0	70	75	1.84	1.00	0.60	14	1	0.0	0	16.9	9	33	E	27+	6	13	11	6.1	57
KOROR R	94	1005.8	1009.3	87	75	81.1	0.0	90	26+	72	23+	4	0	76	88	19.61	6.63	5.80	27	1	0.0	0	1.1	16	24	N	15	0	3	27	9.3	55
KWAJALEIN	8	1009.5	1010.2	86	76	80.9	- 0.5	87	30+	72	15+	0	0	75	83	11.54	2.86	4.69	21	0	0.0	0	13.6	8	28	8	6	1	5	24	8.9	
MAJURO	10	1010.5	1010.8	84	76	80.2	- 0.1	87	29	73	23+	0	0	75	83	13.42	0.58	2.74	28	1	0.0	0	11.7	8	27	E	7+	0	6	24	8.6	46

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear 0.3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover tenths, sunrise to sunset	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																																
PAGO PAGO	12	1012.5	1012.9	84	73	78.5		85	21+	69	28+	0	0	73	83	12.03		3.52	18	3	0.0	0	7.9	10	29	E	1	6	13	11	6.0	53
PONAPE R	123	1004.1	1009.5	86	73	79.5	- 0.6	89	3	70	29+	0	0	74	87	23.62	6.92	4.01	28	3	0.0	0	4.6	9	18	E	13	0	5	25	9.2	33
TRUK MOEN ISLAND	5	1009.5	1009.9	86	76	81.0	0.3	88	27+	74	30+	0	0	75	83	13.92	2.05	2.55	26	0	0.0	0	5.8	8	26	SE	13	0	2	28	9.4	65
WAKE	11	1013.9	1014.1	88	77	82.5	1.1	90	30+	73	20+	2	0	71	71	3.52	1.62	1.58	12	0	0.0	0	11.0	9	30	E	14	5	12	13	6.7	75
YAP R	44			86	75	80.5	- 1.4	88	27	73	25	0	0			13.94	3.22	2.62	26	1	0.0	0			26	E	23	0	3	27	9.0	86
PENNSYLVANIA																																
ALLENTOWN	387	1002.4	1016.2	81	60	70.2	0.8	90	30+	46	1	2	0	60	71	2.66	- 1.41	0.98	6	4	0.0	0	1.5	25	21	33	24	7	14	9	5.8	
ERIE	731	989.2	1015.5	75	57	66.0	- 0.7	91	28	41	10	1	0	54	66	2.83	- 0.22	1.28	10	9	0.0	0	2.6	22	29	26	29	5	16	9	5.8	
HARRISBURG	338	1003.1	1015.7	82	63	72.5	1.2	92	25	51	1	6	0			1.80	- 1.62	0.74	11	5	0.0	0	0.7	24	40	W	6	7	11	12	6.1	56
PHILADELPHIA	5	1014.9	1016.1	83	65	74.3	3.3	92	25	55	2+	4	0	60	66	1.01	- 3.04	0.45	9	4	0.0	0	2.0	20	23	SW	3	5	11	14	6.5	67
PITTSBURGH	1137	972.6	1015.8	82	60	71.4	3.0	96	28	49	10	3	0	58	66	1.41	- 2.37	0.47	7	9	0.0	0	2.5	26	22	30	6	2	17	11	6.6	55
SCRANTON	930	982.7	1016.6	79	58	68.6	0.4	88	30+	44	1	0	0	58	72	2.44	- 1.47	1.16	10	5	0.0	0	1.9	22	24	S	25	10	10	10	5.7	66
WILLIAMSPORT	524	997.3	1016.0	82	60	70.6	1.4	90	27	44	1	1	0	61	74	1.89	- 1.34	0.74	11	7	0.0	0	1.2	18	21	34	21	8	12	10	6.0	
RHODE ISLAND																																
BLOCK ISLAND	110			71	57	63.6	0.7	81	26	46	2+	0	0			0.60	- 1.96	0.29	5		0.0	0										
PROVIDENCE	51	1013.2	1015.6	80	58	69.0	2.8	92	30	47	6+	2	0	55	64	1.64	- 1.12	1.54	3	2	0.0	0	3.2	23	26	34	8	9	14	7	5.0	68
SOUTH CAROLINA																																
CHARLESTON	40	1014.9	1016.6	90	71	80.4	1.2	97	15	58	1	18	0	70	74	4.07	- 0.91	1.07	13	13	0.0	0	2.2	20	36Y	SW	22	8	8	14	6.2	71
CHARLESTON U	9			87	73	80.1	0.5	93	14	68	1	8	0			6.19	1.94	1.83	11		0.0	0			33	S	22					
COLUMBIA	213	1008.5	1016.3	92	68	80.3	0.6	99	15+	54	1	23	0	68	71	7.46	3.61	2.89	10	14	0.0	0	0.6	21	35	1	26	7	13	10	6.0	66
GRNVLLE-SPRTNBRG	957	982.1	1016.2	87	65	76.2	- 0.8	95	26	55	1	10	0	66	75	2.19	- 0.70	0.77	12	7	0.0	0	0.7	28	26	NE	13	5	11	14	6.5	47
SOUTH DAKOTA																																
ABERDEEN	1296	965.1	1011.1	82	59	70.3	3.7	94	27	44	2	3	0	61	75	4.29	0.53	1.30	13	12	0.0	0	2.1	11	35	23	4	5	15	10	6.1	
HURON	1281	965.1	1010.6	83	59	71.4	3.8	100	27	42	2	4	0	60	71	2.87	- 0.27	0.75	14	11	0.0	0	3.7	14	34	NW	17	10	12	8	5.2	78
RAPID CITY	3162	902.5	1011.4	78	55	66.4	1.5	89	25	47	30	0	0	55	69	1.92	- 1.16	0.73	12	13	0.0	0	0.7	3	35	NW	25	5	18	7	5.7	68
SIOUX FALLS	1418	961.7	1012.2	82	60	71.3	3.2	99	26	42	2	2	0	61	72	6.10	1.75	1.34	12	13	0.0	0	2.5	18	35	27	18	8	12	10	6.0	
TENNESSEE																																
BRISTOL	1507	963.8	1016.9	84	64	73.9	0.7	91	28+	52	1	3	0	65	80	5.41	2.03	1.32	13	10	0.0	0	0.6	28	31	30	21	5	10	15	6.4	
CHATTANOOGA	665	991.5	1015.5	90	67	78.3	0.2	97	26	53	1	16	0	66	70	2.71	- 0.99	1.26	13	16	0.0	0	1.1	24	26	E	28+	9	11	10	5.5	59
KNOXVILLE	980	981.7	1016.1	86	66	75.9	0.2	93	26	54	1	6	0	65	76	3.73	0.40	1.00	14	15	0.0	0	1.8	28	34	NW	29	4	10	16	6.6	59
MEMPHIS	258	1005.4	1015.5	90	71	80.6	2.1	97	25	61	2	19	0	67	66	3.82	0.14	1.18	13	14	0.0	0	4.0	21	36	SE	27	7	20	3	4.9	79
NASHVILLE	590	993.9	1015.4	89	66	77.5	0.1	98	26	56	1	12	0	69	79	3.47	0.22	1.95	11	14	0.0	0	2.2	23	35	NE	19	8	17	5	5.4	69
OAK RIDGE R	905			87	64	75.6	1.1	94	26	52	1	8	0			2.25	- 0.99	0.47	12		0.0	0			39Y		29	8	10	12	6.3	
TEXAS																																
ABILENE	1762	952.9	1012.8	91	70	80.4	0.1	95	25+	65	15+	21	0	62	57	1.78	- 0.89	0.90	7	9	0.0	0	10.9	19	37	SE	7	9	6	15	6.0	81
AMARILLO	3604	889.9	1010.1	90	62	75.9	- 1.1	94	24+	50	1	18	0	51	48	4.17	1.28	1.15	10	11	0.0	0	12.2	18	54	SW	5	16	8	6	3.8	86
AUSTIN	597	992.6	1014.1	94	73	83.7	1.9	98	17+	68	5	28	0	67	65	1.68	- 1.54	1.40	5	3	0.0	0	8.9	17	33	SE	18	1	15	14	6.7	55
BROWNSVILLE	19	1013.2	1013.9	91	75	82.8	0.1	94	15	71	5	23	0	73	76	3.44	0.48	1.72	6	3	0.0	0	12.2	14	30	SE	18	3	16	11	6.6	66
CORPUS CHRISTI	41	1012.9	1014.2	91	75	82.9	0.6	94	23+	69	5	24	0	75	80	1.24	- 1.15	0.96	4	2	0.0	0	12.5	14	27	SE	10	3	17	10	6.5	71
DALLAS	481	997.0	1013.8	95	75	85.0	3.7	102	24	69	1	28	0	66	56	1.32	- 1.92	0.74	2	2	0.0	0	10.1	17	30	SE	28	8	12	10	5.6	69
DEL RIO	1026	977.0	1012.2	90	70	80.1	- 4.3	97	11+	67	26+	19	0	67	70	4.87	2.58	1.25	13	7	0.0	0	10.1	13	30	13	10	1	8	21	8.0	
EL PASO	3918	880.1	1008.3	95	67	81.1	0.1	101	28+	53	5+	28	0	36	22	0.01	- 0.68	0.01	1	2	0.0	0	2.2	22	37	NE	20+	22	6	2	2.6	94
FORT WORTH	537	994.2	1014.4	94	72	82.9	1.4	98	24+	67	15+	26	0	67	62	0.83	- 2.15	0.62	2	3	0.0	0	9.3	18	30	18	28	7	10	13	6.0	
GALVESTON U	7			85	78	81.5	- 0.2	87	29+	70	19	0	0			0.82	- 1.83	0.41	5		0.0	0			24	S	18+					63
HOUSTON INTERCON	96	1012.2	1015.9	91	70	80.3	- 0.7	97	15	63	6+	21	0	70	74	2.42	- 1.12	1.02	9	10	0.0	0	5.2	15	21	19	26	6	14	10	6.5	65
LUBBOCK	3254	902.5	1010.6	91	66	78.4	0.9	96	7	59	1	21	0	57	52	2.25	- 0.28	0.80	5	7	0.0	0	9.3	17	40	32	10	8	14	8	5.1	
MIDLAND	2851	915.0	1011.1	90	67	78.4	- 2.8	98	7	61	21+	19	0	58	55	1.07	- 0.56	0.57	5	4	0.0	0	11.5	16	35	30	14	12	7	11	5.2	
PORT ARTHUR	16	1015.6		91	73	81.9	1.3	96	14+	67	5	22	0	74	81	1.86	- 2.43	0.70	5	9	0.0	0	5.9	18	24	SE	18	5	17	8	5.9	74
SAN ANGELO	1903	946.8	1011.8	93	69	80.9	- 1.6	100	7	63	26+	25	0	62	57	1.72	- 0.10	0.92	6	7	0.0	0	10.4	17	29	21	3	7	12	11	6.0	
SAN ANTONIO	788	986.5	1014.0	93	74	83.6	1.7	100	13	69	20	24	0	68	66	2.74	- 0.21	1.21	7	7	0.0	0	8.1	15	36	SE	18	1	10	19	7.7	58
VICTORIA	104	1010.8	1014.8	92	74	82.8	1.5	96	14+	68	6+	26	0	71	75	5.23	2.19	1.35	11	9	0.0	0	9.4	16	62Y	S	15	2	16	12	6.9	
WACO	501	996.6	1014.1	94	74	84.0	2.0	99	24+	70	5	29	0	68	64	0.99	- 1.68	0.65	6	7	0.0	0	12.2	16	25	16	28+	10	12	8	5.2	

See footnotes at end of table

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90 F. or above	Temperature: No. of days Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days .01 inch or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days (sunrise to sunset) Clear, 0-3	No. of days (sunrise to sunset) Partly cloudy, 4-7	No. of days (sunrise to sunset) Cloudy, 8-10	Sky cover, tenths sunrise to sunset	Possible sunshine
	Ft.	Mb	Mb.	F.	F.	F.	F	F.		F.				F.	%	In.	In.	In.			In	In.	M.p.h.		M.p.h.							%
TEXAS																																
WICHITA FALLS	994	976.3	1011.9	98	70	83.8	2.0	102	25+	63	1	29	0	65	59	0.63	- 2.57	0.36	10	13	0.0	0	11.2	14	30	8	3	5	16	9	5.7	
UTAH																																
MILFORD	5028	844.9		86	47	66.1	0.7	99	22+	32	1	13	1			0.15	- 0.28	0.08	3		0.0	0						19	8	3	2.6	
SALT LAKE CITY	4220	870.0	1011.4	83	52	67.5	0.1	99	21	43	2	9	0	41	43	0.64	- 0.34	0.33	8	8	0.0	0	0.4	10	33	NW	26	16	11	3	3.3	87
WENDOVER	4237	869.3	1011.9	81	58	69.4	- 0.4	97	23	44	1	7	0			0.20	- 0.26	0.17	4		0.0	0						18	8	4	3.2	
VERMONT																																
BURLINGTON	332	1002.7	1015.0	77	53	64.9	0.7	92	30	36	1	2	0	54	70	2.29	- 1.20	0.81	7	3	0.0	0	1.5	22	28	S	29	6	16	8	6.0	78
VIRGINIA																																
LYNCHBURG	916			83	64	73.4	0.4	94	28	55	1	4	0			2.85	- 1.21	1.27	12		0.0	0			28	S	29	8	12	10	6.1	52
NORFOLK	24	1015.2	1016.3	84	68	76.0	0.4	96	7	58	11	8	0	67	75	2.16	- 1.45	0.78	6	6	0.0	0	1.8	11	23	SE	2	4	14	12	6.5	73
RICHMOND	164	1009.8	1016.3	84	65	74.7	- 0.4	93	7	56	17+	6	0	67	81	4.10	0.35	1.55	10	9	0.0	0	1.3	15	26	N	7+	4	16	10	6.5	58
ROANOKE	1149	974.9	1016.4	83	62	72.6	- 0.8	93	28	55	11+	7	0	64	79	4.84	1.04	1.84	14	7	0.0	0	1.2	25	23	25	7	7	11	12	6.2	
WALLOPS ISLAND	9			77	66	71.3		90	28	56	2+	1	0			1.42		0.67	5		0.0	0			48Y	NW	7					
WASHINGTON																																
OLYMPIA	195	1010.2	1017.4	65	45	54.8	- 4.3	86	21	36	30+	0	0			3.00	1.21	1.27	13		T	T			21	24	7	1	7	22	8.4	
QUILLAYUTE	179	1010.2	1017.6	60	45	52.5	- 3.3	81	21	36	5	0	0	47	82	5.04	1.66	1.50	20	0	0.0	0	3.2	21	19	SE	24	1	3	26	8.8	19
SEATTLE-TACOMA	400	1001.0	1017.4	63	49	55.9	- 3.9	80	21	44	9+	0	0	47	75	2.28	0.70	0.99	14	0	0.0	0	3.4	20	23	SW	10	1	5	24	8.4	31
SPOKANE	2356	930.9	1014.0	68	48	58.2	- 3.7	90	22	38	1	1	0	42	58	2.46	0.97	1.10	13	1	0.0	0	5.9	20	25	SW	25+	4	12	14	7.1	56
STAMPEDE PASS R	3958	879.4		52	40	46.0	- 2.9	74	21	35	25+	0	0			3.38	- 0.71	0.78	17		T	64						1	3	26	9.2	
WALLA WALLA U	949			73	53	63.2	- 4.0	94	22	46	1	1	0			2.81	1.59	1.45	9		0.0	0			15	W	23+	6	8	16	6.9	55
YAKIMA	1052	976.0	1014.3	77	44	60.7	- 3.7	93	22	37	11	2	0	39		0.20	- 0.61	0.07	4	0	0.0	0	3.0	29	23	26	27+	7	8	15	6.5	
WEST INDIES																																
SAN JUAN P.R.	13	1015.6	1018.1	89	77	83.0	3.0	94	14	75	29+	15	0	70	67	1.24	- 4.42	0.32	14	5	0.0	0	9.5	9	29	E	4	7	23	0	4.5	63
WEST VIRGINIA																																
BECKLEY	2504	929.9	1016.4	79	59	69.1	1.3	87	28	52	10+	0	0	61	79	4.49	0.25	0.83	18	14	0.0	0	2.8	21	23	5	28	0	12	18	7.6	
CHARLESTON	939	982.4	1015.9	85	62	73.5	1.5	95	28	53	10	5	0	64	75	2.58	- 1.11	0.96	11	8	0.0	0	1.5	23	23	18	30	2	14	14	6.8	
ELKINS	1948	947.2		82	56	68.8	1.7	91	28	45	1	1	0			2.34	- 2.85	1.04	11		0.0	0						0	10	20	7.8	
HUNTINGTON	827	986.1	1015.8	83	63	73.3	1.3	92	28	53	10	1	0	66	80	4.80	0.70	1.57	11	11	0.0	0	1.8	19	35	14	28	2	13	15	7.2	
PARKERSBURG U	615			85	63	73.9	1.3	97	28	53	10	3	0			3.09	- 1.18	1.25	8		0.0	0			34	W	25					55
WISCONSIN																																
GREEN BAY	682	988.5	1013.5	82	58	69.8	4.3	97	28+	42	9	5	0	59	70	1.87	- 1.49	0.65	8	8	0.0	0	2.1	19	31	SW	18+	9	7	14	6.0	63
LA CROSSE	651	989.2	1013.2	83	61	72.1	3.3	95	27	46	8	6	0	63	77	4.33	0.13		11	10	0.0		2.6	16								
MADISON	858	982.7	1013.6	85	59	71.7	5.6	95	28+	43	9	9	0	60	67	2.27	- 1.68	0.75	8	7	0.0	0	3.0	20	29	NW	24	9	11	10	5.9	68
MILWAUKEE	672	989.5	1014.3	78	57	67.5	4.2	94	28	45	9+	4	0	58	74	2.67	- 0.97	1.08	12	10	0.0	0	1.9	23	62	W	19	9	12	9	5.6	72
WYOMING																																
CASPER	5338	836.8	1010.8	81	48	64.3	1.2	94	25+	40	7	3	0	42	52	0.17	- 1.08	0.09	5	8	0.0	0	4.2	25	38	27	11	16	8	6	4.2	
CHEYENNE	6126	813.1	1012.5	78	49	63.4	0.4	92	26	40	5	3	0	41	49	0.97	- 1.14	0.49	11	14	0.0	0	3.3	26	37	SW	12+	5	22	3	5.2	68
LANDER	5563	828.3	1010.7	79	49	63.9	1.9	92	23	40	5	3	0	36	39	T	- 1.36	T	0	5	0.0	0	4.5	26	42	SW	10	12	10	8	5.0	77
SHERIDAN	3964	877.4	1012.1	79	47	62.8	0.9	94	25+	37	30	2	0	46	57	0.28	- 2.29	0.11	7	10	0.0	0	1.4	32	45	SW	18	10	9	11	5.5	68

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day-data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70° F. or above for Alaskan Stations.
Y Peak Gust.
· And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

JUNE 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
ALABAMA																																
BIRMINGHAM	189	994.2	1016.4	31.7	18.9	25.5	- 0.8	36.7	14	12.8	1	13	0	18.9	71	167	65	93	13	16	0	0	0.5	29	11.6	SE	27+	6	16	8	5.6	71
HUNTSVILLE	190	993.6	1016.1	32.2	18.9	25.6	- 0.3	36.1	26	13.3	1	13	0	18.9	71	34	- 52	9	10	15	0	0	0.6	26	12.5	2	6+	7	17	6	5.4	
MOBILE	64	1009.5	1017.1	33.9	22.2	28.0	0.5	36.7	14	18.3	1	29	0	21.1	74	73	- 85	35	13	17	0	0	1.5	24	11.6	30	13	4	15	11	6.2	
MONTGOMERY	56	1009.5	1016.6	32.8	20.6	26.6	0.3	36.1	26	15.0	1	23	0	21.1	76	81	- 25	23	13	18	0	0	1.1	24	13.4	W	15	5	19	6	5.5	63
ALASKA												8																				
ANCHORAGE	35	1007.1	1012.2	14.4	6.7	10.7	- 2.5	22.8	6	2.8	6+	2	0	4.4	67	9	- 15	3	10	1	0	0	2.2	18	13.4	17	1	3	3	24	8.2	33
ANNETTE	34	1011.2	1015.3	15.0	7.8	11.4	- 1.0	21.1	18	5.0	4+	1	0	6.7	75	92	- 52	19	15	0	0	0	1.5	15	11.2	14	20	2	8	20	7.6	
BARROW	9	1015.9	1016.5	3.9	- 0.6	1.7	1.1	13.9	23	- 3.9	3	0	20	0.0	90	3	- 6	2	3	0	5	127	4.1	7	13.0	7	10+	10	5	15	5.8	
BARTER ISLAND	12	1013.9	1015.8	5.0	0.6	2.7	1.5	13.3	16	- 2.8	29+	0	15	1.1	91	5	- 8	2	5	0	30	51	3.1	7	13.0	9	9	5	12	13	6.4	
BETHEL	38	1004.7	1010.5	13.9	6.1	10.0	- 0.9	22.2	21	1.7	2	2	0	6.1	80	19	- 11	3	16	0	T	0	1.6	24	13.9	18	15	0	8	22	8.6	
BETTLES	196	986.1	1011.0	22.2	10.0	16.2		31.1	24	0.6	14	18	0	7.2	56	19		10	5	3	0	0	0.5	5	11.2	35	13	4	19	7	5.8	
BIG DELTA	386			21.7	8.9	15.1		29.4	23	1.7	30	16	0			32		14	8	2	0	0			16.1	20	1	6	14	10	6.1	
COLD BAY	29	1008.1	1011.8	7.2	2.2	4.7	- 2.7	15.6	21	0.6	13+	0	0	2.8	89	169	120	53	18	0	13	T	2.8	23	20.6	16	14	0	3	27	9.2	
FAIRBANKS	133	992.2	1009.1	23.9	11.1	17.4	2.8	31.7	24	3.9	4+	22	0	3.9	43	8	- 27	3	8	0	0	0	0.8	3	13.4	21	1	3	15	12	6.5	
GULKANA	479	954.6	1011.4	18.9	5.6	12.1		29.4	23	0.0	7	12	1	1.7	53	33		12	6	3	0	0	3.5	18	17.0	15	1	4	9	17	7.0	
HOMER	20	1009.5	1012.0	11.7	4.4	8.1		17.8	24	0.0	22	0	1	5.0	80	30	3	10	11	0	0	0	1.3	22	10.3	24	5+	2	3	25	8.4	
JUNEAU	4	1013.5	1014.3	17.2	6.1	11.8	0.5	25.0	25+	- 0.6	3	5	1	7.8	80	44	- 42	21	11	0	0	0	0.5	13	10.3	12	19	6	4	20	7.2	46
KING SALMON	15	1008.1	1010.1	12.8	4.4	8.5	- 2.3	18.9	23+	0.6	2	0	0	3.3	74	38	2	7	18	2	T	T	3.0	17	13.4	17	14	0	3	27	9.3	
KOTZEBUE	3	1009.8	1010.3	12.8	4.4	8.6	2.0	28.3	26	- 1.7	13+	5	6	4.4	79	6	- 6	4	4	0	5	T	2.1	28	13.9	28	28	9	10	11	5.7	
MC GRATH	105	996.6	1009.1	21.1	8.9	14.8	1.2	31.1	24	3.3	4	17	0	7.2	63	26	- 16	9	16	7	0	0	0.5	26	10.3	10	1	1	11	18	7.7	
NOME	4	1008.8	1009.5	13.3	5.0	9.1	1.4	25.6	28+	- 0.6	14+	6	2	5.0	76	22	- 2	6	10	1	0	T	0.4	21	15.6	4	1	7	8	15	6.4	46
ST. PAUL ISLAND	7	1010.5	1011.3	4.4	0.0	2.3	- 2.6	10.0	30	- 3.3	11	0	16	1.7	95	19	- 11	5	14	0	T	76	0.9	27	14.3	13	22	0	4	26	9.2	
SHEMYA	37	1005.1	1008.7	6.7	3.9	5.3	- 0.1	8.9	27	- 2.8	9	0	2	2.8	84	48	14	24	13	0	T	0	2.5	21	21.5	23	13	0	2	28	9.5	
SUMMIT	732	926.2	1011.3	14.4	3.3	9.0		27.2	25+	- 1.1	2	7	4	2.8	68	57		24	14	5	30	152	2.5	24	12.5	22	21	4	5	21	7.5	
TALKEETNA	105			17.8	5.0	11.4	- 1.4	27.8	25+	0.0	4	11	1			60	15	25	13	2	0	0			7.6	21	1					
UNALAKLEET	5	1009.1	1009.8	12.2	6.7	9.3		21.1	30	0.6	14+	1	0	6.1	80	9		4	7	2	0	T	1.2	21	12.5	11	4	1	7	22	8.3	
YAKUTAT	9	1013.9	1014.9	12.8	4.4	8.8	- 1.4	23.9	5	- 1.7	4	3	3	6.1	86	61	- 68	47	16	0	0	0	0.7	20	8.0	15	23+	3	2	25	8.4	
ARIZONA																																
FLAGSTAFF	2135	789.4	1013.8	25.6	4.4	14.8	- 0.4	33.3	23	- 5.0	3	2	7	- 4.4	28	0	- 18	0	0	0	0	0	2.5	22	10.3	23	27	24	3	3	2.4	
PHOENIX	340	970.5	1008.4	38.3	21.1	29.6	0.9	43.9	22	13.3	3	28	0	2.8	18	0	- 2	0	0	1	0	0	1.1	26	16.1Y	W	2	23	4	3	1.6	94
TUCSON	788	923.5	1008.8	36.1	18.9	27.3	- 0.8	40.6	22+	10.0	3	27	0	1.1	20	T	- T	T	0	0	0	0	1.6	24	17.0	E	24	24	3	3	1.9	93
WINSLOW	1492	850.7	1010.7	33.9	12.8	23.1	- 0.4	39.4	24+	4.4	1	19	0	- 4.4	17	0	- 7	0	0	1	0	0	2.5	22	17.9	20	2	21	5	4	2.9	
YUMA	59	1001.7	1008.7	37.8	20.6	29.2	- 0.8	44.4	21	13.3	3	26	0	7.8	29	0	T	0	0	0	0	0	2.0	21	11.2	S	23	28	2	0	0.7	97
ARKANSAS																																
FORT SMITH	136	998.6	1014.8	32.2	20.0	25.9	0.1	35.0	26+	16.7	9	16	0	20.0	72	81	- 29	39	8	10	0	0	0.6	20	13.4	SE	27	10	11	9	5.4	77
LITTLE ROCK	78	1005.8	1015.1	32.2	20.0	26.3	0.2	35.6	18+	16.1	9	18	0	21.1	77	195	103	74	9	11	0	0	1.8	23	23.2	SE	27	8	17	5	5.1	81
CALIFORNIA																																
BAKERSFIELD	145	995.6	1012.8	32.8	17.8	25.4	0.3	38.9	16	10.6	1	19	0	10.6	41	0	- 2	0	0	0	0	0	2.5	34	13.0	34	26	23	5	2	1.5	
BISHOP	1252	871.3		32.2	10.0	21.3	0.3	37.8	23	0.6	1	20	0			0	- 2	0	0		0	0						22	6	2	2.2	
BLUE CANYON	1609			19.4	9.4	14.5	- 0.6	25.6	15	0.6	1	0	0			51	27	50	2		T	25			10.3	18	26	17	8	5	3.3	
EUREKA U	13			15.0	10.0	12.4	- 0.7	17.8	22	7.2	1	0	0			38	20	28	10		0	0			10.7	NW	7	3	11	16	7.4	61
FRESNO	100	1001.4	1013.1	33.3	13.9	23.6	- 0.2	39.4	16	7.2	1	22	0	9.4	44	0	- 2	0	0	0	0	0	3.5	30	11.2	NW	26	27	2	1	1.1	98
LONG BEACH	8	1013.2	1014.6	25.0	15.0	20.1	0.4	33.9	20	10.0	1	2	0	13.3	71	T	- 1	T	0	0	0	0	1.6	21	7.2	18	27+	14	9	7	4.7	
LOS ANGELES	30	1010.5	1014.1	21.1	15.0	18.2	- 0.1	25.0	21+	10.0	1	0	0	14.4	81	0	- 1	0	0	0	0	0	3.0	25	11.2Y	W	3	9	14	7	5.2	
LOS ANGELES U	82			25.0	16.1	20.4	0.4	33.9	15	12.2	1	1	0			0	- 2	0	0		0	0			6.7	SW	3	18	7	5	3.2	54
MT SHASTA R	1080	892.0	1015.0	22.8	7.8	15.0	- 0.7	29.4	30	0.6	2	0	0	6.7	61	10	- 21	5	3		0	0	0.2	3								
OAKLAND	2	1016.3	1016.5	19.4	12.2	15.8	- 1.3	27.2	16	10.0	2+	0	0	10.6	76	T	- 3	T	0	0	0	0	4.2	27	10.3	27	13	13	10	7	4.4	
RED BLUFF	104	1000.3	1012.9	30.6	15.0	22.9	- 1.7	37.8	21+	7.8	2	10	0	8.3	44	15	3	7	4	2	0	0	0.8	16	11.2	SE	22	17	6	7	3.3	89
SACRAMENTO	5	1012.9	1013.7	30.6	12.2	21.4	0.0	37.8	21+	7.2	1	12	0	9.4	55	T	- 2	T	1	0	0	0	2.9	20	10.7	SW	27+	22	5	3	2.1	94
SANDBERG R	1377	862.5		23.9	11.1	17.6	- 0.6	31.1	15	1.7	1	0	0	5.0	50	0	- 1	0	0		0	0	3.8	34	16.5	34	19+	23	4	3	1.7	
SAN DIEGO	4	1013.5	1014.6	21.1	15.6	18.3	- 0.7	26.1	20	12.2	1	0	0	12.8	73	T	- 1	T	1	0	0	0	1.9	25	8.0	W	12	8	12	10	6.0	58
SAN FRANCISCO	2	1015.9	1016.6	20.0	11.1	15.6	- 0.7	28.3	17+	8.9	6+	0	0	9.4	73	T	- 3	T	0	0	0	0	5.1	28	11.6	27	28+	16	7	7	4.0	
SAN FRANCISCO U	16			17.2	10.6	14.1	- 1.0	26.7	17	8.9	7+	0	0			T	- 4	T	0		0	0			12.1	W	9					73
SANTA MARIA	72			20.0	9.4	14.8	- 0.6	28.9	21	3.3	1	0	0			T	- 4	T	0		0	0						18	10	2	3.5	
STOCKTON	7	1013.5	1014.7	31.1	13.3	22.4	- 0.3	38.9	17	7.2	1	15	0	9.4	51	T	- 2	T	1	0	0	0	4.2	29	11.2	28	27	20	8	2	2.3	
COLORADO																																
ALAMOSA	2297	774.1		26.1	4.4	15.1	- 0.4	31.1	25+	- 2.2	5+	0	5			2	- 10	1	5		0	0						14	15	1	3.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: No. of days: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm. or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days sunrise to sunset: Clear 0-3	No. of days sunrise to sunset: Partly cloudy 4-7	No. of days sunrise to sunset: Cloudy 8-10	Sky cover, tenths sunrise to sunset	Possible sunshine
	M	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	M.p.s.		M.p.s.							%
COLORADO																																
COLORADO SPRINGS	1873	811.7	1010.9	27.8	11.7	19.9	1.7	35.0	25+	7.2	5	5	0	3.9	39	10	- 30	8	5	13	0	0	0.7	7	15.6	18	8	11	15	4	4.5	
DENVER	1610	835.8	1009.5	30.0	11.1	20.6	1.4	36.7	25	6.1	5	11	0	5.6	44	6	- 31	3	5	13	0	0	0.7	14	18.8	S	30	9	18	3	4.7	73
GRAND JUNCTION	1476	850.3	1008.7	32.2	14.4	23.4	1.6	39.4	24+	7.2	6	16	0	0.6	24	1	- 10	1	1	2	0	0	1.4	15	12.5	W	10+	17	7	6	3.7	81
PUEBLO	1428	854.0	1009.2	33.3	12.8	23.0	1.3	40.0	25+	6.1	5	18	0	3.9	34	17	- 14	10	6	7	0	0	0.4	24	19.2	SW	23+	12	16	2	4.3	83
CONNECTICUT																																
BRIDGEPORT	2	1015.6	1016.2	25.6	16.1	20.8	0.8	31.1	8	8.9	2	0	0	13.9	67	10	- 76	5	6	3	0	0	1.6	20	11.2	10	28+	10	12	8	5.1	
HARTFORD	52	1008.8	1015.2	29.4	13.9	21.7	1.3	36.7	30	6.7	6+	7	0	12.8	60	18	- 76	7	4	3	0	0	1.3	19	10.3	N	8+	8	16	6	5.5	73
DELAWARE																																
WILMINGTON	23	1012.9	1016.0	28.3	17.8	23.0	1.1	33.3	25	10.0	1	2	0	17.2	73	64	- 40	31	8	9	0	0	0.7	19	9.4	31	21+	5	9	16	6.8	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	88	1004.7	1016.2	28.9	16.7	22.6		33.3	30+	10.6	1	5	0	17.8	78	71		37	7	8	0	0	0.4	18	13.0	34	6	2	15	13	6.6	
WASHINGTON NATIONAL	3	1013.5	1016.0	29.4	19.4	24.4	0.9	33.3	27+	15.0	1	10	0	17.8	68	44	- 38	15	8	9	0	0	0.8	18	14.8	NE	28	6	10	14	6.4	54
FLORIDA																																
APALACHICOLA U	4			31.1	23.3	27.3	0.6	34.4	21	19.4	1	9	0			24	-111	12	7	9	0	0			9.8	NE	25	10	16	4	4.7	92
DAYTONA BEACH	9	1016.3	1017.7	31.7	20.6	25.9	0.2	35.6	21+	15.0	1	12	0	20.0	76	120	- 27	81	16	19	0	0	0.7	19	11.6	12	28	2	15	13	6.6	
FORT MYERS	5	1017.3	1017.8	31.7	22.2	26.9	- 0.2	33.9	3	17.8	1	14	0	21.7	78	157	- 71	61	17	19	0	0	0.3	11	13.0	6	3	4	19	7	6.0	
JACKSONVILLE	8	1015.9	1017.1	32.2	19.4	26.0	- 1.1	36.7	15	13.9	1	20	0	20.6	79	140	- 21	33	12	19	0	0	1.1	23	14.3	SW	27	3	20	7	5.9	67
KEY WEST	1	1016.6	1017.2	31.1	25.6	28.3	0.7	31.7	30+	22.8	11	0	0	22.2	71	70	- 30	19	16	16	0	0	1.9	13	10.3	W	14	3	19	8	6.2	82
LAKELAND U	65			31.7	21.7	26.8	- 0.2	33.9	20+	18.9	2	14	0			75	-107	19	17		0	0										72
MIAMI	2	1017.3	1017.6	31.1	23.9	27.2	0.1	32.8	22+	21.1	12+	9	0	21.7	76	296	109	100	16	14	0	0	0.9	7	12.5	20	12	2	16	12	6.8	
ORLANDO	33	1013.2	1017.6	32.8	22.2	27.6	0.2	35.0	21+	18.9	1	25	0	20.6	71	112	- 65	48	18	17	0	0	0.8	23	13.0	29	19	3	17	10	6.8	
PENSACOLA	34	1013.2	1017.2	32.2	22.2	27.2	- 0.1	34.4	15+	18.3	1	15	0	22.2	78	130	- 8	31	11	18	0	0	1.3	24	11.2	34	13	7	15	8	5.5	
TALLAHASSEE	17	1014.6	1016.9	33.3	19.4	26.3	- 0.4	37.2	15	13.9	1	25	0	19.4	72	189	23	54	15	15	0	0	0.7	25	14.3	23	26	4	21	5	5.9	
TAMPA	6	1017.3	1017.4	32.2	22.8	27.3	0.3	35.6	20	16.7	1	17	0	20.6	70	65	-120	25	11	18	0	0	1.3	26	11.2	28	23	4	11	15	6.8	63
WEST PALM BEACH	5	1016.9	1017.7	32.2	22.2	27.2	- 0.1	35.0	16+	18.9	1	17	0	21.1	75	229	38	87	16	19	0	0	0.6	12	15.6	20	22+	1	19	10	6.8	
GEORGIA																																
ATHENS	244	987.8	1016.1	31.7	19.4	25.5	0.2	35.6	26+	12.2	1	14	0	20.0	77	112	13	33	12	15	0	0	0.3	28	10.3	19	7	7	12	11	6.0	
ATLANTA	308	980.0	1015.9	30.6	19.4	25.1	0.3	33.9	26	13.9	1	10	0	18.9	73	85	- 13	18	15	12	0	0	1.1	28	19.7	W	16	6	15	9	5.9	65
AUGUSTA	41	1010.5	1015.8	32.8	18.9	25.9	- 0.1	37.8	15	10.6	1	19	0	20.0	76	89	12	46	7	10	0	0	0.4	19	11.2	27	8	6	13	11	6.0	
COLUMBUS	117	1002.7		32.8	20.6	26.7	0.3	35.6	15+	14.4	1	22	0	20.0	72	107	14	36	11	16	0	0	0.6	28	24.6	29	25	7	17	6	5.3	
MACON	108	1003.7	1016.5	33.9	20.6	27.1	0.1	37.2	6	11.7	1	25	0	20.0	72	171	86	37	16	15	0	0	0.5	25	13.4	NW	20	9	12	9	5.1	68
ROME	194			32.8	18.3	25.6	0.9	36.7	26	11.1	1	17	0			44	- 51	15	13		0	0										
SAVANNAH	14	1014.6	1016.4	33.3	20.6	26.9	0.4	38.9	15	13.9	1	21	0	20.0	71	177	48	69	13	14	0	0	1.1	23	11.6	NW	17	8	9	13	6.1	77
HAWAII																																
HILO	8	1017.3	1018.3	28.3	19.4	23.9	0.4	30.6	16	17.2	4	0	0	18.9	76	71	-102	18	18	0	0	0	0.5	10	8.5	E	16	3	9	18	7.2	43
HONOLULU	2	1017.3	1017.7	28.9	21.7	25.2	- 0.3	30.0	29+	18.3	16	0	0	17.2	64	62	54	57	4	0	0	0	5.7	5	13.9	NE	5	5	19	6	5.6	76
KAHULUI	15	1014.9	1017.2	30.0	20.6	25.2	0.1	31.7	17	16.1	29	0	0	18.3	68	5	1	5	2	0	0	0	5.6	5	13.9	E	8	13	12	5	4.4	84
LIHUE	31	1013.9	1019.1	28.3	22.8	25.5	0.7	29.4	12+	17.8	14	0	0	20.0	73	76	39	55	14	0	0	0	4.5	6	11.2	E	9	2	20	8	6.4	61
IDAHO																																
BOISE	865	914.0	1013.0	25.0	11.7	18.3	- 0.5	36.7	22	6.7	17	2	0	5.0	47	40	18	19	7	2	0	0	1.1	33	12.1	SW	12	9	12	9	5.4	70
LEWISTON	431			23.3	10.6	16.8	- 1.4	35.0	22	6.7	17	2	0			64	20	18	14		0	0						4	9	17	7.1	
POCATELLO	1358	862.2	1012.7	23.9	7.2	15.7	- 1.4	34.4	21	1.1	30	2	0	5.6	54	32	8	10	8	1	T	T	2.8	23	13.0	SW	14	12	10	8	4.7	77
ILLINOIS																																
CAIRO U	96			31.7	21.7	26.7	1.2	37.2	25	16.7	2	13	0			145	40	51	7		0	0			18.3	SW	27	8	18	4	5.0	65
CHICAGO O HARE	201	990.2	1014.2	29.4	16.7	23.1	3.1	36.1	28	8.9	9	10	0	15.6	64	67	- 34	22	11	12	0	0	0.7	21	16.1	31	24	8	16	6	5.3	
CHICAGO MIDWAY	185	992.2	1014.3	30.6	18.3	24.3	2.9	38.3	28+	9.4	9	13	0	15.6	61	55	- 48	14	11	10	0	0	0.8	19	15.2	NE	18	10	11	9	5.3	73
MOLINE	177	992.6	1013.6	31.1	18.3	24.8	2.9	37.2	19	13.3	9	13	0	17.2	65	60	- 51	22	6	7	0	0	1.6	20	18.3	SW	11	6	16	8	5.8	63
PEORIA	199	990.5	1014.1	32.2	17.8	24.9	2.8	37.8	19	10.0	9	15	0	16.1	62	25	- 79	15	5	6	0	0	1.5	19	13.9	SW	11	5	11	14	6.2	83
ROCKFORD	221	987.5	1013.8	30.0	16.7	23.4	2.5	36.7	28	9.4	9	10	0	16.7	68	60	- 49	29	7	9	0	0	1.1	19	13.0	30	6	8	14	8	5.4	
SPRINGFIELD	179	991.9	1013.7	32.8	19.4	26.1	2.8	37.8	26+	12.2	9	20	0	16.7	59	24	- 89	13	7	6	0	0	2.1	20	18.3	W	11	10	12	8	5.2	80
INDIANA																																
EVANSVILLE	116	1001.7	1015.3	32.2	20.6	26.3	1.9	37.2	27	15.6	10	16	0	20.6	73	175	80	83	8	10	0	0	0.9	21	12.1	SE	28	9	15	6	5.2	79

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JUNE 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm. or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days, sunrise to sunset: Clear, 0-3	No. of days, sunrise to sunset: Partly cloudy, 4-7	No. of days, sunrise to sunset: Cloudy, 8-10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	M	Mb.	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
INDIANA																																
FORT WAYNE	241	986.1	1015.7	29.4	17.8	23.6	2.2	36.1	28	9.4	10	7	0	16.7	69	90	- 16	40	8	8	0	0	1.4	23	12.5	SW	7+	4	17	9	6.1	77
INDIANAPOLIS	241	986.8	1015.4	29.4	18.9	24.2	2.5	34.4	27	12.8	10	5	0	17.8	69	86	- 31	53	11	10	0	0	1.4	20	24.6	W	11	11	10	9	5.4	76
SOUTH BEND	236	987.1	1014.5	29.4	17.2	23.3	2.7	36.7	28	9.4	9	7	0	15.6	66	29	- 62	8	10	10	0	0	1.4	23	15.6	27	20	5	13	12	6.2	
IOWA																																
BURLINGTON	211			30.6	18.3	24.7	2.4	36.7	27	12.8	9	10	0	18.3	67	24	-103	17	5	5	0	0	1.7	20	15.6	24	11	5	17	8	5.7	
DES MOINES	286	979.0	1013.0	30.6	19.4	24.9	3.2	36.7	27+	12.2	2	10	0	17.8	67	109	- 10	38	12	12	0	0	1.7	19	16.5	SW	6	4	16	10	5.6	82
DUBUQUE	322	975.6		28.3	17.2	22.9	2.9	35.6	19	11.1	9	3	0			64	- 43	24	13		0	0						6	11	13	6.3	
SIOUX CITY	334	972.6	1011.6	30.0	18.3	24.1	2.2	37.8	26	8.3	2	8	0	17.2	68	93	- 17	30	9	11	0	0	1.7	16	17.0	W	18	5	14	11	6.1	73
WATERLOO	265	982.1	1013.3	27.8	16.1	22.0	0.8	33.9	28+	9.4	8	4	0	16.7	74	80	- 43	25	12	10	0	0	1.5	19	17.9	2	24+	4	17	9	6.3	
KANSAS																																
CONCORDIA	448	959.7	1011.2	31.1	18.3	24.6	1.2	39.4	24	12.2	3	11	0	17.2	67	101	- 6	47	11	13	0	0	3.3	17	24.1	S	10	11	12	7	5.1	84
DODGE CITY	787	922.1	1010.5	32.8	17.8	25.1	1.5	39.4	24	11.7	1	16	0	13.9	56	100	23	32	11	14	0	0	4.2	18	23.2	SW	11	14	12	4	4.3	81
GOODLAND	1114	886.2	1009.8	31.1	14.4	22.9	1.9	41.7	26+	7.8	5+	12	0	11.7	57	60	- 8	22	9	12	0	0	2.5	15	15.6	36	29	11	16	3	4.2	
TOPEKA	267	981.7	1012.7	31.1	19.4	25.3	1.6	35.6	25	12.8	3	10	0	18.9	70	79	- 36	37	8	8	0	0	2.5	19	12.5	W	10+	7	12	11	5.8	71
WICHITA	403	965.5	1011.9	32.2	20.0	26.1	1.3	38.9	24	15.6	1	15	0	16.1	58	69	- 38	29	12	12	0	0	4.2	18	22.8	SW	2	8	12	10	5.8	65
KENTUCKY																																
COVINGTON	265	984.8	1015.7	30.0	18.3	24.3	2.2	36.1	27	12.2	10	8	0	17.2	67	132	33	37	12	7	0	0	1.2	21	17.9	24	7	5	13	12	6.3	
LEXINGTON	294	981.4	1016.3	28.9	17.2	23.2	0.1	33.9	27	11.7	10	2	0	17.8	76	199	79	78	11	9	0	0	1.0	21	9.4	29	30	6	14	10	6.2	
LOUISVILLE	145	998.0	1015.2	30.6	18.9	24.7	1.7	36.1	27	13.3	10	9	0	18.3	70	67	- 34	27	8	7	0	0	1.0	21	12.1	NE	14	6	13	11	6.2	68
LOUISIANA																																
ALEXANDRIA	28	1012.5	1016.8	32.8	20.0	26.4	- 0.1	35.6	13	18.3	19+	19	0	21.1	78	22	- 87	9	5	14	0	0	1.2	22	8.9	23	20	7	15	8	5.3	
BATON ROUGE	20	1013.9	1016.8	32.8	21.7	27.1	- 0.1	35.0	14+	18.9	4+	25	0	21.1	75	59	- 45	20	9	13	0	0	1.2	22	14.3	13	26	6	16	8	5.8	
LAKE CHARLES	3	1015.2	1016.4	33.3	22.2	27.8	- 0.5	35.0	14+	20.6	7+	27	0	22.2	78	57	- 63	20	7	11	0	0	2.0	18	11.6	17	18	3	17	10	6.4	
NEW ORLEANS	1	1016.3	1017.2	32.8	20.6	26.7	- 0.1	35.0	14+	16.1	1	20	0	21.1	75	204	91	57	17	13	0	0	0.8	23	21.5	5	27	9	12	9	5.9	
SHREVEPORT	77	1006.1	1015.4	33.9	21.1	27.6	0.6	36.7	13	19.4	16+	27	0	20.6	70	25	- 60	18	5	4	0	0	2.4	19	12.1	34	15	5	17	8	5.6	70
MAINE																																
CARIBOU	190	989.8		22.2	8.3	15.2	0.2	30.6	20	- 0.6	6	0	1			67	- 37	20	13		T	0						9	7	14	6.2	
PORTLAND	13	1011.9	1014.2	24.4	11.7	17.9	1.2	35.6	30	3.9	2	1	0	11.1	66	28	- 53	11	4	3	0	0	1.3	23	10.7	SW	29	9	15	6	5.3	72
MARYLAND																																
BALTIMORE	45	1011.2	1016.5	28.9	17.8	23.3	0.8	34.4	25	12.2	17	6	0	16.7	71	74	- 9	31	7	6	0	0	0.5	21	15.2	SW	3	6	9	15	6.5	58
MASSACHUSETTS																																
BLUE HILL OBS R	192			25.6	13.3	19.3	0.9	33.9	30	8.3	15+	2	0			31	- 65	14	4		0	0			15.2	SW	3					77
BOSTON	5	1013.9	1014.9	26.1	15.0	20.6	0.7	34.4	30	8.9	2	4	0	11.7	61	44	- 44	14	5	5	0	0	1.3	23	13.0	NE	8+	10	15	5	5.0	78
WORCESTER	301	979.7	1016.3	25.0	12.2	18.7	0.6	33.3	30	6.1	15	1	0	10.0	60	48	- 50	17	4	3	0	0	2.1	26	11.2	32	8	8	17	5	5.1	
MICHIGAN																																
ALPENA	210	989.8	1014.7	25.0	10.6	17.7	1.8	36.7	28	2.2	10+	1	0	12.2	71	149	82	60	10	9	0	0	0.6	13	15.6	SW	7	8	13	9	5.5	66
DETROIT	189			28.9	16.1	22.3	1.3	38.3	28	5.6	10	6	0	15.0	65					8			0.8	21	17.9	28	6					
DETROIT METRO	193	990.9	1014.5	28.3	15.0	21.6	1.6	37.2	28+	7.8	10	6	0	15.0	69	55	- 29	15	10	7	0	0	0.8	23	15.6	W	7	7	10	13	5.9	66
FLINT	235	987.1	1014.5	27.2	14.4	20.8	1.6	35.6	28	5.6	10	4	0	14.4	69	62	- 18	25	8	8	0	0	1.5	23	15.6	26	6	6	15	9	5.7	
GRAND RAPIDS	239	985.8	1014.5	28.3	15.0	21.6	1.9	35.6	28	4.4	10	6	0	15.0	67	51	- 33	19	9	6	0	0	1.5	22	18.3	W	6	7	13	10	5.7	73
HOUGHTON LAKE	350	973.2	1014.7	26.1	12.8	19.4	2.4	33.9	29+	1.7	10	3	0	13.9	70	72	- 7	22	10	8	0	0	0.7	24	7.6	14	9+	6	14	10	5.9	
LANSING	256	983.4	1014.7	28.3	14.4	21.3	1.7	35.0	28+	3.9	10	5	0	15.0	68	130	45	43	8	9	0	0	1.3	23	17.9	W	6	7	13	10	5.5	79
MARQUETTE U	206			21.7	10.6	16.3	0.7	35.6	28	1.7	1	1	0			105	17	37	13		0	0			11.2	SW	29	6	13	11	6.1	63
MUSKEGON	191	991.9	1014.6	26.7	13.9	20.3	1.1	33.3	29	5.0	10	4	0	13.9	69	25	- 44	6	8	9	0	0	1.6	21	19.7	24	6	8	12	10	5.4	
SAULT STE MARIE	220	987.8	1014.1	22.8	8.9	15.9	0.9	31.7	28	0.0	1	0	1	10.0	69	73	- 11	22	11	7	0	0	0.4	21	10.3	SE	10	7	10	13	6.4	57
MINNESOTA																																
DULUTH	435	962.8	1013.7	23.3	9.4	16.5	1.6	28.9	6	1.7	9	0	0	10.6	71	83	- 26	26	15	10	0	0	1.3	10	17.0	SW	5	4	11	15	7.0	52
INTERNATIONAL FALLS	359	969.9	1012.4	24.4	11.7	18.0	2.5	31.7	4	3.9	1	0	0	12.2	73	68	- 30	16	12	8	0	0	0.2	17	9.4	28	18+	7	7	16	6.7	
MINNEAPOLIS	254	982.7	1012.5	27.2	16.7	21.9	2.6	35.6	27	10.0	1	2	0	15.0	64	89	- 12	19	11	9	0	0	0.7	17	14.3	SE	4	6	11	13	6.6	67
ROCHESTER	395	966.1	1012.8	27.8	16.1	21.9	2.4	33.3	28+	7.8	8	3	0	16.1	73	126	12	51	11	11	0	0	1.7	19	20.6	34	24	4	14	12	6.5	
ST CLOUD	315	975.3	1012.7	26.7	15.0	20.7	2.2	35.6	27	7.2	1	3	0			165	51	88	11		0	0						4	11	15	6.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min. 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile 1.6 kilometers: Speed	Wind: Fastest mile 1.6 kilometers: Direction	Wind: Fastest mile 1.6 kilometers: Date	No. of days sunrise to sunset: Clear 0.3	No. of days sunrise to sunset: Partly cloudy 4.7	No. of days sunrise to sunset: Cloudy 8.10	Sky cover, tenths, sunrise to sunset	Possible sunshine
	M	Mb	Mb	C.	C.	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
MISSISSIPPI																																
JACKSON	94	1005.1	1016.6	33.3	20.0	26.6	0.1	35.6	14	16.1	1	27	0	20.6	75	86	- 10	34	13	16	0	0	0.9	23	14.8	SE	7	7	17	6	5.4	74
MERIDIAN	88	1005.8	1016.7	33.3	19.4	26.5	0.1	37.8	14	13.9	1	26	0	20.6	75	66	- 38	21	10	11	0	0	0.8	24	9.4	26	19	4	22	4	5.8	
MISSOURI																																
COLUMBIA REGIONAL	270	982.7	1014.4	31.1	19.4	25.3	1.9	37.2	25	14.4	3	11	0	17.8	66	69	- 42	37	7	9	0	0	2.2	19	13.4	S	12	5	15	10	6.3	78
KANSAS CITY	226	986.5	1012.6	31.7	21.1	26.3	1.9	37.2	18	15.0	3	13	0	18.9	65	81	- 35	35	6	6	0	0	2.5	19	13.4	SE	28	8	16	6	5.4	69
ST JOSEPH	247			32.2	18.9	25.7	2.4	36.7	26+	12.8	3	16	0	17.2	61	51	-100		7	0	0		2.5	17	17.4	34	30	7	16	7	5.4	
ST LOUIS	163	994.9	1014.7	32.2	20.0	26.1	2.7	36.7	27	14.4	9	18	0	20.0	71	62	- 47	25	9	11	0	0	1.7	20	15.2	SW	12	6	15	9	5.7	67
SPRINGFIELD	386	970.5	1014.9	32.2	18.3	25.3	1.9	37.2	25	14.4	1	16	0	17.2	66	92	- 35	29	10	11	0	0	2.4	18	17.0	NW	2	11	13	6	4.9	81
MONTANA																																
BILLINGS	1087	889.6	1011.7	25.6	10.6	17.9	- 0.4	36.1	23	6.7	30	2	0	7.8	57	18	- 47	5	8	6	0	0	1.4	30	16.1	NW	29	8	13	9	5.5	70
GLASGOW	696	930.6	1011.1	25.6	11.1	18.3	1.5	33.9	25	7.2	15	2	0	7.8	54	32	- 44	19	10	3	0	0	0.2	22	16.5	12	9	4	15	11	6.5	
GREAT FALLS	1116	886.6	1011.9	23.9	9.4	16.7	1.2	34.4	23	5.0	28+	2	0	4.4	49	16	- 58	11	5	4	0	0	3.1	24	14.8	SW	25	4	11	15	6.9	67
HAVRE	788	920.4	1011.0	25.0	10.0	17.4	1.3	35.0	22	3.9	2	3	0	5.6	50	44	- 25	22	9	7	0	0	2.1	25	15.2	SW	14	6	10	14	6.4	79
HELENA	1167	879.4	1013.5	21.1	6.7	13.9	- 1.4	30.6	22	0.6	29	0	0	3.9	55	24	- 33	7	9	5	0	0	1.7	27	18.8	W	25	4	9	17	7.0	60
KALISPELL	904	910.3	1014.4	20.0	5.6	12.7	- 2.1	30.6	22	0.0	16	0	1	6.7	68	91	35	34	15	5	0	0	0.9	18	10.7	16	1	0	15	15	7.5	
MILES CITY	801	919.4	1010.7	26.7	13.3	20.0	1.3	36.7	23	8.9	28	4	0	10.6	60	54	- 15		11	12	0		1.1	32								
MISSOULA	972	903.5	1014.8	22.2	6.7	14.6	- 0.1	33.3	22	0.6	16	1	0	7.2	66	44	- 4	17	13	7	T	0	1.7	32	13.0	NW	23+	1	16	13	7.0	63
NEBRASKA																																
GRAND ISLAND	561	946.8	1011.1	31.1	17.8	24.4	2.8	40.0	24	12.2	1	13	0	14.4	58	143	46	83	7	9	0	0	2.3	16	17.0	33	4	10	10	10	5.3	
LINCOLN U	351			31.1	20.0	25.6	2.7	38.9	24	15.6	7+	11	0			44	- 70	23	6		0	0			18.3	SW	6	11	8	11	5.4	75
NORFOLK	471			30.6	16.7	23.4	1.8	38.3	26	9.4	2	9	0			151	43	56	12		0	0						8	14	8	5.7	
NORTH PLATTE	846	915.7	1011.3	28.3	13.9	21.2	0.6	35.6	26+	8.3	5	5	0	14.4	70	148	66	57	11	15	0	0	2.1	13	19.2	N	30	9	17	4	4.9	74
OMAHA	298	977.3	1011.7	32.2	18.9	25.4	2.6	39.4	26+	11.1	2	17	0	16.7	62	84	- 31	56	9	12	0	0	1.6	17	25.0	NW	18	6	14	10	5.8	83
SCOTTSBLUFF	1206	877.8	1010.7	28.3	12.8	20.7	1.3	38.3	26	7.8	5	8	0	11.1	60	63	- 16	27	11	14	0	0	1.0	11	12.5	17	11	11	12	7	4.8	
VALENTINE	789			29.4	13.9	21.8	2.1	40.6	26	10.0	5	7	0			37	- 42	13	15		0	0			25.9	SW	4	11	11	8	5.1	65
NEVADA																																
ELKO	1539	843.9	1013.2	23.9	5.0	14.5	- 1.1	33.3	21	1.1	2+	1	0	3.3	53	26	8	8	7	4	T	T	1.4	25	10.7	27	26	15	8	7	4.1	
ELY	1906	808.3	1010.6	25.6	4.4	15.1	0.3	32.8	22	- 1.7	2+	2	3	0.6	42	2	- 10	2	3	4	0	0	2.1	22	18.8	S	10	14	12	4	3.9	86
LAS VEGAS	659	934.0	1008.5	36.7	20.0	28.5	0.2	43.9	22	10.6	1	26	0	- 2.2	14	T	- 1	T	0	0	0	0	3.3	20	16.1	SW	26	23	5	2	1.6	98
RENO	1342	865.6	1013.3	26.1	4.4	15.4	- 0.2	32.2	22+	- 1.7	2	4	2	3.3	45	2	- 7	1	2	0	0	0	1.1	28	13.0	W	17	18	6	6	3.5	83
WINNEMUCCA	1311	867.6	1012.7	27.2	6.1	16.9	0.5	36.7	22	- 1.1	3+	8	2	2.8	44	41	21	25	5	1	0	0	1.5	27	12.1	SW	18	16	4	10	4.4	88
NEW HAMPSHIRE																																
CONCORD	104	1002.7	1015.1	27.2	10.0	18.6	0.6	35.0	30	0.0	6	2	1	11.1	65	42	- 49	13	5	3	0	0	1.0	24	17.0	W	8	9	18	3	4.9	73
MT WASHINGTON OBS	1909			11.1	3.3	7.2	0.1	17.8	30	- 7.8	5	0	7			124	- 41	57	11	4	0	0			39.8Y	NW	5	4	6	20	7.8	42
NEW JERSEY																																
ATLANTIC CITY	20	1013.9	1016.3	26.1	15.6	20.9	- 0.2	32.8	8	8.3	18+	3	0	15.6	74	18	- 54	13	5	5	0	0	1.1	18	8.9	7	14	6	12	12	6.0	61
ATLANTIC CITY U	3			22.8	17.2	19.9	- 0.6	28.3	26	11.1	2	0	0			15	- 62	11	6						13.0	W	8					
NEWARK	2	1014.9	1015.8	28.3	18.9	23.8	1.9	34.4	7	12.8	2	6	0	14.4	60	38	- 50	18	7	3	0	0	0.8	21	9.8	32	8	7	11	12	6.0	
TRENTON U	17			27.2	17.2	22.4	0.7	32.2	25+	11.7	2	3	0			38	- 54	15	7		0	0			10.7	NW	6	7	12	11	6.0	63
NEW MEXICO																																
ALBUQUERQUE	1619	837.5	1009.4	32.8	13.9	23.2	- 0.6	37.2	26	5.6	4	18	0	- 2.8	20	1	- 14	T	2	3	0	0	0.7	20	19.2	SW	18	20	7	3	3.2	82
CLAYTON	1515			30.6	13.3	21.9	0.7	36.1	24	10.0	30	11	0			75	37	30	10		0	0						14	13	3	4.0	
ROSWELL	1101			35.6	16.1	25.6	0.6	37.8	29	9.4	1	30	0			5	- 22	4	2		0	0			15.2	N	14					82
NEW YORK																																
ALBANY	84	1004.7	1015.4	26.7	11.7	19.1	- 0.6	32.8	30	3.3	6	1	0	12.2	65	71	- 11	31	9	6	0	0	0.9	20	25.5	NW	8	6	14	10	6.1	70
BINGHAMTON	485	958.7	1016.7	24.4	13.3	19.1	1.6	30.0	30+	7.2	11+	0	0			44	- 54	22	7	4	0	0	1.2	24	12.5	SW	25	4	18	8	6.3	76
BUFFALO	215	989.8	1015.3	24.4	15.0	19.8	1.6	31.7	29+	7.2	10	0	0	13.9	71	108	43	42	11	13	0	0	1.8	23	13.4	SW	29	4	14	12	6.6	74
NEW YORK U	40	1012.9	1015.8	28.3	18.9	23.4	1.6	33.9	8+	12.8	2	5	0	15.0	63	59	- 25	27	7	2	0	0	0.5	22	12.1	SW	21					62
NEW YORK KENNEDY	4	1015.2	1016.2	26.7	17.8	22.3	1.1	33.9	26	12.2	2	4	0	15.0	67	43	- 42	24	8	4	0	0	1.8	18	11.6	34	8	7	13	10	5.8	
NEW YORK LA GUARDIA	3	1015.2	1016.2	26.7	17.8	22.3	0.3	33.3	7	12.2	2	3	0	14.4	64	56	- 30	19	7	3	0	0	1.1	18	14.8	NW	21	7	14	9	5.6	
ROCHESTER	167	994.9	1014.9	26.1	13.3	19.7	0.3	33.9	30	5.0	11	3	0	14.4	74	89	24	29	11	14	0	0	0.8	25	11.6	W	8	8	9	13	6.2	64
SYRACUSE	125	1000.3	1015.1	26.7	13.3	19.9	0.3	34.4	30	3.9	1	4	0	13.3	68	83	8	27	8	8	0	0	0.7	26	12.5	SW	25	5	13	12	6.3	66

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JUNE 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days sunrise to sunset: Clear 0-3	No. of days sunrise to sunset: Partly cloudy 4-7	No. of days sunrise to sunset: Cloudy 8-10	Sky cover tenths sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							
NORTH CAROLINA																																
ASHEVILLE	652	942.4	1017.3	28.3	16.1	22.4	1.3	32.8	27	7.8	1	1	0	17.2	79	127	38	39	14	15	0	0	0.5	34	14.3	34	15	4	10	16	6.9	71
CAPE HATTERAS R	2	1016.3	1016.5	27.8	19.4	23.7	+ 0.3	31.7	30	12.2	1	0	0	20.6	84	40	- 65	15	8	3	0	0	1.2	20	10.3	22	26	5	10	15	6.6	59
CHARLOTTE	224	989.2	1016.2	30.6	18.9	24.7	+ 0.3	34.4	6	15.0	1	9	0	19.6	76	129	38	32	15	10	0	0	0.3	22	10.3	NW	14	7	11	12	6.3	77
GREENSBORO	273	985.4	1016.4	29.4	18.3	23.7	+ 0.1	33.9	28	12.2	1	5	0	18.9	79	76	- 12	22	10	10	0	0	0.2	25	10.3	N	12	4	13	13	7.0	62
RALEIGH	132	1001.0	1016.5	30.6	17.8	24.1	0.2	34.4	28	11.7	11	10	0	19.4	79	71	- 23	29	7	8	0	0	0.3	19	16.5	22	30	9	11	10	5.7	61
WILMINGTON	9	1015.2	1016.4	31.7	20.0	25.6	0.2	35.0	5	14.4	1	14	0	21.1	81	142	34	53	10	10	0	0	0.9	18	10.7	NW	16	7	7	16	6.3	66
NORTH DAKOTA																																
BISMARCK	502	952.6	1011.3	25.0	12.2	18.7	0.7	28.9	22+	6.7	1	0	0	14.4	76	98	12	25	15	14	0	0	0.5	12	16.5	SE	4	4	10	16	7.1	61
FARGO	273	979.3	1011.5	25.6	13.9	19.7	1.5	32.2	27	7.2	8+	1	0	15.6	77	89	12	20	9	6	0	0	0.5	12	19.2	S	4	3	13	14	6.7	58
WILLISTON	579	943.8	1011.1	25.0	11.7	18.2	0.9	30.6	22	3.3	1	0	0	11.7	69	99	14	34	11	11	0	0	0.4	24	14.8	E	23	1	14	15	7.1	61
OHIO																																
AKRON	368	971.6	1015.5	28.3	16.1	22.0	1.2	36.1	28	8.3	10	2	0	15.6	69	117	9	47	13	12	0	0	1.0	24	15.6	36	4	6	12	12	6.2	
CINCINNATI ABBE OB	232			30.0	18.3	24.4	1.4	36.7	27	12.2	10	8	0			66	- 41	22	11		0	0			8.9	NW	11					57
CLEVELAND	237	987.1	1015.8	27.2	16.1	21.7	1.8	35.0	28	7.8	10	4	0	14.4	65	96	9	39	12	9	0	0	0.9	24	16.1	SW	29+	3	11	16	6.7	65
COLUMBUS	247	986.1	1015.6	29.4	16.7	23.1	1.5	34.4	28	8.3	10	7	0	16.1	66	106	0	45	10	9	0	0	0.9	20	17.0	N	13	6	11	13	6.0	58
DAYTON	305	980.0	1015.5	29.4	17.8	23.7	1.7	36.7	27	10.0	10	7	0	16.7	67	61	- 43	43	10	7	0	0	1.0	23	12.5	E	25	8	11	11	5.6	78
MANSFIELD	395			28.3	15.6	21.8	1.9	36.1	28	6.7	10	3	0	16.1	71	33	- 75	8	10	7	0	0	1.7	23	15.6	19	28	5	15	10	6.1	
TOLEDO	204	989.8	1014.7	28.9	15.0	21.8	1.7	37.2	28	6.1	10	6	0	15.0	67	67	- 29	26	12	11	0	0	0.8	23	16.1	NW	6	8	12	10	6.0	69
YOUNGSTOWN	359	973.9	1015.8	27.2	14.4	20.9	1.4	35.0	28	6.7	10	2	0	15.6	72	62	- 28	28	10	9	0	0	0.7	23	14.8	34	5	7	11	12	6.2	
OKLAHOMA																																
OKLAHOMA CITY	392	967.8	1013.2	32.2	19.4	25.9	0.3	36.1	17	17.2	8+	18	0	17.8	65	131	17	64	11	11	0	0	3.9	17	23.2	N	2	10	10	10	5.2	76
TULSA	198	989.8	1013.6	32.2	20.6	26.3	1.2	36.1	25	17.2	9+	18	0	20.6	73	83	- 36	37	11	12	0	0	3.5	18	15.2	NE	22	8	11	11	5.6	75
OREGON																																
ASTORIA	2	1017.6	1018.3	16.7	8.9	12.6	+ 1.5	26.7	21	5.0	30+	0	0	8.3	79	75	- 1	27	19	0	0	0	1.7	22	11.6	18	24	0	8	22	8.7	
BURNS U	1265	872.7	1014.4	21.1	6.1	13.8	+ 1.7	30.6	22+	0.6	2	0	0	5.0	57	25	3	9	10		0	0	1.6	28				9	9	12	5.8	
EUGENE	109	1004.4	1018.0	21.1	7.2	14.3	+ 1.7	30.6	21	2.8	28	0	0	8.9	74	79	43	39	10	0	0	0	1.0	26	10.3	20	18	2	12	16	7.4	
MEACHAM	1234	877.1	1015.9	15.6	5.0	10.4	+ 1.7	28.3	22	2.2	29+	0	0			93	31	26	9		0	0			6.7	32	23	6	9	15	6.3	
MEDFORD	396	968.8	1016.2	24.4	8.3	16.3	+ 1.6	33.3	21	5.0	29+	1	0	7.8	62	25	- 1	14	9	0	0	0	1.9	32	9.4	31	13	9	7	14	5.7	
PENDLETON	452	962.1	1015.5	23.9	11.1	17.4	+ 1.4	36.7	22	6.7	29	2	0	8.3	59	44	14	23	9	0	0	0	1.8	26	11.2	28	6	5	9	16	6.9	
PORTLAND	6	1016.3	1017.5	21.1	10.6	15.7	+ 1.0	32.2	21	7.2	29+	1	0	8.3	65	45	2	26	13	0	0	0	0.9	30	10.3	SW	22	2	8	20	8.0	54
SALEM	60	1010.5	1017.8	21.1	8.3	14.6	+ 1.3	31.1	21	5.0	30+	0	0	8.9	72	63	26	34	12	0	0	0	0.8	25	11.2	25	22	2	9	19	7.8	
SEXTON SUMMIT R	1169	884.9	1016.5	17.8	6.1	11.9	+ 1.2	26.7	21	0.0	1	0	1			43	4	25	6		13	T			13.4	22	24	9	11	10	5.6	
PACIFIC AREA																																
GUAM TAGUAC R	110	998.3		30.6	22.8	26.4	+ 0.3	32.2	20	21.1	25	1	0			129	- 21	22	29	0	0	0			8.9	E	15+	0	7	23	8.6	
JOHNSTON	2	1014.6	1015.1	27.8	24.4	26.1	+ 0.8	28.9	16	21.7	11	0	0	21.1	75	47	25	15	14	1	0	0	7.6	9	14.8	E	27+	6	13	11	6.1	57
KOROR R	29	1005.8	1009.3	30.6	23.9	27.3	0.0	32.2	26+	22.2	23+	4	0	24.4	88	498	168	147	27	1	0	0	0.5	16	10.7	N	15	0	3	27	9.3	55
KWAJALEIN	2	1009.5	1010.2	30.0	24.4	27.2	+ 0.3	30.6	30+	22.2	15+	0	0	23.9	83	293	73	119	21	0	0	0	6.1	8	12.5	8	6	1	5	24	8.9	
MAJURO	3	1010.5	1010.8	28.9	24.4	26.8	+ 0.1	30.6	29	22.8	23+	0	0	23.9	83	341	15	70	28	1	0	0	5.2	8	12.1	E	7+	0	6	24	8.6	46
PAGO PAGO	4	1012.5	1012.9	28.9	22.8	25.8		29.4	21+	20.6	28+	0	0	22.8	83	306		89	18	3	0	0	3.5	10	13.0	E	1	6	13	11	6.0	53
PONAPE R	37	1004.1	1009.5	30.0	22.8	26.4	- 0.3	31.7	3	21.1	29+	0	0	23.3	87	600	176	102	28	3	0	0	2.1	9	8.0	E	13	0	5	25	9.2	33
TRUK MOEN ISLAND	2	1009.5	1009.9	30.0	24.4	27.2	0.2	31.1	27+	23.3	30+	0	0	23.9	83	354	52	65	26	0	0	0	2.6	8	11.6	SE	13	0	2	28	9.4	65
WAKE	3	1013.9	1014.1	31.1	25.0	28.1	0.6	32.2	30+	22.8	20+	2	0	21.7	71	89	41	40	12	0	0	0	4.9	9	13.4	E	14	5	12	13	6.7	75
YAP R	13			30.0	23.9	26.9	+ 0.8	31.1	27	22.8	25	0	0			354	82	67	26	1	0	0			11.6	E	23	0	3	27	9.0	86
PENNSYLVANIA																																
ALLENTOWN	118	1002.4	1016.2	27.2	15.6	21.2	0.4	32.2	30+	7.8	1	2	0	15.6	71	68	- 36	25	6	4	0	0	0.7	25	9.4	33	24	7	14	9	5.8	
ERIE	223	989.2	1015.5	23.9	13.9	18.9	+ 0.4	32.8	28	5.0	10	1	0	12.2	66	72	- 6	33	10	9	0	0	1.2	22	13.0	26	29	5	16	9	5.8	
HARRISBURG	103	1003.1	1015.7	27.8	17.2	22.5	0.7	33.3	25	10.6	1	6	0			46	- 41	19	11	5	0	0	0.3	24	17.9	W	6	7	11	12	6.1	56
PHILADELPHIA	2	1014.9	1016.1	28.3	18.3	23.5	1.8	33.3	25	12.8	2+	4	0	15.6	66	26	- 77	11	9	4	0	0	0.9	20	10.3	SW	3	5	11	14	6.5	67
PITTSBURGH	347	972.6	1015.8	27.8	15.6	21.9	1.7	35.6	28	9.4	10	3	0	14.4	66	36	- 60	12	7	9	0	0	1.1	26	9.8	30	6	2	17	11	6.6	55
SCRANTON	283	982.7	1016.6	26.1	14.4	20.3	0.2	31.1	30+	6.7	1	0	0	14.4	72	62	- 37	29	10	5	0	0	0.8	22	10.7	S	25	10	10	10	5.7	66
WILLIAMSPORT	160	997.3	1016.0	27.8	15.6	21.4	0.8	32.2	27	6.7	1	1	0	16.1	74	48	- 34	19	11	7	0	0	0.5	18	9.4	34	21	8	12	10	6.0	
RHODE ISLAND																																
BLOCK ISLAND	34			21.7	13.9	17.6	0.4	27.2	26	7.8	2+	0	0			15	- 50	7	5		0	0										
PROVIDENCE	16	1013.2	1015.6	26.7	14.4	20.6	1.6	33.3	30	8.3	6+	2	0	12.8	64	42	- 28	39	3	2	0	0	1.4	23	11.6	34	8	9	14	7	5.0	68

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: No. of days Date	Max 32.2 °C or above	Min 0 °C or lower	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 25 mm or more	Precipitation: No. of days With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile 1.6 kilometers Speed	Wind: Fastest mile 1.6 kilometers Direction	Wind: Fastest mile 1.6 kilometers Date	No. of days (sunrise to sunset) Clear 0.3	Partly cloudy 4.7	Cloudy 8.10	Sky cover tenths sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							%
SOUTH CAROLINA																																
CHARLESTON	12	1014.9	1016.6	32.2	21.7	26.9	0.7	36.1	15	14.4	1	18	0	21.1	74	103	- 23	27	13	13	0	0	1.0	20	16.1Y	SW	22	8	8	14	6.2	71
CHARLESTON U	3			30.6	22.8	26.7	0.3	33.9	14	20.0	1	8	0			157	49	46	11		0	0			14.8	S	22					
COLUMBIA	65	1008.5	1016.3	33.3	20.0	26.8	0.3	37.2	15+	12.2	1	23	0	20.0	71	189	92	73	10	14	0	0	0.3	21	15.6	1	26	7	13	10	6.0	66
GRNVLLE-SPRTNBRG	292	982.1	1016.2	30.6	18.3	24.6	- 0.4	35.0	26	12.8	1	10	0	18.9	75	56	- 18	20	12	7	0	0	0.3	28	11.6	NE	13	5	11	14	6.5	47
SOUTH DAKOTA																																
ABERDEEN	395	965.1	1011.1	27.8	15.0	21.3	2.1	34.4	27	6.7	2	3	0	16.1	75	109	13	33	13	12	0	0	0.9	11	15.6	23	4	5	15	10	6.1	
HURON	390	965.1	1010.6	28.3	15.0	21.9	2.1	37.8	27	5.6	2	4	0	15.6	71	73	- 7	19	14	11	0	0	1.7	14	15.2	NW	17	10	12	8	5.2	78
RAPID CITY	964	902.5	1011.4	25.6	12.8	19.1	0.8	31.7	25	8.3	30	0	0	12.8	69	49	- 29	19	12	13	0	0	0.3	3	15.6	NW	25	5	18	7	5.7	68
SIOUX FALLS	432	961.7	1012.2	27.8	15.6	21.8	1.8	37.2	26	5.6	2	2	0	16.1	72	155	44	34	12	13	0	0	1.1	18	15.6	27	18	8	12	10	6.0	
TENNESSEE																																
BRISTOL	459	963.8	1016.9	28.9	17.8	23.3	0.4	32.8	28+	11.1	1	3	0	18.3	80	137	52	34	13	10	0	0	0.3	28	13.9	30	21	5	10	15	6.4	
CHATTANOOGA	203	991.5	1015.5	32.2	19.4	25.7	0.1	36.1	26	11.7	1	16	0	18.9	70	69	- 25	32	13	16	0	0	0.5	24	11.6	E	28+	9	11	10	5.5	59
KNOXVILLE	299	981.7	1016.1	30.0	18.9	24.4	0.1	33.9	26	12.2	1	6	0	18.3	76	95	10	25	14	15	0	0	0.8	28	15.2	NW	29	4	10	16	6.6	59
MEMPHIS	79	1005.4	1015.5	32.2	21.7	27.0	1.2	36.1	25	16.1	2	19	0	19.4	66	97	4	30	13	14	0	0	1.8	21	16.1	SE	27	7	20	3	4.9	79
NASHVILLE	180	993.9	1015.4	31.7	18.9	25.3	0.1	36.7	26	13.3	1	12	0	20.6	79	88	6	50	11	14	0	0	1.0	23	15.6	NE	19	8	17	5	5.4	69
OAK RIDGE R	276			30.6	17.8	24.2	0.6	34.4	26	11.1	1	8	0			57	- 25	12	12		0	0			17.4Y		29	8	10	12	6.3	
TEXAS																																
ABILENE	537	952.9	1012.8	32.8	21.1	26.9	0.1	35.0	25+	18.3	15+	21	0	16.7	57	45	- 23	23	7	9	0	0	4.9	19	16.5	SE	7	9	6	15	6.0	81
AMARILLO	1098	889.9	1010.1	32.2	16.7	24.4	- 0.6	34.4	24+	10.0	1	18	0	10.6	48	106	33	29	10	11	0	0	5.5	18	24.1	SW	5	16	8	6	3.8	86
AUSTIN	182	992.6	1014.1	34.4	22.8	28.7	1.0	36.7	17+	20.0	5	28	0	19.4	65	43	- 39	36	5	3	0	0	4.0	17	14.8	SE	18	1	15	14	6.7	55
BROWNSVILLE	6	1013.2	1013.9	32.8	23.9	28.2	0.1	34.4	15	21.7	5	23	0	22.8	76	87	12	44	6	3	0	0	5.5	14	13.4	SE	18	3	16	11	6.6	66
CORPUS CHRISTI	12	1012.9	1014.2	32.8	23.9	28.3	0.3	34.4	23+	20.6	5	24	0	23.9	80	31	- 29	24	4	2	0	0	5.6	14	12.1	SE	10	3	17	10	6.5	71
DALLAS	147	997.0	1013.8	35.0	23.9	29.4	2.1	38.9	24	20.6	1	28	0	18.9	56	34	- 49	19	2	2	0	0	4.5	17	13.4	SE	28	8	12	10	5.6	69
DEL RIO	313	977.0	1012.2	32.2	21.1	26.7	- 2.4	36.1	11+	19.4	26+	19	0	19.4	70	124	66	32	13	7	0	0	4.5	13	13.4	13	10	1	8	21	8.0	
EL PASO	1194	880.1	1008.3	35.0	19.4	27.3	0.1	38.3	28+	11.7	5+	28	0	2.2	22	T	- 17	T	1	2	0	0	1.0	22	16.5	NE	20+	22	6	2	2.6	94
FORT WORTH	164	994.2	1014.4	34.4	22.2	28.3	0.8	36.7	24+	19.4	15+	26	0	19.4	62	21	- 55	16	2	3	0	0	4.2	18	13.4	18	28	7	10	13	6.0	
GALVESTON U	2			29.4	25.6	27.5	- 0.1	30.6	29+	21.1	19	0	0			21	- 46	10	5		0	0			10.7	S	18+					63
HOUSTON INTERCON	29	1012.2	1015.9	32.8	21.1	26.8	- 0.4	36.1	15	17.2	6+	21	0	21.1	74	61	- 28	26	9	10	0	0	2.3	15	9.4	19	26	6	14	10	6.5	65
LUBBOCK	992	902.5	1010.6	32.8	18.9	25.8	0.5	35.6	7	15.0	1	21	0	13.9	52	57	- 7	20	5	7	0	0	4.2	17	17.9	32	10	8	14	8	5.1	
MIDLAND	869	915.0	1011.1	32.2	19.4	25.8	- 1.6	36.7	7	16.1	21+	19	0	14.4	55	27	- 14	14	5	4	0	0	5.1	16	15.6	30	14	12	7	11	5.2	
PORT ARTHUR	5	1015.6		32.8	22.8	27.7	0.7	35.6	14+	19.4	5	22	0	23.3	81	47	- 62	18	5	9	0	0	2.6	18	10.7	SE	18	5	17	8	5.9	74
SAN ANGELO	580	946.8	1011.8	33.9	20.6	27.2	- 0.9	37.8	7	17.2	26+	25	0	16.7	57	44	- 3	23	6	7	0	0	4.6	17	13.0	21	3	7	12	11	6.0	
SAN ANTONIO	240	986.5	1014.0	33.9	23.3	28.7	0.9	37.8	13	20.6	20	24	0	20.0	66	70	- 5	31	7	7	0	0	3.6	15	16.1	SE	18	1	10	19	7.7	58
VICTORIA	32	1010.8	1014.8	33.3	23.3	28.2	0.8	35.6	14+	20.0	6+	26	0	21.7	75	133	56	34	11	9	0	0	4.2	16	27.7Y	S	15	2	16	12	6.9	
WACO	153	996.6	1014.1	34.4	23.3	28.9	1.1	37.2	24+	21.1	5	29	0	20.0	64	25	- 43	17	6	7	0	0	5.5	16	11.2	16	28+	10	12	8	5.2	
WICHITA FALLS	303	976.3	1011.9	36.7	21.1	28.8	1.1	38.9	25+	17.2	1	29	0	18.3	59	16	- 65	9	10	13	0	0	5.0	14	13.4	8	3	5	16	9	5.7	
UTAH																																
MILFORD	1533	844.9		30.0	8.3	18.9	0.4	37.2	22+	0.0	1	13	1			4	- 7	2	3		0	0						19	8	3	2.6	
SALT LAKE CITY	1286	870.0	1011.4	28.3	11.1	19.7	0.1	37.2	21	6.1	2	9	0	5.0	43	16	- 9	8	8	8	0	0	0.2	10	14.8	NW	26	16	11	3	3.3	87
WENDOVER	1291	869.3	1011.9	27.2	14.4	20.8	- 0.2	36.1	23	6.7	1	7	0			5	- 7	4	4		0	0						18	8	4	3.2	
VERMONT																																
BURLINGTON	101	1002.7	1015.0	25.0	11.7	18.3	0.4	33.3	30	2.2	1	2	0	12.2	70	58	- 30	21	7	3	0	0	0.7	22	12.5	S	29	6	16	8	6.0	78
VIRGINIA																																
LYNCHBURG	279			28.3	17.8	23.0	0.2	34.4	28	12.8	1	4	0			72	- 31	32	12		0	0			12.5	S	29	8	12	10	6.1	52
NORFOLK	7	1015.2	1016.3	28.9	20.0	24.4	0.2	35.6	7	14.4	11	8	0	19.4	75	55	- 37	20	6	6	0	0	0.8	11	10.3	SE	2	4	14	12	6.5	73
RICHMOND	50	1009.8	1016.3	28.9	18.3	23.7	- 0.2	33.9	7	13.3	17+	6	0	19.4	81	104	9	39	10	9	0	0	0.6	15	11.6	N	7+	4	16	10	6.5	58
ROANOKE	350	974.9	1016.4	28.3	16.7	22.6	- 0.4	33.9	28	12.8	11+	7	0	17.8	79	123	26	47	14	7	0	0	0.5	25	10.3	25	7	7	11	12	6.2	
WALLOPS ISLAND	3			25.0	18.9	21.8		32.2	28	13.3	2+	1	0			36		17	5		0	0			21.5Y	NW	7					
WASHINGTON																																
OLYMPIA	59	1010.2	1017.4	18.3	7.2	12.7	- 2.4	30.0	21	2.2	30+	0	0			76	31	32	13		T	T			9.4	24	7	1	7	22	8.4	
QUILLAYUTE	55	1010.2	1017.6	15.6	7.2	11.4	- 1.8	27.2	21	2.2	5	0	0	8.3	82	128	42	38	20	0	0	0	1.4	21	8.5	SE	24	1	3	26	8.8	19
SEATTLE-TACOMA	122	1001.0	1017.4	17.2	9.4	13.3	- 2.2	26.7	21	6.7	9+	0	0	8.3	75	58	18	25	14	0	0	0	1.5	20	10.3	SW	10	1	5	24	8.4	31
SPOKANE	718	930.9	1014.0	20.0	8.9	14.6	- 2.1	32.2	22	3.3	1	1	0	5.6	58	62	25	28	13	1	0	0	2.6	20	11.2	SW	25+	4	12	14	7.1	56
STAMPEDE PASS R	1206	879.4		11.1	4.4	7.8	- 1.6	23.3	21	1.7	25+	0	0			86	- 18	20	17		T	1626						1	3	26	9.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JUNE 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0.3	No. of days (sunrise to sunset): Partly cloudy 4.7	No. of days (sunrise to sunset): Cloudy 8.10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C.		C.				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							%
WASHINGTON																																	
WALLA WALLA U	289			22.8	11.7	17.3	- 2.2	34.4	22	7.8	1	1	0			71	40	37	9		0	0			6.7	W	23+	6	8	16	6.9	55
YAKIMA	321	976.0	1014.3	25.0	6.7	15.9	- 2.1	33.9	22	2.8	11	2	0	3.9		5	- 15	2	4	0	0	0	1.3	29	10.3	26	27+	7	8	15	6.5	
WEST INDIES																																	
SAN JUAN P.R.	4	1015.6	1018.1	31.7	25.0	28.3	1.7	34.4	14	23.9	29+	15	0	21.1	67	31	-112	8	14	5	0	0	4.2	9	13.0	E	4	7	23	0	4.5	63
WEST VIRGINIA																																	
BECKLEY	763	929.9	1016.4	26.1	15.0	20.6	0.7	30.6	28	11.1	10+	0	0	16.1	79	114	6	21	18	14	0	0	1.3	21	10.3	5	28	0	12	18	7.6	
CHARLESTON	286	982.4	1015.9	29.4	16.7	23.1	0.8	35.0	28	11.7	10	5	0	17.8	75	66	- 28	24	11	8	0	0	0.7	23	10.3	18	30	2	14	14	6.8	
ELKINS	594	947.2		27.8	13.3	20.4	0.9	32.8	28	7.2	1	1	0			59	- 72	26	11		0	0						0	10	20	7.8	
HUNTINGTON	252	986.1	1015.8	28.3	17.2	22.9	0.7	33.3	28	11.7	10	1	0	18.9	80	122	18	40	11	11	0	0	0.8	19	15.6	14	28	2	13	15	7.2	
PARKERSBURG U	187			29.4	17.2	23.3	0.7	36.1	28	11.7	10	3	0			78	- 30	32	8		0	0			15.2	W	25					55
WISCONSIN																																	
GREEN BAY	208	988.5	1013.5	27.8	14.4	21.0	2.4	36.1	28+	5.6	9	5	0	15.0	70	47	- 38	17	8	8	0	0	0.9	19	13.9	SW	18+	9	7	14	6.0	63
LA CROSSE	198	989.2	1013.2	28.3	16.1	22.3	1.8	35.0	27	7.8	8	6	0	17.2	77	110	3		11	10	0		1.2	16								
MADISON	262	982.7	1013.6	29.4	15.0	22.1	3.1	35.0	28+	6.1	9	9	0	15.6	67	58	- 43	19	8	7	0	0	1.3	20	13.0	NW	24	9	11	10	5.9	68
MILWAUKEE	205	989.5	1014.3	25.6	13.9	19.7	2.3	34.4	28	7.2	9+	4	0	14.4	74	68	- 25	27	12	10	0	0	0.8	23	27.7	W	19	9	12	9	5.6	72
WYOMING																																	
CASPER	1627	836.8	1010.8	27.2	8.9	17.9	0.7	34.4	25+	4.4	7	3	0	5.6	52	4	- 27	2	5	8	0	0	1.9	25	17.0	27	11	16	8	6	4.2	
CHEYENNE	1867	813.1	1012.5	25.6	9.4	17.4	0.2	33.3	26	4.4	5	3	0	5.0	49	25	- 29	12	11	14	0	0	1.5	26	16.5	SW	12+	5	22	3	5.2	68
LANDER	1696	828.3	1010.7	26.1	9.4	17.7	1.1	33.3	23	4.4	5	3	0	2.2	39	T	- 35	T	0	5	0	0	2.0	26	18.8	SW	10	12	10	8	5.0	77
SHERIDAN	1208	877.4	1012.1	26.1	8.3	17.1	0.5	34.4	25+	2.8	30	2	0	7.8	57	7	- 58	3	7	10	0	0	0.6	32	20.1	SW	18	10	9	11	5.5	68

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normal July-June
ALABAMA														
BIRMINGHAM	0	[illegible]	10	104	493	523	657	578	500	171	74	0	3110	2954
HUNTSVILLE	0	0	10	116	484	529	708	597	524	161	83	0	3224	3070
MOBILE	0	0	0	7	273	265	361	308	190	57	6	0	1467	1560
MONTGOMERY	0	0	1	39	398	410	525	445	376	122	35	0	2351	2291
ALASKA														
ANCHORAGE	239	312	552	1003	1201	1550	1934	1238	1574	940	717	410	11670	10648
ANNETTE	248	249	367	514	762	1032	1111	836	892	694	590	367	7662	7069
BARROW	835	921	1173	1999	2074	2338	2624	2555	2585	2090	1470	891	21555	20174
BARTER ISLAND	802	751	1132	1928	1970	2477	2723	2671	2618	2144	1381	837	21434	19862
BETHEL	408	437	707	1210	1118	1848	2210	1863	2022	1430	917	443	14613	13196
BETTLES	196	401	972	1706	1968	2438	3074	2295	2279	1374	748	180	17611	
BIG DELTA	179	305	812	1450	1571	2182	2777	1751	1993	1152	637	186	14995	
COLD BAY	416	452	538	766	815	1059	1323	1086	1381	1103	945	728	10614	9887
FAIRBANKS	96	244	722	1425	1630	2318	3002	1948	2030	1141	542	117	15215	14279
GULKANA	340	410	758	1357	1699	2354	2624	1594	1730	1063	743	330	15002	
HOMER	419	418	593	943	960	1396	1711	1132	1447	956	820	545	11340	
JUNEAU	387	405	553	783	1110	1343	1607	1029	1112	784	658	346	10117	9075
KING SALMON	374	404	602	1099	1065	1657	2094	1476	1775	1140	838	523	13047	12348
KOTZEBUE	342	444	860	1565	1559	2081	2444	2354	2236	1658	1168	538	17249	16105
MC GRATH	243	378	757	1360	1546	2326	2873	1968	2116	1269	713	210	15759	14283
NOME	471	527	841	1305	1334	1849	2194	2150	2124	1558	1087	495	15935	14171
ST. PAUL ISLAND	611	598	624	806	838	1104	1288	1388	1552	1300	1148	859	12116	11195
SHEMYA	609	509	497	700	826	1016	1049	1017	1066	915	872	696	9772	9687
SUMMIT	478	560	865	1452	1590	2060	2428	1626	2015	1289	981	498	15842	
TALKEETNA	268	379	651	1184	1419	1835	2249	1465	1693	1010	762	365	13280	11559
UNALAKLEET	357	439	793	1399	1293	1918	2331	2100	2171	1548	995	478	15822	
YAKUTAT	348	378	522	788	1053	1408	1527	1115	1288	982	840	507	10756	9892
ARIZONA														
FLAGSTAFF	6	16	310	643	758	1125	1098	943	862	683	557	210	7211	7152
PHOENIX	0	0	0	19	119	376	396	241	123	53	0	0	1327	1765
TUCSON	[illegible]	0	[illegible]	58	143	403	445	350	200	111	12	0	1722	1800
WINSLOW	0	0	84	391	600	964	992	774	583	374	168	10	4940	4782
YUMA	0	0	0	4	75	333	331	195	105	36	4	0	1083	1217
ARKANSAS														
FORT SMITH	0	0	10	181	479	639	795	647	495	176	37	0	3459	3292
LITTLE ROCK	0	[illegible]	4	153	442	554	737	571	470	182	55	0	3168	3219
CALIFORNIA														
BAKERSFIELD	0	0	0	55	184	486	532	420	225	117	30	3	2052	2122
BISHOP	0	0	59	312	572	911	719	607	539	356	234	29	4338	4227
BLUE CANYON	0	1	115	388	641	1008	809	746	872	718	565	210	6073	5507
EUREKA U	308	292	274	379	338	539	590	518	548	502	438	318	5044	4643
FRESNO	0	0	0	108	282	573	593	480	322	181	81	8	2628	2492
LONG BEACH	0	0	0	21	124	317	332	251	185	146	72	9	1457	1711
LOS ANGELES	0	1	5	20	118	274	311	234	248	191	130	34	1566	1799
LOS ANGELES U	0	0	0	8	72	243	255	184	154	127	77	11	1131	1349
MT SHASTA R	3	17	197	457	675	1060	911	739	834	623	414	181	6111	5722
OAKLAND	100	116	41	191	252	479	523	400	366	323	243	136	3170	2870
RED BLUFF	0	[illegible]	0	121	328	650	584	419	403	232	87	7	2831	2515
SACRAMENTO	0	0	4	129	286	578	603	466	379	249	114	14	2822	2773
SANDBERG R	0	[illegible]	66	264	479	872	690	614	638	580	461	116	4780	4209
SAN DIEGO	0	0	0	12	107	290	331	266	215	143	109	29	1502	1439
SAN FRANCISCO	92	117	59	203	265	495	513	414	394	354	258	154	3318	3012
SAN FRANCISCO U	231	246	95	201	208	439	433	359	354	351	317	230	3464	3001
SANTA MARIA	99	141	144	218	279	486	471	425	427	426	330	188	3634	2967
STOCKTON	[illegible]	0	[illegible]	106	281	564	616	477	363	217	77	10	2711	2676
COLORADO														
ALAMOSA	11	40	368	783	1002	1298	1417	1188	1042	738	543	170	8600	8529
COLORADO SPRINGS	2	3	235	637	797	987	1086	980	837	584	357	32	6537	6423
DENVER	0	0	198	584	770	977	1018	958	817	508	329	25	6184	6283
GRAND JUNCTION	0	0	93	495	714	1019	1152	858	734	378	182	4	5629	5641
PUEBLO	0	0	105	471	572	820	926	825	715	450	200	0	5084	5462
CONNECTICUT														
BRIDGEPORT	0	0	49	247	512	997	1196	893	825	531	234	22	5506	5617
HARTFORD	0	0	89	322	619	1177	1410	1001	911	556	215	17	6317	6172
DELAWARE														
WILMINGTON	0	0	25	175	487	895	1159	821	746	411	153	3	4875	4930
DIST.OF COLUMBIA														
WASHINGTON DULLES	0	0	46	272	573	879	1121	786	776	401	168	5	5027	
WASHINGTON NATIONAL	0	0	17	131	464	777	1034	722	670	294	85	2	4196	4224
FLORIDA														
APALACHICOLA U	0	0	0	0	236	222	337	299	229	66	5	0	1394	1308
DAYTONA BEACH	0	0	[illegible]	[illegible]	164	143	230	199	194	55	7	0	992	879
FORT MYERS	0	0	[illegible]	0	61	33	110	85	63	13	0	0	365	442
JACKSONVILLE	0	0	0	1	224	215	348	256	259	79	14	0	1396	1239
KEY WEST	0	0	0	0	11	1	25	20	4	0	0	0	61	108
LAKELAND U	0	[illegible]	0	[illegible]	135	95	176	134	115	31	0	0	686	661
MIAMI	0	0	0	[illegible]	42	23	67	45	31	5	0	0	213	214
ORLANDO	0	0	0	0	120	79	165	115	92	20	0	0	591	766
PENSACOLA	0	[illegible]	0	1	238	278	373	318	230	66	3	0	1507	1463
TALLAHASSEE	0	[illegible]	1	1	374	357	423	335	338	129	26	0	1984	1485
TAMPA	0	[illegible]	[illegible]	0	145	115	201	134	139	36	[illegible]	0	770	683
WEST PALM BEACH	0	0	0	0	66	32	113	73	79	18	0	0	381	253
GEORGIA														
ATHENS	0	0	5	81	443	538	678	573	521	156	50	0	3045	2929
ATLANTA	0	0	3	64	457	537	681	572	533	156	56	0	3059	2983
AUGUSTA	0	0	12	60	418	510	601	532	466	165	39	0	2803	2397
COLUMBUS	0	0	0	16	369	493	515	458	397	113	25	0	2286	2383
MACON	0	0	[illegible]	15	368	397	507	440	387	109	19	0	2242	2136
ROME	0	0	10	99	508	608	753	679	580	201	65	0	3503	3326
SAVANNAH	0	0	1	20	303	340	458	359	338	100	15	0	1934	1819

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
IDAHO														
BOISE	0	0	240	537	650	969	958	765	763	465	176	78	5601	5809
LEWISTON	3	0	217	465	698	956	885	720	740	457	171	114	5426	5542
POCATELLO	4	2	333	675	847	1236	1166	1034	997	666	376	168	7474	7033
ILLINOIS														
CAIRO U	0	0	11	165	517	685	967	740	598	207	64	0	3953	3821
CHICAGO O HARE	2	0	85	302	725	1055	1422	1026	923	484	262	14	6300	6639
CHICAGO MIDWAY	4	0	79	293	723	1032	1413	1023	903	482	257	10	6219	6155
MOLINE	0	2	92	350	764	1111	1556	1088	931	425	242	0	6561	6408
PEORIA	2	3	84	353	774	1080	1418	1035	906	402	241	0	6298	6025
ROCKFORD	5	2	117	377	812	1186	1549	1114	1007	504	258	5	6932	6830
SPRINGFIELD	0	1	41	281	690	952	1275	952	793	342	168	0	5495	5429
INDIANA														
EVANSVILLE	2	0	24	255	605	846	1087	874	707	290	90	0	4780	4435
FORT WAYNE	9	1	71	312	731	1033	1382	1031	945	518	239	3	6275	6205
INDIANAPOLIS	4	0	51	301	715	930	1281	1006	852	417	198	0	5755	5699
SOUTH BEND	18	11	93	327	766	1066	1387	1012	959	562	280	7	6488	6439
IOWA														
BURLINGTON	3	2	87	339	774	1081	1483	1079	913	385	202	0	6348	6114
DES MOINES	0	0	100	352	748	1114	1521	1167	915	393	211	0	6521	6808
DUBUQUE	9	3	140	379	840	1271	1663	1257	1090	515	295	9	7471	7376
SIOUX CITY	4	0	148	489	868	1326	1581	1133	918	390	182	8	7047	6951
WATERLOO	15	6	175	466	900	1410	1776	1364	1095	549	354	15	8125	7320
KANSAS														
CONCORDIA	1	0	102	424	752	984	1333	1071	787	330	191	0	5975	5479
DODGE CITY	4	0	85	441	696	880	1163	919	701	337	142	0	5368	4986
GOODLAND	5	1	174	497	747	986	1084	957	777	463	269	5	5965	6141
TOPEKA	0	0	57	344	706	945	1262	1065	735	274	144	0	5532	5182
WICHITA	1	0	64	358	696	866	1118	1005	643	253	95	0	5099	4620
KENTUCKY														
COVINGTON	4	0	28	212	591	829	1133	881	758	351	157	0	4944	5265
LEXINGTON	6	0	31	229	637	821	1087	838	759	382	198	0	4988	4683
LOUISVILLE	0	0	23	220	582	781	1052	833	707	303	137	0	4638	4660
LOUISIANA														
ALEXANDRIA	0	0	0	113	377	367	452	410	354	129	22	0	2224	1921
BATON ROUGE	0	0	0	64	320	289	392	333	250	85	3	0	1736	1560
LAKE CHARLES	0	0	0	37	255	216	311	271	204	67	0	0	1361	1459
NEW ORLEANS	0	0	0	24	284	248	329	328	216	88	2	0	1519	1385
SHREVEPORT	0	0	0	97	324	351	459	398	316	94	15	0	2054	2184
MAINE														
CARIBOU	17	80	328	540	905	1697	1833	1415	1224	860	411	199	9509	9767
PORTLAND	7	14	159	408	704	1400	1634	1202	1028	695	373	81	7705	7511
MARYLAND														
BALTIMORE	0	0	20	149	484	824	1080	766	712	364	134	2	4535	4654
MASSACHUSETTS														
BLUE HILL OBS R	2	3	123	354	642	1215	1371	1022	945	647	303	49	6676	6368
BOSTON	0	0	68	314	598	1113	1269	962	868	586	287	25	6090	5634
WORCESTER	2	12	174	410	738	1319	1461	1087	1083	667	327	61	7341	6969
MICHIGAN														
ALPENA	27	64	230	478	855	1294	1541	1298	1269	796	450	112	8414	8506
DETROIT	1	4	78	298	707	1077	1338	1025	990	573	238	27	6356	6232
DETROIT METRO	8	8	108	339	742	1105	1368	1047	1015	588	278	22	6628	6516
FLINT	19	26	151	395	761	1177	1400	1079	1088	646	324	41	7107	6885
GRAND RAPIDS	13	17	150	397	798	1210	1441	1140	1110	626	342	35	7279	6998
HOUGHTON LAKE	30	54	225	478	878	1330	1556	1289	1282	781	415	65	8383	8342
LANSING	26	31	159	409	771	1208	1416	1070	1069	621	318	34	7132	6909
MARQUETTE U	49	44	224	443	887	1257	1563	1279	1189	754	513	162	8364	8393
MUSKEGON	9	20	146	367	763	1161	1387	1119	1098	657	352	39	7118	6696
SAULT STE MARIE	63	99	301	530	959	1469	1712	1452	1380	868	538	157	9528	9048
MINNESOTA														
DULUTH	38	67	311	630	1107	1616	1996	1464	1332	794	518	124	9997	10000
INTERNATIONAL FALLS	19	68	314	650	1226	1908	2239	1550	1352	761	451	69	10607	10606
MINNEAPOLIS	3	5	190	476	959	1443	1811	1341	1139	537	297	18	8219	8382
ROCHESTER	17	11	205	480	966	1450	1832	1357	1195	566	324	19	8422	8295
ST CLOUD	11	17	231	569	1060	1548	1927	1414	1237	612	352	24	9002	8879
MISSISSIPPI														
JACKSON	0	0	0	85	367	388	507	444	394	147	40	0	2372	2203
MERIDIAN	0	0	1	87	404	432	521	468	408	142	40	0	2503	2289
MISSOURI														
COLUMBIA REGIONAL	0	0	37	282	655	850	1164	910	711	275	147	0	5031	5046
KANSAS CITY	0	0	25	231	610	801	1151	931	659	208	92	0	4708	4711
ST JOSEPH	0	0	42	279	653	864	1254	963	699	201	79	0	5034	5484
ST LOUIS	0	0	24	287	635	863	1159	866	718	303	122	0	4977	4900
SPRINGFIELD	8	0	28	344	677	771	1035	852	642	283	116	0	4756	4561
MONTANA														
BILLINGS	1	0	296	614	936	1244	1429	1063	972	617	322	86	7580	7049
GLASGOW	5	7	296	680	1142	1638	1856	1416	1245	595	285	59	9224	8996
GREAT FALLS	9	8	319	625	1036	1296	1509	993	1031	594	320	134	7874	7750
HAVRE	7	22	304	708	1237	1689	1821	1261	1074	589	285	93	9090	8700
HELENA	22	12	413	763	1063	1372	1422	1013	1020	699	414	251	8464	8129
KALISPELL	48	62	478	798	1026	1276	1338	1006	986	635	344	305	8302	8191
MILES CITY	0	0	259	646	1003	1459	1664	1243	1032	550	257	39	8152	7723
MISSOULA	32	12	425	722	928	1313	1195	911	908	600	319	211	7576	8125

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total [illegible] Season	Normals [illegible]
NEBRASKA														
GRAND ISLAND	0	0	146	513	828	1102	1392	1080	891	396	194	[illegible]	6542	6530
LINCOLN U	1	0	108	424	774	1040	1393	1077	947	321	173	0	6158	5864
NORFOLK	6	1	165	532	903	1272	1512	1126	962	435	222	5	7141	6979
NORTH PLATTE	2	1	214	600	899	1177	1320	1127	974	501	311	13	7139	6684
OMAHA	0	0	105	426	799	1085	1458	1106	853	319	172	1	6324	6218
SCOTTSBLUFF	0	0	261	689	861	1212	1177	1013	947	497	321	16	6984	6673
VALENTINE	1	0	204	611	910	1353	1494	1244	1002	508	291	7	7625	7425
NEVADA														
ELKO	5	1	357	736	804	1297	1068	863	891	690	515	205	7432	7433
ELY	12	7	376	734	863	1334	1259	979	933	705	549	183	7934	7733
LAS VEGAS	0	0	0	111	295	631	630	421	306	105	47	0	2546	2709
RENO	0	0	234	519	585	1102	985	780	739	567	429	164	6104	6332
WINNEMUCCA	0	0	295	635	686	1080	962	837	834	604	374	117	6424	6761
NEW HAMPSHIRE														
CONCORD	4	25	181	431	760	1379	1622	1165	1064	682	332	73	7718	7383
MT WASHINGTON OBS	424	511	713	924	1217	1812	2079	1583	1746	1334	949	593	13885	13817
NEW JERSEY														
ATLANTIC CITY	0	0	49	224	515	876	1117	814	798	514	228	29	5164	4812
ATLANTIC CITY U	0	0	33	204	493	823	1029	749	738	480	246	30	4825	4741
NEWARK	0	0	24	199	472	914	1160	827	732	482	155	7	4892	5067
TRENTON U	0	0	30	212	502	907	1137	813	759	434	182	12	4988	4980
NEW MEXICO														
ALBUQUERQUE	0	0	58	380	605	878	968	725	533	343	122	5	4617	4348
CLAYTON	6	0	151	506	667	835	950	849	690	439	215	0	5308	5158
ROSWELL	0	0	56	298	490	662	729	612	384	206	30	0	3467	3793
NEW YORK														
ALBANY	3	7	127	377	686	1336	1580	1104	1059	672	315	50	7316	6875
BINGHAMTON	20	31	179	431	769	1258	1525	1154	1130	723	339	56	7615	7286
BUFFALO	6	6	93	328	695	1161	1361	1057	1085	691	327	36	6846	7062
NEW YORK U	0	0	27	210	490	940	1173	830	764	419	135	9	4997	4871
NEW YORK KENNEDY	0	0	25	219	487	921	1144	858	803	508	180	9	5154	5219
NEW YORK LA GUARDIA	0	0	26	200	456	886	1117	807	774	455	179	11	4911	4811
ROCHESTER	3	11	126	349	699	1218	1405	1059	1122	707	342	49	7090	6748
SYRACUSE	7	27	150	388	692	1222	1437	1069	1040	658	295	50	7035	6756
NORTH CAROLINA														
ASHEVILLE	0	0	29	194	565	682	875	707	672	290	137	0	4151	4466
CAPE HATTERAS R	0	0	10	40	299	515	690	486	476	300	65	0	2881	2612
CHARLOTTE	0	0	12	111	456	622	770	655	574	208	73	0	3481	3191
GREENSBORO	0	1	19	179	511	736	916	728	653	312	120	0	4175	3805
RALEIGH	0	0	22	154	460	684	863	636	611	258	87	0	3775	3393
WILMINGTON	0	0	10	43	295	461	620	469	450	160	27	0	2535	2347
NORTH DAKOTA														
BISMARCK	8	24	263	632	1123	1667	1967	1458	1134	631	383	41	9331	8851
FARGO	16	26	251	560	1109	1723	2035	1461	1153	609	333	30	9306	9226
WILLISTON	2	17	286	719	1182	1689	1964	1400	1135	649	310	62	9415	9243
OHIO														
AKRON	10	2	61	281	664	1015	1309	962	946	554	248	9	6061	6037
CINCINNATI OBS	5	0	27	213	621	853	1150	890	756	370	153	0	5038	4806
CLEVELAND	9	12	86	332	696	1009	1344	1032	1031	650	277	16	6494	6196
COLUMBUS	10	0	58	297	674	944	1256	950	871	475	230	4	5769	5660
DAYTON	5	0	48	278	685	907	1265	975	836	403	193	1	5596	5622
MANSFIELD	6	0	53	275	674	1006	1316	1004	955	563	275	16	6143	6403
TOLEDO	14	11	118	345	749	1111	1379	1035	987	561	272	22	6604	6494
YOUNGSTOWN	20	19	101	347	716	1077	1367	1055	1070	642	314	18	6746	6417
OKLAHOMA														
OKLAHOMA CITY	0	0	18	254	559	651	866	718	492	163	36	0	3757	3725
TULSA	0	0	18	217	577	692	878	721	463	176	37	0	3779	3860
OREGON														
ASTORIA	170	142	264	428	531	743	746	632	703	549	415	310	5633	5186
BURNS U	12	6	357	645	841	1298	1077	889	973	665	390	248	7401	6957
EUGENE	11	11	135	374	576	769	767	664	671	496	318	212	5004	4726
MEACHAM	76	47	456	692	915	1218	1062	951	1089	806	511	427	8250	7874
MEDFORD	0	0	89	363	520	827	890	674	617	489	280	121	4870	5008
PENDLETON	0	1	260	540	731	903	767	698	755	460	169	95	5379	5127
PORTLAND	14	14	130	369	530	771	757	615	653	454	253	149	4709	4635
SALEM	33	45	195	438	635	797	796	710	706	528	355	201	5439	4754
SEXTON SUMMIT R	48	39	270	479	713	1030	906	799	954	750	528	341	6857	6254
PENNSYLVANIA														
ALLENTOWN	0	0	64	292	621	1056	1326	969	900	512	250	24	6014	5810
ERIE	18	18	125	366	731	1056	1324	1048	1078	723	404	68	6959	6451
HARRISBURG	0	0	39	213	564	931	1192	884	812	432	165	12	5244	5251
PHILADELPHIA	0	0	29	191	499	899	1145	802	746	394	140	3	4848	5101
PITTSBURGH	5	1	69	318	678	1013	1277	961	949	562	264	6	6103	5987
PITTSBURG U	3	0	45	242	585	919	1200	893	881	510	213	1	5492	5291
SCRANTON	2	5	109	371	695	1162	1404	1051	985	593	292	32	6701	6254
WILLIAMSPORT	0	0	56	271	591	990	1297	961	871	495	212	16	5760	5934
RHODE ISLAND														
BLOCK ISLAND	0	0	70	288	524	963	1180	927	883	659	357	73	5924	5804
PROVIDENCE	0	0	102	342	602	1124	1298	949	868	566	212	34	6097	5954
SOUTH CAROLINA														
CHARLESTON	0	0	11	42	324	392	465	424	404	127	16	0	2205	2033
CHARLESTON U	0	0	0	22	258	308	484	386	355	86	14	0	1913	1794
COLUMBIA	0	0	6	85	420	462	602	519	462	155	27	0	2738	2484
GRNVLLE-SPRTNBRG	0	0	10	120	480	620	782	643	572	188	73	0	3488	3044
SOUTH DAKOTA														
ABERDEEN	11	9	187	513	1029	1583	1846	1388	1035	515	287	20	8423	8473
HURON	7	2	181	522	952	1541	1777	1375	1127	579	325	16	8404	8223
RAPID CITY	2	0	245	644	918	1330	1463	1182	996	563	344	35	7722	7345
SIOUX FALLS	16	3	195	577	986	1526	1754	1288	1041	511	297	17	8211	7839

MONTHLY AND SEASONAL HEATING DEGREE DAYS

(Base 65°F)

State and Station	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total for Season	Normals July-June
TENNESSEE														
BRISTOL	[illegible]	0	26	147	538	737	903	780	676	296	135	0	4238	4143
CHATTANOOGA	0	0	13	119	535	636	807	698	606	206	73	[illegible]	3693	3254
KNOXVILLE	0	0	13	109	497	640	813	710	596	209	76	[illegible]	3663	3494
MEMPHIS	0	0	7	150	455	571	781	593	509	171	50	[illegible]	3287	3232
NASHVILLE	0	0	13	159	522	671	902	733	624	227	101	0	3952	3578
OAK RIDGE R	0	0	19	134	536	689	870	717	633	233	87	0	3918	3817
TEXAS														
ABILENE	[illegible]	0	15	147	414	411	569	455	326	96	22	[illegible]	2455	2624
AMARILLO	[illegible]	0	47	359	544	661	837	726	524	290	89	0	4077	3985
AUSTIN	0	0	3	75	240	231	328	300	171	52	0	0	1400	1711
BROWNSVILLE	0	0	1	5	86	46	130	76	38	6	0	0	388	600
CORPUS CHRISTI	0	0	2	12	125	93	174	151	64	26	0	0	647	914
DALLAS	[illegible]	0	10	113	313	323	505	403	257	71	7	[illegible]	2002	2363
EL PASO	0	0	24	69	233	224	278	239	107	35	0	[illegible]	1209	1504
FORT WORTH	[illegible]	0	39	180	388	519	625	457	254	110	6	0	2578	2700
GALVESTON U	0	0	7	105	316	369	564	440	307	97	19	0	2224	2405
HOUSTON INTERCON	0	[illegible]	0	31	161	130	250	223	143	30	0	0	968	1235
LUBBOCK	0	0	0	72	274	209	298	273	219	72	3	[illegible]	1420	1676
MIDLAND	[illegible]	0	50	286	484	608	723	618	438	186	30	0	3423	3578
PORT ARTHUR	0	0	41	150	348	441	540	493	297	119	15	0	2444	2591
SAN ANGELO	[illegible]	0	0	28	213	168	269	254	167	43	[illegible]	[illegible]	1142	1447
SAN ANTONIO	0	0	26	126	320	326	453	359	211	81	9	0	1911	2255
VICTORIA	0	0	1	72	247	201	282	239	134	52	[illegible]	0	1229	1546
WACO	0	0	0	44	189	149	228	222	120	45	0	0	997	1173
WICHITA FALLS	0	0	4	87	286	288	411	349	188	50	5	[illegible]	1668	2030
	[illegible]	[illegible]	20	205	474	529	749	560	395	131	15	0	3078	2832
UTAH														
MILFORD	0	0	215	583	746	1072	1088	962	819	540	367	78	6470	6497
SALT LAKE CITY	0	0	218	550	667	1103	1002	836	754	499	258	55	5942	6052
WENDOVER	0	0	195	554	722	1218	1039	813	783	506	227	45	6102	5778
VERMONT														
BURLINGTON	10	36	174	444	773	1567	1710	1257	1263	821	336	83	8474	8269
VIRGINIA														
LYNCHBURG	0	0	21	183	528	789	968	729	673	303	119	3	4316	4166
NORFOLK	0	0	16	93	393	552	812	567	555	269	69	0	3326	3421
RICHMOND	0	0	12	124	445	756	960	709	627	295	104	3	4035	3865
ROANOKE	1	1	24	194	553	769	959	719	658	285	143	3	4309	4150
WALLOPS ISLAND	0	0	19	119	440	744	983	742	659	394	135	11	4246	
WASHINGTON														
OLYMPIA	65	102	293	535	672	868	810	716	771	560	344	304	6040	5236
QUILLAYUTE	208	197	298	475	628	799	783	673	787	578	445	372	6243	5745
SEATTLE-TACOMA	53	44	190	435	548	801	778	628	728	472	321	267	5265	5145
SPOKANE	13	5	321	614	864	1146	1022	873	918	584	270	215	6845	6655
STAMPEDE PASS R	272	254	541	770	1034	1274	1168	1033	1200	925	681	563	9715	9283
WALLA WALLA U	0	0	158	411	673	826	699	653	653	412	170	93	4748	4805
YAKIMA	13	5	221	504	785	1141	932	754	813	508	158	140	5974	5941
WEST VIRGINIA														
BECKLEY	17	12	58	299	645	890	1149	883	890	461	280	4	5588	5390
CHARLESTON	3	0	40	246	563	817	1097	828	778	387	184	2	4945	4476
ELKINS	26	14	97	362	702	987	1258	930	938	580	296	5	6195	5675
HUNTINGTON	4	0	28	215	529	800	1089	769	711	322	165	2	4634	4446
PARKERSBURG U	2	0	33	216	553	820	1112	832	787	404	180	0	4939	4754
WISCONSIN														
GREEN BAY	17	17	185	466	898	1398	1797	1391	1206	636	365	43	8419	8029
LA CROSSE	10	5	173	406	883	1406	1781	1340	1137	533	297	18	7989	7589
MADISON	28	18	196	431	853	1310	1718	1258	1124	582	312	22	7852	7863
MILWAUKEE	7	7	145	383	823	1259	1615	1211	1122	716	421	65	7774	7635
WYOMING														
CASPER	1	0	322	733	894	1225	1222	1119	1025	714	456	71	7782	7410
CHEYENNE	3	5	302	732	874	1108	1087	1093	1007	713	481	99	7504	7278
LANDER	3	0	357	733	970	1344	1187	1083	997	716	428	91	7909	7870
SHERIDAN	10	4	342	686	948	1347	1407	1122	968	631	358	107	7930	7683

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Note: "Heating Degree Days" has been discontinued in the June issues of this publication. Data which would usually be shown in that table for June are shown in the last three columns of the above Table.

COOLING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	394	520	
HUNTSVILLE	397	522	
MOBILE	531	1010	
MONTGOMERY	453	662	
ALASKA			
ANCHORAGE	0	0	
ANNETTE	0	0	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	74	74	
BIG DELTA	15	15	
COLD BAY	0	0	
FAIRBANKS	73	73	
GULKANA	1	1	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	0	0	
KOTZEBUE	14	14	
MC GRATH	27	27	
NOME	4	4	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	0	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	28	28	
PHOENIX	614	1071	
TUCSON	493	747	
WINSLOW	276	297	
YUMA	589	1081	
ARKANSAS			
FORT SMITH	416	529	
LITTLE ROCK	435	544	
CALIFORNIA			
BAKERSFIELD	389	554	
BISHOP	197	205	
BLUE CANYON	10	10	
EUREKA U	0	0	
FRESNO	296	368	
LONG BEACH	111	191	
LOS ANGELES	33	100	
LOS ANGELES U	131	342	
MT SHASTA R	M	8	
OAKLAND	9	9	
RED BLUFF	263	316	
SACRAMENTO	186	208	
SANDBERG R	82	82	
SAN DIEGO	31	65	
SAN FRANCISCO	12	12	
SAN FRANCISCO U	7	7	
SANTA MARIA	3	10	
STOCKTON	233	270	
COLORADO			
ALAMOSA	3	3	
COLORADO SPRINGS	126	127	
DENVER	149	149	
GRAND JUNCTION	284	320	
PUEBLO	259	263	
CONNECTICUT			
BRIDGEPORT	161	162	
HARTFORD	201	208	
DELAWARE			
WILMINGTON	261	277	
DIST.OF COLUMBIA			
WASHINGTON DULLES	237	258	
WASHINGTON NATIONAL	337	389	
FLORIDA			
APALACHICOLA U	492	910	
DAYTONA BEACH	420	989	
FORT MYERS	467	1367	
JACKSONVILLE	421	862	
KEY WEST	544	2035	
LAKELAND U	466	1233	
MIAMI	488	1844	
ORLANDO	505	1418	
PENSACOLA	487	922	
TALLAHASSEE	439	721	
TAMPA	490	1204	
WEST PALM BEACH	484	1529	
GEORGIA			
ATHENS	394	544	
ATLANTA	374	527	
AUGUSTA	415	563	
COLUMBUS	458	682	
MACON	486	754	
ROME	392	494	
SAVANNAH	474	808	
HAWAII			
HILO	306	1269	
HONOLULU	376	1826	
KAHULUI	374	1623	
LIHUE	393	1797	
IDAHO			
BOISE	81	112	
LEWISTON	42	77	
POCATELLO	29	29	
ILLINOIS			
CAIRO U	460	589	
CHICAGO O HARE	275	302	
CHICAGO MIDWAY	341	372	
MOLINE	355	396	
PEORIA	359	395	
ROCKFORD	288	305	
SPRINGFIELD	425	490	
INDIANA			
EVANSVILLE	437	514	
FORT WAYNE	294	315	
INDIANAPOLIS	324	343	
SOUTH BEND	283	303	
IOWA			
BURLINGTON	348	398	
DES MOINES	362	401	
DUBUQUE	260	276	
SIOUX CITY	329	355	
WATERLOO	217	224	
KANSAS			
CONCORDIA	344	373	
DODGE CITY	369	425	
GOODLAND	254	259	
TOPEKA	381	447	
WICHITA	425	509	
KENTUCKY			
COVINGTON	335	368	
LEXINGTON	266	291	
LOUISVILLE	351	388	
LOUISIANA			
ALEXANDRIA	449	719	
BATON ROUGE	481	916	
LAKE CHARLES	521	1004	
NEW ORLEANS	456	957	
SHREVEPORT	510	842	
MAINE			
CARIBOU	36	38	
PORTLAND	66	66	
MARYLAND			
BALTIMORE	278	302	
MASSACHUSETTS			
BLUE HILL OBS R	111	115	
BOSTON	155	161	
WORCESTER	87	87	
MICHIGAN			
ALPENA	86	86	
DETROIT	248	272	
DETROIT METRO	205	219	
FLINT	187	198	
GRAND RAPIDS	218	226	
HOUGHTON LAKE	131	136	
LANSING	202	216	
MARQUETTE U	57	63	
MUSKEGON	151	156	
SAULT STE MARIE	34	34	
MINNESOTA			
DULUTH	32	32	
INTERNATIONAL FALLS	56	56	
MINNEAPOLIS	218	225	
ROCHESTER	218	220	
ST CLOUD	160	161	
MISSISSIPPI			
JACKSON	453	686	
MERIDIAN	450	647	
MISSOURI			
COLUMBIA REGIONAL	379	448	
KANSAS CITY	437	577	
ST JOSEPH	407	562	
ST LOUIS	427	509	
SPRINGFIELD	384	446	
MONTANA			
BILLINGS	69	73	
GLASGOW	67	76	
GREAT FALLS	50	56	
HAVRE	52	70	
HELENA	14	14	
KALISPELL	6	6	
MILES CITY	136	151	
MISSOULA	14	15	
NEBRASKA			
GRAND ISLAND	338	359	
LINCOLN U	397	445	
NORFOLK	288	294	
NORTH PLATTE	177	178	
OMAHA	393	439	
SCOTTSBLUFF	150	151	
VALENTINE	201	205	
NEVADA			
ELKO	7	7	
ELY	8	8	
LAS VEGAS	556	781	
RENO	11	11	
WINNEMUCCA	45	45	
NEW HAMPSHIRE			
CONCORD	95	95	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	178	184	
ATLANTIC CITY U	122	124	
NEWARK	307	332	
TRENTON U	237	251	
NEW MEXICO			
ALBUQUERQUE	277	308	
CLAYTON	200	221	
ROSWELL	402	579	
NEW YORK			
ALBANY	98	107	
BINGHAMTON	101	114	
BUFFALO	119	128	
NEW YORK U	290	319	
NEW YORK KENNEDY	231	247	
NEW YORK LA GUARDIA	229	241	
ROCHESTER	133	143	
SYRACUSE	145	162	
NORTH CAROLINA			
ASHEVILLE	232	260	
CAPE HATTERAS R	294	362	
CHARLOTTE	354	449	
GREENSBORO	298	348	
RALEIGH	320	404	
WILMINGTON	397	580	
NORTH DAKOTA			
BISMARCK	67	67	
FARGO	109	112	
WILLISTON	62	65	
OHIO			
AKRON	217	232	
CINCINNATI ABBE OB	334	375	
CLEVELAND	198	220	
COLUMBUS	266	287	
DAYTON	298	329	
MANSFIELD	211	227	
TOLEDO	219	233	
YOUNGSTOWN	164	180	
OKLAHOMA			
OKLAHOMA CITY	416	568	
TULSA	442	582	
OREGON			
ASTORIA	2	2	
BURNS U	M	8	
EUGENE	3	3	
MEACHAM	4	4	
MEDFORD	16	18	
PENDLETON	50	86	
PORTLAND	14	19	
SALEM	5	5	
SEXTON SUMMIT R	3	7	
PACIFIC AREA			
GUAM TAGUAC R	443	2562	
JOHNSTON	424	2262	
KOROR R	488	3080	
KWAJALEIN	484	2978	
MAJURO	462	2826	
PAGO PAGO	410	2634	
PONAPE R	442	2710	
TRUK MOEN ISLAND	487	2998	
WAKE	531	2632	
YAP R	469	2906	
PENNSYLVANIA			
ALLENTOWN	184	188	
ERIE	105	112	
HARRISBURG	244	258	
PHILADELPHIA	292	311	
PITTSBURGH	204	217	
SCRANTON	145	161	
WILLIAMSPORT	189	20[illegible]	
RHODE ISLAND			
BLOCK ISLAND	38	38	
PROVIDENCE	[illegible]	160	
SOUTH CAROLINA			
CHARLESTON	469	761	
CHARLESTON U	458	753	
COLUMBIA	465	709	
GRNVLLE-SPRTNBRG	342	450	
SOUTH DAKOTA			
ABERDEEN	186	194	
HURON	217	218	
RAPID CITY	81	81	
SIOUX FALLS	211	216	
TENNESSEE			
BRISTOL	273	310	
CHATTANOOGA	406	514	
KNOXVILLE	333	403	
MEMPHIS	474	630	
NASHVILLE	380	458	
OAK RIDGE R	323	385	
TEXAS			
ABILENE	469	843	
AMARILLO	334	459	
AUSTIN	570	1202	
BROWNSVILLE	541	1887	
CORPUS CHRISTI	542	1531	
DALLAS	607	1039	
DEL RIO	461	1221	
EL PASO	492	817	
FORT WORTH	546	839	
GALVESTON U	500	974	
HOUSTON INTERCON	466	1005	
LUBBOCK	408	614	
MIDLAND	410	733	
PORT ARTHUR	517	1117	
SAN ANGELO	482	1006	
SAN ANTONIO	564	1347	
VICTORIA	540	1301	
WACO	576	1129	
WICHITA FALLS	573	891	
UTAH			
MILFORD	118	118	
SALT LAKE CITY	136	141	
WENDOVER	184	189	
VERMONT			
BURLINGTON	87	104	
VIRGINIA			
LYNCHBURG	263	302	
NORFOLK	336	418	
RICHMOND	297	353	
ROANOKE	239	283	
WALLOPS ISLAND	204	221	
WASHINGTON			
OLYMPIA	3	3	
QUILLAYUTE	3	3	
SEATTLE-TACOMA	2	6	
SPOKANE	17	27	
STAMPEDE PASS R	M	0	
WALLA WALLA U	48	83	
YAKIMA	16	50	
WEST INDIES			
SAN JUAN P.R.	545	2690	
WEST VIRGINIA			
BECKLEY	132	146	
CHARLESTON	265	297	
ELKINS	128	134	
HUNTINGTON	258	293	
PARKERSBURG U	270	303	
WISCONSIN			
GREEN BAY	195	196	
LA CROSSE	237	241	
MADISON	229	242	
MILWAUKEE	148	148	
WYOMING			
CASPER	58	58	
CHEYENNE	58	58	
LANDER	66	66	
SHERIDAN	49	49	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
					† DAMAGE			† DAMAGE				† DAMAGE				† DAMAGE			† DAMAGE				† DAMAGE				† DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	1	1			3			4	5			5																	
Alaska*																													
[illegible]*																													
Arkansas								4	5			4	3	1	3														
California*																													
Colorado	5	3						3	4			4																	
Connecticut												4				4													
Delaware												3																	
Florida	6	5			3				5			5		7	16	5													
Georgia	2	1			4			4	6			5	5	1	1	5													
Hawaii	1	1			4																								
Idaho								3	4			4				3				2	2								6
Illinois	2	2						4	1			3	3																
Indiana								6	6		2	4	3		4	5												5	4
Iowa	5	2	1	4	5			5	6		4	7	6		7	5													
Kansas	11	7		3	5			6	6		7	5	6		1	5												5	5
Kentucky								[illegible]	[illegible]			°5	C	1	10	5												°5	C
Louisiana	3	2			5						5	5	3	3		5												4	
Maine	1	1			5			4	3			4																4	3
Maryland								4		1		5	3	1	2	5													
Massachusetts								3	4			5	4			5												4	
Michigan	4	3		3	5			4	4	1	3	5	4		2	5													
Minnesota	3	3			3			4	6		10	6	5			4													
Mississippi	2	2			5			3	4	1	2	5	3	1		5													
Missouri	6	5		1	4			4			3	5		2	1														
Montana	6	3			4			4	6																				
Nebraska	22	7			5			5	6		20	6	4	1	3	5													
Nevada*																													
New Hampshire												5				4												3	
New Jersey*																													
New Mexico	3	2			4			2	3																	1			
New York								°4	C		2	6			2	5												6	
North Carolina								4	7		12	6	4		14	6											1	5	4
North Dakota	10	4		1	5				6			5																	
Ohio	2	1			6			[illegible]	[illegible]	2	3	6		5	1	6													
Oklahoma	8	4			5			5	5		14	6		1	1	4													
Oregon*																													
Pacific Area*																													
Pennsylvania	1	1			4			3	3		2	5			9	5											1	4	
Puerto Rico*																													
Rhode Island												4				4													
South Carolina								2	6		10	5	5		2	5													
South Dakota	35	12			5			5	6			6				3													
Tennessee	3	2						5	[illegible]		8	°5	C	3	3	5											1	°5	C
Texas	33	13		20	5			5	7		6	6	5	1	1	5												5	6
Utah*																													
Vermont								3				4				4												3	
U.S. Virgin Is.*																													
Virginia								3	C			5		1	1	4												°5	C
Washington*																													
West Virginia												4			1	4												4	
Wisconsin	15	8		5	6			5	4			5				6													
Wyoming	4	3			4			5	4																				

† Includes crop damage.
° Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
JUNE 1971

Elmer R. Nelson, Office of Hydrology

Extensive flooding occurred along the Nueces River from below Crystal City, Tex., to below Cotulla, Tex., during the latter part of June. Major flooding occurred at Cotulla with a crest on July 1 ranking as the third highest of record.

Moderate to severe flooding occurred in the Shenandoah Basin in Virginia and West Virginia during the latter part of May and the first part of June.

Serious flooding occurred during June in Alaska on the lower Yukon, Kuskokwim, and Kobuk Rivers due to ice jams and greater than normal snowpack.

ATLANTIC SLOPE DRAINAGE

Precipitation for June in the Delaware River Basin above Trenton, N. J., averaged around 2.2 inches, or about 65 percent of normal. In the Delaware River Basin below Trenton and in central and southern New Jersey, precipitation averaged about 1.5 inches, or about 41 percent of normal. In northern New Jersey, precipitation averaged around 1.8 inches or 44 percent of normal. Many stations in southeastern Pennsylvania and southern New Jersey recorded less than 1 inch of rainfall. Only a few stations reported over 3 inches of precipitation and these were in the lower Lehigh River Valley. All major water supply reservoirs in New Jersey dropped to below capacity during June. By the end of the month, reservoirs were down to 93 percent of capacity, a loss of almost 6 billion gallons. New York City's three reservoirs on the upper Delaware River lost 29 billion gallons during June and were 89 percent of capacity by the end of the month.

The flooding in the Shenandoah Basin in Virginia on May 29 to June 4 was due to 3 to 5 inches of rain. The runoff was high as the soil was saturated due to a wet May. There were periods of very heavy rain, where 1 inch of rain fell in 1 hour, with nearly all of it runoff. The overflows began as flash floods in the headwaters of the Shenandoah River. General flooding developed along the entire river. The flooding along the South Fork of the Shenandoah was moderate to severe. The stages in the lower Shenandoah were the highest since 1955. The storm, centered over the Shenandoah Valley, moved downstream through the basin and contributed to higher crest stages. No large population centers were seriously affected by the flooding of the Shenandoah River or its tributaries. Damage was predominantly confined to resort areas, riverside and mobile homes, highways and agricultural bottom land. The Corps of Engineers estimated the flood damages throughout the basin at approximately $750,000 to $1 million.

The flooding in eastern North Carolina during June was due to the heavy rains that occurred during the latter part of May. The Roanoke River at Randolph, Va., which crested nearly 3 feet above flood stage on May 31, receded within its banks on June 1. Kerr Reservoir continued at a rather high level during most of June. Regulated releases prevented any flooding of consequence downstream. At Williamston, N. C., the stage remained from bankfull to 1 foot above from May 24 to June 24. Minor flooding occurred along the upper Neuse River during the first 2 days of June. A local downpour of around 1 inch caused street flooding in Greensboro, N. C., during the afternoon of the 23d.

EAST GULF OF MEXICO DRAINAGE

The Pearl River which went above flood stage at Bogalusa, La., on May 9 receded within its banks on June 2. Downstream at Pearl River, La., the Pearl River continued above flood stage from May 15 to June 4. By the middle of June, farming and timber cutting operations were almost back to normal. The flood damage during June was minimal in comparison to May when it was estimated by the Corps of Engineers to be $1.2 million.

MISSISSIPPI SYSTEM

Upper Mississippi Basin--Very heavy rains during the night of the 10th in the Franklin-Fairfax area along the Minnesota River in south-central Minnesota caused flooding along small streams and creeks in the area. Rainfall amounts from 4 to near 11 inches (Franklin) were reported in this area. This is the third known occurrence in Minnesota of 24-hour rainfall exceeding 10 inches. The two previous occurrences were June 16, 1957, in the Marshall area and May 20, 1960, in and around Jordan. These heavy rains resulted in loss of livestock, bridge and road damage, and washouts and damage to a State Park Recreational area. Additional information on the Franklin 10-inch-plus rainfall will be found in the June 1971 issues of Storm Data and Minnesota Climatological Data.

Locally heavy rains in northeastern Iowa on June 20 caused the Turkey River at Garber, Iowa, to overflow. No damage resulted. Slow moving thunderstorms in east-central Iowa late on the 24th and early on the 25th produced rainfall amounts in excess of 3 inches causing the Wapsipinicon and Maquoketa Rivers to overflow. Damage was negligible.

Heavy rains in the upper reaches of the Raccoon River on the 6th caused minor flooding at Van Meter, Iowa, on the 7th. The precipitation totalled about 4.5 inches in about 6 hours. No damage was reported.

Missouri Basin--Snowmelt runoff in the upper Missouri Basin in Montana kept river levels high but below flood stage during June, except during periods following moderate or heavy rainfall. Levels in the headwater areas rose above flood stage four times. Only minor lowland flooding occurred each time causing little damage. The Gallatin River near Gateway, Mont., rose to its highest stage, 33.45 feet, since 1957. The old record set last year was 33.35 feet. Flooding along the Yellowstone River was confined to pasture and haylands. No major losses were reported.

Prolonged thunderstorm activity from the 4th through the 10th caused flooding on the Floyd River and its tributaries in northwestern Iowa. Some areas received 6 to 8 inches of rain during the 7-day period. The first flood crest was due to rainfall amounts ranging up to 4 inches on the 4th-5th in northwest Iowa, southeast South Dakota, and southwest Minnesota. Additional rainfall of 2 to 3 inches in the same area caused a second crest. Lowland flooding occurred on the West Branch of the Floyd River at Struble, Iowa, on the 10th. The Rock River at Rock Valley, Iowa, crested near bankfull on the 8th and 10th. The Big Sioux River at Akron, Iowa, crested 0.3 foot below flood stage on the 11th. Brazile Creek at Niobrara, Nebr., ran a little over bankfull stage on the 10th-11th. The major damage was to drowning of corn crops from the prolonged flooding created by several rises. Other damages were to fences, sheds, and small farmstead bridges and dikes. The damages were estimated at $135,000.

Snowmelt from the higher elevations of the Rocky

Mountains and rainfall from storm systems moving across the Platte River Basin in Nebraska kept the Platte River above flood stage near Grand Island, Nebr., from May 5 to July 1. The North Platte River at North Platte, Nebr., continued above flood level from May 12 through June 29.

Heavy general rains beginning during the evening of the 9th and ending on the early morning of the 11th caused flooding on Lyon Creek in the lower Smoky Hill River Basin. The crest near Woodbine, Kans., on the 10th was 9.5 feet above flood stage. Damage was relatively minor and confined to agricultural overflows.

Heavy rains over the headwaters of the Missouri Basin on the 25th-26th with lighter amounts on the 27th-28th caused flooding along the main stem of the Missouri at Toston, Mont., on the 28th-29th. The crest on the 28th was 0.3 foot above flood stage. Snowmelt runoff throughout the month kept the river levels high. Runoff from the Big Sioux and Floyd Rivers in Iowa, and the Platte River in Nebraska, caused near bankfull stages in the reach below Sioux City, Iowa, to the mouth of the Platte River from the 8th to the 18th. Considerable flooding occurred along the main stem of the Missouri below the mouth of the Platte River during this period. Many acres of lowland and cropland were flooded from the mouth of the Platte River southward into Kansas and Missouri. Some lowland flooding occurred from Lexington to Waverly, Mo. County Extension Agents in Nebraska, Iowa, and northwest Missouri indicated much of the crops were lost through seepage from high underground water levels. Preliminary damages were estimated at $1 million.

Ohio Basin--Severe flash flooding occurred on Ten Mile Creek at Wallace, W. Va., on the 5th. The Corps of Engineers reported the stage of Ten Mile Creek to be the flood of record at Wallace, W. Va., exceeding the 1963 flood. Further downstream below Dallas, W. Va., the crest was 3 feet or more below the 1963 flood. This flooding was due to 5 to 7 inches of rain that occurred in a 3-hour period. Thousands of dollars' worth of damage was reported. Thirty to 40 families sustained losses and were helped by the Red Cross.

Major flash flooding occurred on Slate, Jack, and Brush Creeks in Westmoreland County southeast of Pittsburgh, Pa. During the evening of the 13th storm totals of 5 inches occurred around Jeannette, Pa. in a period of 1 to 1-1/2 hours. About 250 to 300 homes were affected by the high water. Damage was estimated at several hundred thousand dollars.

Some flooding of small creeks occurred in the vicinity of Waterloo, Ohio, during the evening of the 13th. Little or no damage occurred. A flash flood occurred on Federal Creek near Lawrence-Gallia County border in West Virginia during the evening of the 13th. Several cars were flooded and a bridge was washed out. Locally heavy rain caused some flash flooding of small creeks in the vicinity of Waterloo and Jackson, Ohio, during the afternoon of the 14th. Considerable damage resulted from the flash flood in the vicinity of Pikeville, Ky., during the afternoon and evening of the 14th. The weather station at Pikeville, Ky., reported 2.26 inches of precipitation. During the afternoon of the 16th, a thunderstorm in East Rainelle, W. Va., caused some flooding of a small creek that flows through the Bellwood area. No estimate of damage is available. A flash flood occurred in eastern Pulaski County in Virginia during the night of the 22d or the morning of the 23d. Most of the flooding occurred between Dublin and Parrott, Va.

Intermittent, heavy thundershowers caused flooding on the Little Wabash at Wilcox, Ill., on the 16th-17th and 20th-22d. Local storm totals of over 3 inches were recorded in less than 2 hours. In the vicinity of Evansville, Ind., 1.77 inches of rain was reported on the 15th. Over 4 inches was reported on the 19th from the area just west of Evansville, Ind. The total rainfall at Evansville, Ind., during the month was 6.89 inches which is the third greatest total on record for the month of June.

Localized flash flooding occurred in Asheville, N. C., on the 19th due to a severe thundershower. Three to 4 inches of rain occurred in about 1 hour in a low lying area along the Swannanoa River. The high water halted traffic for about 1 hour and caused some road damage. Three young persons were swept through a small culvert, one of which suffered injuries. The high water completely covered the Municipal Golf Course along the Swannanoa River Road.

White Basin--The Cache River at Patterson, Ark., rose above flood stage on June 1 and continued at or slightly above flood stage for about 48 hours. The crest on the 2d was 0.1 foot above flood stage. The rise was due to heavy rain that occurred over the basin on May 24. No damage resulted from the slight flooding.

Arkansas Basin--Flooding in the Arkansas Basin during June was confined principally to the Cottonwood and the upper Neosho Rivers in Kansas. The high water was due to frequent thundershowers. Storms during the first 3 days of the month totalled 6 to 7 inches. Subsequent rains kept the stream flow at a relatively high level through the middle of the month. The total damages were estimated at nearly $1 million.

Heavy thundershowers during the night of June 2 produced brief flooding in low areas and underpasses in southern and southeastern Tulsa, Okla.

WEST GULF OF MEXICO DRAINAGE

Severe to extreme drouth conditions persisted over the upper Trinity and upper Brazos Basins in Texas during June. Rainfall amounts averaged less than 2 inches.

Locally heavy rains on the upper West Nueces Basin in Texas on the 13th caused flash flooding along the West Nueces River late on the 13th and on the 14th, closing farm roads in Edwards and Kinney Counties. Additional rains of 2 to 3 inches on the morning of the 15th caused more flash flooding with the closing of farm roads through the 15th.

Local flash flooding occurred on the Atascosa River, San Miguel Creek, and the lower Frio River in Texas due to rain amounts ranging up to 5 inches during the evening of the 15th.

Heavy rains on the 26th and 27th caused flooding on Turkey Creek at Crystal City, Tex. The flooding continued from June 29 to July 5 with a crest 9.6 feet above flood stage on July 1. The flood waters from Turkey Creek reached the Nueces River on the morning of the 29th. This, plus local runoff, caused extensive flooding along the Nueces from below Crystal City to below Cotulla, Tex. Water from San Roque Creek above Cotulla entered the Nueces on the night of the 30th causing major flooding at Cotulla on July 1, with a crest of 25.74 feet, which was 10.7 feet above flood stage. This was the third highest crest of record.

GREAT BASIN

The only river basin in Utah experiencing serious high water during the snowmelt season was the Bear River. This basin had one of the largest mountain snowpacks during the past winter and early spring that had occurred in recent years.

The U. S. Geological Survey Office at Logan, Utah, reported the highest crest at Logan since 1916. The lower Bear River near Corinine, Utah, reported a

streamflow of 7,360 c.f.s., which compares with the most recent high water period of 1952 when 7,200 c.f.s. was recorded. General flooding of agricultural lands occurred in many areas of the Bear River Basin in southeastern Idaho and extreme southwestern Wyoming. Very little damage occurred to residences and businesses.

PACIFIC SLOPE DRAINAGE

Columbia Basin--Extremely cool weather was observed throughout the Columbia Basin during June. Temperatures were above normal on only four days, 12th, 20th, 21st, and 22d. However, measurable precipitation was observed somewhere in the Columbia Basin on every day of the month. There were two main rainy periods. The first occurred during the first week of June, while the heavier rain occurred during the last week of June.

Streams throughout the Snake River Drainage flowed greater than normal throughout the month. The below normal temperatures were instrumental in preventing major flood problems. Nearly all streams in the Snake Basin were at bankfull stage or overflowing.

Locally heavy rain caused flash flooding along Pocatello Creek and on South First Avenue in Pocatello, Idaho, on the 9th-10th. County roads were badly washed, but remained passable. Some 1,200 telephones became inoperative. Some water spilled into a few basements.

Major flooding occurred in the Payette drainage of central Idaho on the 27th-28th due to snowmelt augmented by rainfall runoff. Several stations reported precipitation amounts in excess of 1 inch during the last week of June. The railroad bed, as well as some 200 acres of farmland in the vicinity of Montour, Idaho, was flooded. Minor damage was reported at Horseshoe Bend and along the Payette River below Emmett, Idaho. Mud slides occurred on Highway 55 near Banks, Idaho, at the confluence of the North and South forks of the Payette River.

In eastern Idaho, the Henrys Fork, Teton, and South Fork of the Snake River were at bankfull stage or above during the last week of the month. Many acres of farm and pasture lands were inundated along the Teton River, below the proposed site of the lower Teton Dam. Spring plantings of potatoes, sugar beets, and grain between Sugar City and Teton City rotted under the flooded fields. Most pasture lands remained under water too long, killing pasture grasses. Crop losses in this area are expected to total tens of thousands of dollars.

The Hoback, Salt, and Grays Rivers in West Wyoming above the Palisades Reservoir, were extremely high with some 8,000 acres of farmland under water. Many county roads were washed out. The Palisades Reservoir was instrumental in preventing excessive flooding lower on the Snake River.

In eastern Oregon, rainfall amounts of 0.5 to 1 inch on the 26th-29th produced overbank flows on several Wallowa mountain streams. Hurricane Creek ran bankfull in the upper valley reaches but overflowed in the vicinity of Enterprise, Oreg., flooding a fish hatchery road. Minor flooding was reported where Hurricane Creek enters the Wallowa River. The Lostine River overflowed its banks and flooded the valley about 3 miles upstream from Lostine, Oreg.

Streamflow in the lower Columbia River was controlled by reservoir storage and changed very little during the first 3 weeks of June before receding below flood stage on June 30. The stage of the Columbia River at Vancouver, Wash., was 18.8 feet on June 1 and remained near 18 feet until the 21st.

Records of the U. S. Geological Survey indicate natural mean flow of the Columbia River at Vancouver, Wash., during June was 630,800 c.f.s., or 113 percent of the 15-year average. Mean flow of the Willamette River at the mouth for June, under natural conditions, was reported as 26,120 c.f.s., or 129 percent of average.

ALASKA

Serious flooding occurred in Alaska on the lower Yukon, Kuskokwim, and Kobuk Rivers due to ice jams and greater than normal snowpack. Backwater from ice jams resulted in a stage of 0.6 foot above the previous maximum stage of 1963 on the Yukon River near Ruby, Alaska. Property in villages was damaged by large floating ice cakes as well as by water and silt.

FLOOD STAGE DATA

(Gage datum is mean sea level unless otherwise specified) JUNE 1971

River and station	Flood stage	Above flood stages -dates- From-	To-	Crest* Stage	Date[1]
	Ft.			Ft.	
Front Royal, Va.	[illegible]	[illegible] 30	1	17.8	May 31
Shenandoah:					
Riverton, Va.	22	May 31	1	23.5	[illegible] 31
Millville, W. Va.	13.5	[illegible] 31	2	16.9	1
[illegible]	[illegible]	May 30	1	24.3	1
Columbia, Va.	[illegible]	[illegible] 30	1 E	27	May 31
Cartersville, Va.	[illegible]	[illegible] 30	1	21.5	1
State Farm, Va.	[illegible]	May 30	2 E	18	1
Richmond (Westham), Va.	12	[illegible] 30	2	17.0	1
Richmond (City Locks), Va.	[illegible]	May 30	3	14.2	2
Roanoke:					
Randolph, Va.	21	May 30	1	23.9	May 31
[illegible]	10	May 24	24	11.2	13
Neuse: Neuse, N. C.	13	1	1	14.2	1
Smithfield, N. C.	13	1	2	13.7	2
[illegible]					
Pearl: Bogalusa, La.	[illegible]	[illegible] 9	2	19.4	May 28
Pearl River, La.	12	May 1	1	14.8	[illegible] 27
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Turkey: Garber, Iowa	17	20	20	20.9	20
[illegible]					
Maquoketa, Iowa	13	25	26	14.8	25
[illegible]	10	25	27	10.5	25
[illegible]					
Van Meter, Iowa	[illegible]	7	7	13.3	7
[illegible]					
Divide (nr.), Mont.	6.5	May 29	1	7.2	1-2
		31	14	6.5	11-14
Melrose, Mont.	[illegible]	[illegible] 30	1	6.3	2
Gallatin:					
Gateway (nr.), Mont.	33	27	27	33.45	27
Logan, Mont.	7.5	11	11	7.6	11
		23	24	7.6	23
		27	29	8.7	28
Clarks Fork:					
Edgar, Mont.	8.5	23	25	8.7	23
Yellowstone:					
Livingston, Mont.	8	22	25	8.4	23
[illegible]	7	23	25	7.5	23
Brazile Creek:					
[illegible]	B15	10	11	15.6	10
[illegible]	12	4	6	15.6	5
		6	9	16.3	7
LeMars, Iowa	20	5	6	20.8	5
		8	9	21.6	8
Merrill, Iowa	12	8	9	13.2	8
Little Sioux:					
Spencer, Iowa	[illegible]	7	13	13.4	8
Cherokee, Iowa	[illegible]	8	9	18.3	8
		10	13	17.7	12
Linn Grove, Iowa	12	6	17	16.95	10

River and station	Flood stage	Above flood stages -dates- From-	To-	Crest* Stage	Date[1]
	Ft.			Ft.	
MISSISSIPPI SYSTEM-Cont.					
Missouri Basin-Cont.					
North Platte:					
[illegible]	[illegible]	May 12	29	6.6	10-11
Platte: Grand Island, (nr.), Nebr.	3.5	May 5	July 1	4.9	14
Lyon Creek:					
Woodbine (nr.), Kans.	17	10	11	26.5	10
Missouri:					
Toston, Mont.	10	28	29	10.3	28
Nebraska City, Nebr.	18	11	16	19.0	12
[illegible]	17	9	18	17.95	13
St. Joseph, Mo.	17	8	18	18.6	14
Lexington, Mo.	22	13	17	22.7	14
Waverly, Mo.	18	10	18	19.4	14
Ohio Basin					
Little Wabash:					
[illegible]	16	16	17	16.6	16
		20	22	18.2	21
White Basin					
Cache: Patterson, Ark.	7	1	3	7.1	2
[illegible]					
Cottonwood:					
Florence, Kans.	22	11	12	22.25	12
Cottonwood Falls, Kans.	9	2	3	12.5	3
		11	11	9.0	11
Plymouth, Kans.	28	1	5	34.3	3
		11	15	32.8	12
[illegible]	20	1	6	25.5	3
		11	15	22.4	13
Neosho: Neosho Rapids, Kans.	22	3	6	25.3	4
WEST GULF OF MEXICO DRAINAGE					
Turkey Creek:					
Crystal City, Tex.	8	29	July 5	17.6	July 1
Nueces: Asherton, Tex.	20	29	[illegible]	29.7	July 2
Cotulla, Tex.	15	29	July 27	25.7	[illegible] 1
[illegible]					
Columbia Basin					
Henrys Fork:					
[illegible]	9	May 6	9	9.85	2
		11	14	9.1	12-13
		18	July 1	9.5	29
Big Wood:					
Hailey, Idaho	4.5	May 27	3	5.1	May 29-30
		8	28	5.4	14
				5.6	23
Payette					
Horseshoe Bend, Idaho	14	27	28	14.45	27
Little Salmon:					
[illegible], Idaho	10	28	28	11.5	28
Salmon: Salmon, Idaho	7	14	15	7.1	15
		23	25	7.1	24
		27	27	7.1	27
Willamette:					
[illegible], Oreg.	18	May 30	3	18.3	May 31-1
Columbia:					
Vancouver, Wash.	16	May 26	30	18.9	[illegible] 31
				18.3	14-15
				17.3	27

* Provisional

[illegible]

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	86	16.0	12.2	19	1.0
1000	30	141			22	1.0
950	30	577	15.6	8.0	29	3.1
900	30	1,035	13.4	5.5	29	4.9
850	30	1,514	11.1	2.4	29	5.8
800	30	2,018	8.1	.0	30	7.4
750	30	2,549	5.7	-5.7	30	8.8
700	30	3,111	2.7	-10.1	29	10.0
650	30	3,707	.1	-15.0	29	11.1
600	30	4,345	-3.0	-19.9	29	11.8
550	30	5,029	-7.0	-23.8	29	12.3
500	30	5,766	-11.7	-27.8	30	13.5
450	30	6,565	-16.9	-32.7	30	14.9
400	30	7,438	-23.2	-38.2	30	15.6
350	30	8,405	-30.5	-44.8	29	16.6
300	30	9,478	-39.3	-50.9	30	18.3
250	30	10,701	-48.8		30	20.3
200	30	12,140	-56.7		30	22.0
175	30	12,982	-59.1		30	20.5
150	30	13,947	-59.4		30	17.5
125	30	15,086	-59.8		30	14.7
100	29	16,480	-60.6		30	9.7
80	28	17,872	-59.1		32	5.4
70	28	18,713	-57.8		34	3.0
60	28	19,689	-56.0		03	2.5
50	28	20,854	-54.2		07	4.0
40	26	22,294	-52.3		08	5.8
30	26	24,168	-49.5		09	7.8
25	25	25,364	-47.7		09	9.0
20	24	26,842	-45.1		09	10.5
15	22	28,780	-41.8		10	11.9
10	15	31,543	-37.1		09	9.9
7						
5						
4						

ALBUQUERQUE, N. MEX. — 838 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,619	16.0	-3.5	06	1.8
1000	30	90				
950	30	540				
900	30	1,010				
850	30	1,501				
800	30	2,020	18.5	-4.7	09	.4
750	30	2,569	15.1	-7.7	27	2.1
700	30	3,148	10.4	-10.4	27	3.5
650	30	3,759	5.5	-12.4	26	4.2
600	30	4,406	.2	-14.4	24	5.3
550	30	5,096	-5.4	-17.5	24	6.0
500	30	5,836	-11.3	-21.5	24	7.6
450	30	6,636	-16.8	-28.1	24	8.8
400	30	7,510	-23.0	-36.5	24	9.6
350	29	8,480	-30.1	-44.5	24	10.8
300	29	9,555	-38.6	-51.[illegible]	25	12.8
250	29	10,783	-47.7		25	14.2
200	29	12,228	-55.9		25	15.4
175	29	13,073	-58.2		26	14.4
150	29	14,038	-61.1		25	11.6
125	29	15,160	-64.8		25	9.4
100	28	16,515	-66.8		24	5.8
80	28	17,866	-65.3		17	1.6
70	28	18,684	-62.7		09	2.7
60	28	19,641	-60.0		09	5.4
50	28	20,785	-57.7		09	7.7
40	27	22,204	-55.2		09	8.6
30	27	24,054	-51.9		09	10.8
25	27	25,242	-49.6		09	11.7
20	26	26,714	-46.9		09	13.1
15	25	28,633	-44.0		09	14.4
10	21	31,383	-40.4		09	15.8
7	10	33,843	-36.0			
5						
4						

AMARILLO, TEXAS — 891 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,095	18.2	12.3	19	4.5
1000	30	89				
950	30	537				
900	30	1,005				
850	30	1,498	19.5	11.2	20	11.5
800	30	2,019	18.2	5.5	21	10.1
750	30	2,570	15.1	-.6	23	7.8
700	30	3,150	10.8	-5.2	24	5.4
650	30	3,763	5.9	-8.4	25	3.6
600	30	4,412	.6	-13.0	25	2.4
550	30	5,1[illegible]	-4.6	-17.9	25	2.8
500	30	5,846	-10.5	-23.6	25	3.1
450	30	6,649	-15.7	-29.5	25	5.6
400	30	7,526	-22.1	-35.8	25	6.8
350	30	8,498	-29.1	-42.3	25	8.0
300	30	9,578	-37.5	-49.5	23	10.5
250	30	10,810	-47.4		23	13.8
200	30	12,255	-56.7		24	15.5
175	30	13,095	-59.9		24	15.8
150	30	14,053	-61.7		25	12.4
125	30	15,174	-65.0		25	[illegible].4
100	30	16,525	-67.0		24	3.7
80	30	17,872	-66.1		12	2.4
70	30	18,689	-62.6		09	4.1
60	30	19,644	-60.6		09	5.9
50	30	20,786	-58.0		09	7.6
40	27	22,204	-55.2		09	8.9
30	29	24,056	-51.7		09	10.9
25	29	25,245	-49.4		09	12.0
20	29	26,717	-46.7		09	13.7
15	26	28,640	-44.0		08	15.3
10	14	31,371	-39.6		09	16.9

* ANCHORAGE, ALASKA — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	45	8.4	4.4	17	2.8
1000	30	104			17	2.9
950	30	529	8.0	2.6	16	2.8
900	30	974	5.8	.7	14	3.1
850	30	1,440	3.5	-1.5	13	4.2
800	30	1,930	.9	-4.1	13	5.2
750	30	2,446	-2.1	-6.6	12	5.5
700	30	2,992	-5.1	-10.7	13	5.4
650	30	3,571	-8.5	-14.4	13	5.8
600	30	4,187	-12.4	-19.[illegible]	13	6.1
550	30	4,847	-16.5	-25.6	13	5.7
500	30	5,557	-21.0	-3[illegible]	13	5.5
450	30	6,327	-26.4	-35.[illegible]	14	5.4
400	30	7,168	-32.4	-40.6	13	6.1
350	30	8,099	-39.1	-47.[illegible]	14	6.9
300	30	9,137	-46.6		13	6.4
250	30	10,328	-53.4		14	6.5
200	29	11,772	-49.3		14	3.6
175	28	12,646	-48.4		13	2.5
150	28	13,661	-48.4		14	3.2
125	28	14,861	-48.5		13	2.1
100	28	16,330	-48.4		13	2.6
80	28	17,799	-48.3		11	2.9
70	28	18,679	-48.4		10	3.5
60	28	19,694	-48.2		10	4.0
50	27	20,898	-47.8		09	4.8
40	27	22,373	-47.2		10	5.7
30	25	24,295	-45.5		09	7.8
25	24	25,516	-44.2		09	8.6
20	23	27,017	-42.3		09	9.7
15	18	28,973	-39.3		09	9.8

* ANNETTE, ALASKA — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	37	8.7	5.[illegible]	[illegible]	[illegible]
1000	30	130	8.5	[illegible]	[illegible]	[illegible]
950	30	553	6.5	3.[illegible]	[illegible]	[illegible]
900	30	995	4.3	[illegible]	16	2.9
850	30	1,459	2.1	-1.5	16	3.[illegible]
800	30	1,946	-.7	-4.4	15	[illegible]
750	30	2,460	-3.1	-[illegible].9	15	4.7
700	30	3,004	-5.7	-10.7	15	[illegible]
650	30	3,582	-9.0	-16.4	15	[illegible]
600	30	4,197	-12.8	-20.9	15	[illegible]
550	30	4,856	-16.8	-27.3	15	[illegible].4
500	30	5,565	-21.5	-31.7	15	[illegible]
450	30	6,334	-26.8	-36.9	15	[illegible]
400	30	7,173	-33.0	-44.2	15	7.[illegible]
350	30	8,101	-40.2	-49.5	14	8.4
300	30	9,132	-46.2		14	[illegible].1
250	30	10,317	-53.3		15	[illegible]
200	30	11,760	-50.5		17	4.[illegible]
175	30	12,633	-49.6		19	[illegible]
150	30	13,643	-49.8		19	[illegible]
125	30	14,835	-50.4		[illegible]	2.[illegible]
100	30	16,288	-51.0		18	3.0
80	30	17,738	-51.5		16	2.2
70	30	18,604	-51.9		14	[illegible]
60	30	19,604	-51.6		12	2.4
50	30	20,789	-51.0		[illegible]	3.2
40	30	22,246	-49.7		09	4.4
30	30	24,137	-48.0		09	6.6
25	29	25,344	-46.5		09	7.4
20	23	26,835	-44.5		09	8.2
15	26	28,776	-41.1		09	8.9
10	[illegible]	31,574	-35.6		09	10.[illegible]
7	14	34,070	-31.2		09	13.[illegible]
5	16	36,475	-26.2		09	13.9
4	1	38,051	-23.4			

ATHENS, GEORGIA — 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	19.8	17.5	33	1.0
1000	30	142				
950	30	587	21.8	15.9	29	2.8
900	30	1,057	19.7	13.2	29	3.4
850	30	1,547	16.1	10.1	29	3.4
800	30	2,060	12.8	6.5	29	3.3
750	30	2,600	9.4	1.6	29	3.6
700	30	3,169	5.9	-4.1	28	3.6
650	30	3,772	2.4	-8.3	28	3.8
600	30	4,415	-1.1	-14.2	29	3.9
550	30	5,105	-4.8	-18.7	29	4.3
500	30	5,849	-9.1	-24.7	30	4.4
450	30	6,656	-14.3	-29.1	30	4.5
400	30	7,539	-20.5	-35.4	29	5.2
350	30	8,517	-27.5	-41.1	30	5.6
300	30	9,604	-35.9	-49.8	30	5.9
250	30	10,845	-45.9		30	6.5
200	30	12,294	-56.8		30	6.7
175	30	13,130	-61.7		31	6.3
150	29	14,077	-65.4		30	5.9
125	29	15,182	-66.6		34	4.2
100	29	16,530	-67.4		02	3.4
80	29	17,879	-65.5		05	5.8
70	29	18,696	-63.5		06	6.5
60	28	19,650	-60.6		08	7.4
50	27	20,792	-57.9		08	9.1
40	26	22,211	-55.0		09	9.5
30	25	24,064	-52.2		09	11.5
25	23	25,253	-49.7		09	14.0
20	22	26,724	-46.5		09	15.0
15	22	28,645	-43.8		09	15.2
10	16	31,396	-40.6			
7						
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* BARROW, ALASKA — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	8	.5	-.5	08	4.7
1000	26	136	4.0	.3	09	7.3
950	26	556	6.8	-2.7	11	8.2
900	26	1,000	5.8	-6.9	10	6.4
850	26	1,466	3.4	-8.6	10	4.9
800	26	1,955	.8	-10.8	09	4.4
750	26	2,471	-2.1	-14.4	09	3.2
700	26	3,016	-5.4	-19.7	10	2.7
650	26	3,594	-8.7	-23.0	10	2.1
600	26	4,209	-12.4	-27.7	10	1.8
550	26	4,868	-17.1	-31.1	10	1.6
500	26	5,576	-21.9	-36.0	08	1.8
450	26	6,344	-27.0	-40.5	06	2.3
400	26	7,183	-33.0	-46.3	05	2.4
350	26	8,112	-39.6	-51.6	07	1.7
300	26	9,147	-46.7		31	.5
250	26	10,342	-51.8		23	.5
200	26	11,792	-49.4		10	.7
175	26	12,672	-47.7		11	1.3
150	26	13,690	-47.5		09	1.0
125	26	14,895	-47.4		11	1.7
100	25	16,373	-47.0		10	2.8
80	25	17,852	-46.6		09	3.7
70	25	18,739	-46.3		10	4.0
60	22	19,764	-46.0		09	3.8
50	21	20,983	-45.1		08	5.3
40	20	22,472	-44.5		09	5.6
30	18	24,404	-43.4		09	6.8
25	16	25,633	-42.9		08	6.8
20	14	27,130	-41.0			

BARTER IS., ALASKA — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	15	1.5	.7	08	2.5
1000	30	123	4.0	1.8	09	3.6
950	30	544	7.4	.0	10	3.9
900	30	989	6.4	-2.8	11	2.9
850	30	1,456	4.0	-4.8	11	2.0
800	30	1,947	1.2	-8.8	12	1.1
750	30	2,463	-2.1	-12.8	11	1.0
700	30	3,008	-5.4	-17.7	10	.8
650	30	3,586	-9.0	-20.3	11	.6
600	30	4,201	-12.7	-25.4	11	.1
550	30	4,860	-16.9	-29.6	34	.1
500	30	5,568	-21.7	-34.1	35	.2
450	30	6,336	-27.3	-39.5	34	.3
400	30	7,174	-33.3	-44.2	01	1.2
350	30	8,103	-39.2	-50.1	34	2.5
300	30	9,142	-45.2		32	2.6
250	30	10,346	-49.7		29	3.2
200	30	11,809	-47.6		33	1.4
175	29	12,696	-46.7		04	1.2
150	29	13,718	-46.6		05	1.1
125	29	14,929	-46.6		08	1.4
100	29	16,410	-46.4		09	2.2
80	29	17,893	-46.1		09	3.0
70	29	18,783	-45.7		08	3.7
60	28	19,811	-45.3		08	4.3
50	28	21,030	-44.6		08	5.4
40	28	22,526	-44.1		08	6.0
30	28	24,460	-43.2		08	7.0
25	25	25,702	-41.9		08	7.9
20	24	27,221	-40.3		08	8.8
15	24	29,194	-37.8		08	9.3
10	19	31,994	-32.8		09	10.8
7	12	34,530	-27.8			

BETHEL, ALASKA — 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	7.2	6.3	27	1.7
1000	30	81			27	1.9
950	30	504	7.4	3.0	17	1.2
900	30	949	5.6	.6	14	3.3
850	30	1,414	2.7	-2.5	14	4.4
800	30	1,903	.3	-4.9	14	4.6
750	30	2,418	-2.6	-8.6	13	5.3
700	30	2,962	-6.0	-11.4	13	6.4
650	30	3,539	-9.4	-16.8	14	6.5
600	30	4,154	-13.0	-20.5	13	7.1
550	30	4,812	-17.0	-28.1	13	7.7
500	29	5,516	-22.0	-33.0	13	7.9
450	29	6,283	-27.2	-37.4	13	8.7
400	29	7,121	-33.5	-42.5	13	10.1
350	29	8,048	-40.2	-47.8	13	10.4
300	29	9,083	-46.6		13	10.4
250	29	10,277	-51.9		13	8.2
200	29	11,730	-48.3		13	3.2
175	29	12,613	-47.2		14	2.4
150	29	13,632	-47.6		14	2.3
125	29	14,835	-48.3		13	2.0
100	29	16,304	-48.7		12	2.3
80	28	17,776	-48.7		10	2.6
70	27	18,654	-48.6		09	2.9
60	27	19,667	-48.7		09	3.2
50	27	20,867	-48.6		09	4.3
40	25	22,339	-48.0		09	4.8
30	24	24,238	-46.7		09	6.2
25	24	25,450	-45.7		08	7.0
20	24	26,943	-44.0		08	8.4
15	21	28,892	-40.5		09	10.0
10	9	31,724	-34.8			

* BISMARCK, N. DAK. — 953 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	503	13.7	12.[illegible]	[illegible]	.6
1000	30	49				
950	30	525			09	.7
900	30	985	15.6	10.1	23	1.3
850	30	1,469	13.[illegible]	6.4	26	3.[illegible]
800	30	1,979	11.0	2.5	26	4.[illegible]
750	30	2,514	7.7	-1.[illegible]	26	5.[illegible]
700	30	3,0[illegible]	4.1	-5.6	26	7.1
650	30	3,679	.2	-8.9	26	8.4
600	30	4,316	-3.7	-13.4	27	[illegible]
550	30	4,997	-8.0	-18.9	26	[illegible].4
500	30	5,731	-13.0	-22.8	26	[illegible].4
450	30	6,527	-17.8	-29.4	26	13.6
400	30	7,398	-24.0	-36.[illegible]	26	14.9
350	30	8,361	-31.3	-43.[illegible]	26	16.4
300	30	9,431	-39.7	-48.[illegible]	25	17.7
250	30	10,654	-4[illegible].5		25	19.9
200	30	12,095	-55.6		24	21.9
175	30	12,943	-56.6		25	19.3
150	30	13,923	-55.9		26	15.5
125	30	15,082	-56.8		25	12.2
100	29	16,489	-58.9		26	7.9
80	29	17,889	-58.0		26	3.6
70	29	18,734	-56.7		28	1.6
60	29	19,715	-55.2		05	1.8
50	29	20,884	-53.5		08	3.2
40	29	22,326	-51.7		08	5.4
30	29	24,207	-48.3		09	7.[illegible]
25	29	25,412	-46.4		09	7.8
20	29	26,903	-44.1		09	9.[illegible]
15	24	28,845	-41.4		09	10.8
10	22	31,634	-35.9		08	13.0
7	20	34,133	-30.4		09	16.0
5	9	36,534	-26.3			

BOISE, IDAHO — 914 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	871	12.7	5.1	14	1.3
1000	30	108				
950	30	546				
900	30	1,003	14.2	4.1	16	.3
850	30	1,485	13.2	.9	31	2.6
800	30	1,992	9.5	-.7	29	2.5
750	30	2,524	5.8	-2.9	27	4.0
700	30	3,084	1.7	-5.4	26	6.6
650	30	3,678	-2.1	-8.7	25	9.0
600	30	4,309	-6.0	-14.7	24	11.1
550	30	4,986	-10.2	-21.0	24	12.6
500	30	5,714	-15.1	-25.3	24	14.6
450	30	6,502	-20.4	-30.5	24	16.3
400	30	7,364	-26.6	-36.1	24	16.4
350	30	8,317	-33.7	-42.6	24	16.7
300	30	9,378	-41.7	-48.4	24	18.6
250	30	10,592	-49.7		25	20.6
200	30	12,035	-54.6		25	19.9
175	30	12,887	-55.4		25	18.5
150	30	13,869	-56.2		25	16.5
125	30	15,024	-57.6		25	12.6
100	30	16,429	-58.9		24	7.6
80	30	17,828	-58.7		23	2.5
70	28	18,671	-57.8		16	1.2
60	28	19,647	-56.4		11	2.2
50	26	20,810	-54.8		10	3.4
40	25	22,240	-53.3		08	5.2
30	23	24,109	-50.3		09	7.9
25	22	25,308	-48.4		08	8.5
20	20	26,781	-45.9		08	9.9
15	20	28,712	-42.4		09	11.5
10	12	31,459	-37.7			
7						
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BOOTHVILLE, LA. — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	24.3	22.7	26	.7
1000	30	142	25.0	22.3	27	1.8
950	30	593	22.2	18.6	26	3.5
900	30	1,062	19.5	13.6	23	2.3
850	30	1,553	16.6	8.8	21	1.9
800	30	2,067	13.8	4.8	19	1.9
750	30	2,609	10.5	1.2	20	1.7
700	30	3,180	6.9	-2.8	21	1.6
650	30	3,785	3.1	-5.6	24	1.4
600	30	4,429	-.7	-12.1	28	2.5
550	30	5,120	-4.7	-17.4	31	2.6
500	30	5,864	-9.2	-20.6	31	2.6
450	30	6,671	-14.2	-24.6	31	2.6
400	30	7,555	-20.1	-30.8	33	3.6
350	30	8,534	-27.0	-38.0	32	4.2
300	30	9,624	-35.5	-46.7	34	4.1
250	30	10,866	-45.7		34	3.6
200	30	12,318	-56.2		35	2.8
175	30	13,157	-61.2		32	3.4
150	30	14,104	-65.4		34	4.3
125	30	15,203	-68.8		02	3.2
100	30	16,537	-69.0		05	4.1
80	30	17,871	-67.9		07	5.4
70	29	18,679	-65.5		08	7.5
60	29	19,623	-62.6		08	9.4
50	29	20,757	-59.2		08	12.1
40	29	22,165	-56.4		09	13.2
30	[illegible]	24,009	-52.4		09	15.4
25	29	25,195	-49.7		09	16.4
20	27	26,665	-46.7		09	17.6
15	26	28,595	-43.8		09	17.[illegible]
10	14	31,340	-40.3			

* BROWNSVILLE, TEXAS — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	24.3	22.6	14	3.2
1000	30	120	24.8	23.5	15	6.1
950	30	570	22.0	20.4	16	11.5
900	30	1,040	20.0	14.1	17	12.0
850	30	1,532	17.8	6.9	16	11.1
800	30	2,049	15.2	2.2	16	9.5
750	30	2,593	11.9	-2.3	16	8.1
700	30	3,167	8.1	-6.0	15	5.7
650	27	3,775	4.5	-10.8	14	4.5
600	27	4,423	.7	-14.8	13	3.4
550	[illegible]	5,116	-3.6	-18.1	14	1.7
500	29	5,862	-8.3	-22.0	12	.9
450	29	6,673	-13.0	-26.5	11	.7
400	29	7,561	-18.9	-32.7	26	1.9
350	29	8,545	-25.9	-39.5	28	3.4
300	29	9,640	-34.4	-46.6	30	5.0
250	29	10,888	-44.5		30	7.7
200	29	12,344	-56.0		30	10.5
175	29	13,183	-61.6		30	10.1
150	29	14,125	-67.0		31	7.2
125	29	15,215	-71.0		35	3.7
100	29	16,531	-72.2		06	4.9
80	28	17,852	-69.4		08	8.7
70	28	18,656	-65.8		08	10.4
60	27	19,600	-62.9		09	12.1
50	27	20,729	-60.8		09	14.5
40	27	22,131	-56.8		09	16.8
30	27	23,974	-52.1		09	17.7
25	26	25,165	-49.5		09	18.4
20	24	26,634	-47.3		08	18.4
15	[illegible]	28,550	-43.8		09	20.1
10	18	31,301	-39.5		09	21.7
7	17	33,763	-36.2		09	22.2
5	13	36,094	-34.0			

BUFFALO, N. Y. — 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	218	16.5	13.5	21	2.1
1000	30	135				
950	30	574	17.4	10.4	23	3.7
900	30	1,035	15.2	8.6	27	3.8
850	30	1,517	12.3	5.8	28	4.3
800	30	2,023	9.8	-1.0	28	6.4
750	30	2,557	7.1	-4.6	28	8.4
700	30	3,122	4.0	-9.4	28	9.6
650	30	3,721	.9	-14.7	28	9.7
600	30	4,360	-2.6	-18.0	29	9.5
550	30	5,045	-6.7	-22.2	29	10.3
500	29	5,785	-11.5	-28.6	28	11.9
450	29	6,584	-16.7	-33.8	29	13.0
400	29	7,458	-23.1	-39.4	29	13.5
350	29	8,426	-30.3	-45.3	28	14.9
300	29	9,501	-38.7	-5[illegible].3	29	17.1
250	29	10,728	-47.9		29	21.2
200	29	12,168	-57.2		29	21.8
175	29	13,010	-58.7		29	19.2
150	29	13,974	-60.3		29	16.1
125	[illegible]	15,112	-60.3		32	13.4
100	[illegible]	16,[illegible]	-60.8		30	9.5
80	[illegible]	17,889	-60.1		32	5.[illegible]
70	[illegible]	18,726	-58.2		33	3.5
60	[illegible]	19,703	-56.3		32	2.[illegible]
50	[illegible]	20,867	-54.2		[illegible]	3.9
40	[illegible]	22,305	-52.0		[illegible]	5.[illegible]
30	[illegible]	24,161	-49.2		[illegible]	7.[illegible]
25	[illegible]	25,382	-47.2		[illegible]	8.3
20	[illegible]	26,870	-44.7		[illegible]	9.3
15	[illegible]	28,789	-41.8		[illegible]	11.2
10	[illegible]	[illegible]	-36.1			

CAPE HATTERAS, N. C. — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	21.4	20.[illegible]	24	.9
1000	30	143	22.0	19.0	26	1.5
950	30	589	20.5	15.[illegible]	28	3.2
900	30	1,056	18.0	12.[illegible]	28	3.0
850	30	1,543	15.3	7.[illegible]	29	3.2
800	30	2,056	12.7	3.0	29	3.8
750	30	2,595	9.6	-1.1	29	4.5
700	30	3,164	6.3	-5.1	29	4.7
650	30	3,768	2.9	-9.5	28	5.[illegible]
600	30	4,412	-.6	-15.7	28	5.4
550	30	5,103	-4.5	-20.[illegible]	28	6.1
500	30	5,847	-8.9	-26.[illegible]	28	6.2
450	30	6,655	-13.9	-32.5	28	6.7
400	30	7,539	-20.[illegible]	-38.[illegible]	28	7.2
350	30	8,519	-2[illegible]	-43.9	29	7.9
300	30	9,608	-35.5	-50.8	29	8.[illegible]
250	30	10,850	-45.[illegible]		29	9.[illegible]
200	30	12,301	-5[illegible].5		30	[illegible]
175	30	13,138	-6[illegible].5		3[illegible]	[illegible].9
150	30	[illegible]	[illegible]		3[illegible]	10.7
125	30	15,196	[illegible]		31	7.2
100	30	16,554	[illegible]		34	[illegible].4
80	[illegible]	17,914	[illegible]		[illegible]	[illegible]
70	[illegible]	18,739	[illegible]		[illegible]	4.2
60	[illegible]	19,697	[illegible]		[illegible]	[illegible]
50	[illegible]	20,847	[illegible]		[illegible]	8.6
40	[illegible]	22,273	[illegible]		[illegible]	9.9
30	[illegible]	24,141	-4[illegible].8		[illegible]	10.7
25	[illegible]	25,339	-46.[illegible]		09	[illegible]
20	[illegible]	26,820	-45.9		09	[illegible]
15	[illegible]	28,748	-43.1		09	15.[illegible]
10	[illegible]	31,493	-38.8		09	14.[illegible]
7	[illegible]	33,962	[illegible]			
5	[illegible]	[illegible]	[illegible]			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

CARIBOU, MAINE — [illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	191	13.[illegible]	8.[illegible]	28	[illegible].8
1000	[illegible]	113				
950	[illegible]	[illegible]	[illegible]	4.5	3[illegible]	4.3
900	[illegible]	[illegible]	[illegible]	[illegible].9	3[illegible]	5.5
850	[illegible]	1,465	[illegible].3	-.[illegible]	3[illegible]	7.5
800	3[illegible]	[illegible]	[illegible].7	-5.[illegible]	3[illegible]	8.5
750	[illegible]	[illegible]	[illegible]	-10.6	30	[illegible].3
700	3[illegible]	[illegible]	-[illegible].9	-13.4	3[illegible]	11.7
650	[illegible]	3,620	-4.[illegible]	[illegible]	[illegible]	[illegible].4
600	3[illegible]	4,246	-8.[illegible]	-12.4	3[illegible]	14.[illegible]
550	3[illegible]	4,917	-1[illegible]	-26.[illegible]	30	15.5
500	3[illegible]	5,640	-16.7	-3[illegible]	[illegible]9	17.4
450	3[illegible]	6,4[illegible]	-22.1	-36.[illegible]	29	17.3
400	3[illegible]	7,27[illegible]	-2[illegible].2	-42.6	29	19.3
350	3[illegible]	8,227	-35.[illegible]	-4[illegible]	29	[illegible].2
300	3[illegible]	[illegible]	-42.4	-4[illegible]	29	23.7
250	3[illegible]	[illegible]	-49.3		29	24.8
200	[illegible]	11,950	-51.5		29	22.2
175	[illegible]	12,[illegible]18	-53.2		29	20.[illegible]
150	[illegible]	13,[illegible]8	-54.[illegible]		28	17.4
125	[illegible]	[illegible]	-54.9		29	13.[illegible]
100	[illegible]	16,403	-5[illegible]		29	9.[illegible]
80	2[illegible]	17,829	-5[illegible].7		29	4.7
70	2[illegible]	18,685	-53.[illegible]		31	2.[illegible]
60	[illegible]	19,677	-5[illegible].8		31	1.[illegible]
50	[illegible]	[illegible]	-5[illegible].4		[illegible]4	.7
40	26	22,314	-49.9		[illegible]8	3.1
30	2[illegible]	24,205	-4[illegible].3		09	6.7
25	2[illegible]	25,4[illegible]	-45.6		09	8.3
20	2[illegible]	26,909	-[illegible]3.9		09	9.6
15	2[illegible]	28,852	-4[illegible]		09	[illegible]0.9
10	[illegible]	31,667	-34.5		09	[illegible]1.8
[illegible]	[illegible]	34,133	-29.2			

CHARLESTON, S. C. — 1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	13	22.1	20.[illegible]	27	1.0
1000	3[illegible]	142	22.9	20.[illegible]	25	2.1
950	3[illegible]	5[illegible]	22.1	16.3	27	3.6
900	3[illegible]	1,060	19.4	12.8	28	2.9
850	3[illegible]	1,549	16.2	9.3	29	2.7
800	3[illegible]	2,063	12.9	5.[illegible]	29	2.7
750	3[illegible]	2,602	9.8	.6	29	2.9
700	3[illegible]	3,173	6.5	-3.[illegible]	28	3.1
650	3[illegible]	3,777	3.1	-7.[illegible]	27	3.6
600	3[illegible]	4,422	-.3	-11.4	27	4.3
550	3[illegible]	5,114	-4.0	-17.[illegible]	28	4.4
500	3[illegible]	5,859	-8.8	-2[illegible]	28	4.9
450	3[illegible]	6,668	-13.[illegible]	-27.8	28	4.8
400	3[illegible]	7,554	-19.9	-34.[illegible]	28	5.0
350	3[illegible]	8,534	-26.[illegible]	-40.2	29	4.5
300	3[illegible]	9,625	-35.[illegible]	-48.2	29	5.4
250	3[illegible]	10,869	-45.2		30	5.9
200	3[illegible]	12,322	-56.4		30	6.3
175	3[illegible]	13,159	-61.6		30	5.5
150	3[illegible]	14,106	-65.0		32	5.5
125	3[illegible]	15,211	-66.5		35	3.9
100	3[illegible]	16,561	-67.0		02	3.8
80	3[illegible]	17,916	-64.5		06	5.5
70	3[illegible]	18,737	-62.1		07	6.7
60	3[illegible]	19,695	-59.8		08	7.8
50	3[illegible]	20,843	-56.7		08	9.5
40	2[illegible]	22,269	-53.6		09	11.0
30	2[illegible]	24,135	-49.6		09	12.2
25	29	25,333	-48.0		09	13.4
20	2[illegible]	26,807	-45.9		09	14.4
15	27	28,738	-42.8		09	15.9
10	2[illegible]	31,499	-38.9		09	19.2
[illegible]	[illegible]	33,925	-36.4			

CHATHAM, MASS. — 1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	16	15.9	12.3	28	1.0
1000	3[illegible]	131	15.3	9.1	29	1.1
950	3[illegible]	567	15.9	6.9	30	1.9
900	3[illegible]	1,026	14.0	4.2	30	3.7
850	3[illegible]	1,506	11.2	1.6	29	6.0
800	3[illegible]	2,010	8.4	-3.9	29	7.3
750	3[illegible]	2,541	5.9	-9.4	29	9.5
700	3[illegible]	3,103	3.7	-13.7	29	10.9
650	3[illegible]	3,702	.9	-17.5	29	11.4
600	3[illegible]	4,341	-2.5	-20.9	29	12.4
550	3[illegible]	5,027	-6.5	-24.3	29	12.4
500	3[illegible]	5,765	-11.0	-29.7	29	13.6
450	3[illegible]	6,566	-16.4	-33.6	29	14.3
400	3[illegible]	7,441	-22.5	-38.5	29	16.6
350	3[illegible]	8,41[illegible]	-29.7	-45.1	29	16.8
300	3[illegible]	9,488	-38.3	-52.5	29	17.8
250	29	10,719	-47.6		29	20.1
200	29	12,162	-56.6		29	21.3
175	[illegible]	13,010	-59.0		30	19.4
150	2[illegible]	13,973	-60.0		29	15.9
125	29	15,113	-59.5		29	13.6
100	2[illegible]	16,508	-59.9		30	8.6
80	2[illegible]	17,906	-58.5		31	4.8
70	2[illegible]	18,749	-57.1		33	2.5
60	2[illegible]	19,729	-55.3		05	1.3
50	2[illegible]	20,897	-53.7		08	3.7
40	2[illegible]	22,344	-51.6		08	5.2
30	2[illegible]	24,224	-48.4		09	7.6
25	2[illegible]	25,428	-46.5		09	8.3
20	2[illegible]	26,919	-43.8		09	9.9
15	2[illegible]	28,865	-41.2		09	10.7
10	[illegible]	31,665	-36.7			

CHIHUAHUA, MEXICO — 856 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	1,428	19.1	7.0	26	.2
1000	3[illegible]	71				
950	3[illegible]	524				
900	3[illegible]	997				
850	3[illegible]	1,492	20.1	6.9	27	.3
800	3[illegible]	2,015	18.9	5.7	30	1.1
750	30	2,566	15.1	3.1	34	1.9
700	3[illegible]	3,145	10.6	-.4	33	2.4
650	30	3,759	6.1	-3.2	36	2.0
600	3[illegible]	4,409	1.0	-7.3	03	2.5
550	30	5,102	-4.0	-12.6	04	1.8
500	30	5,846	-9.3	-22.3	33	.4
450	3[illegible]	6,653	-14.5	-27.3	28	2.2
400	30	7,535	-20.7	-34.6	28	5.1
350	30	8,512	-27.9	-40.5	27	6.8
300	3[illegible]	9,599	-35.7	-47.2	27	10.7
250	30	10,841	-45.0		27	12.9
200	30	12,298	-55.6		27	12.7
175	3[illegible]	13,140	-60.2		26	11.6
150	29	14,094	-64.3		26	8.2
125	29	15,199	-68.1		25	4.3
100	29	16,530	-70.6		18	1.7
80	29	17,861	-68.1		08	4.6
70	2[illegible]	18,670	-65.1		09	8.0
60	28	19,616	-62.5		09	10.5
50	27	20,749	-59.4		10	11.7
40	27	22,156	-56.2		09	12.7
30	25	24,001	-52.3		09	14.4
25	25	25,186	-50.3		09	15.8
20	24	26,657	-46.8		10	16.2
15	22	28,578	-44.1		09	17.2
10	[illegible]2	31,317	-40.4			

* COLD BAY, ALASKA — 1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	30	3.2	1.7	22	2.1
1000	3[illegible]	93			20	2.2
950	30	507	1.3	-.7	25	2.5
900	30	942	.8	-3.6	28	2.6
850	30	1,401	.0	-5.1	26	2.3
800	30	1,885	-2.1	-7.1	26	2.3
750	30	2,396	-4.5	-10.3	25	2.8
700	30	2,937	-7.1	-13.4	25	3.3
650	30	3,512	-10.0	-17.7	25	3.6
600	3[illegible]	4,125	-13.2	-21.7	25	4.3
550	30	4,783	-17.0	-26.4	26	5.1
500	30	5,492	-21.6	-32.7	27	5.9
450	3[illegible]	6,260	-27.1	-36.9	27	6.1
400	3[illegible]	7,098	-33.3	-42.6	27	6.4
350	30	8,027	-39.6	-47.1	27	8.5
300	30	9,063	-46.3		26	8.1
250	30	10,261	-50.7		26	9.1
200	30	11,723	-48.5		26	8.7
175	30	12,602	-48.3		26	7.8
150	30	13,617	-48.8		26	5.8
125	30	14,812	-49.7		26	4.1
100	30	16,270	-50.6		24	1.6
80	30	17,725	-50.4		16	1.0
70	29	18,595	-50.4		11	1.9
60	29	19,601	-50.5		10	2.5
50	27	20,794	-50.3		10	3.4
40	26	22,253	-49.6		10	4.6
30	26	24,141	-48.6		09	6.2
25	26	25,344	-47.3		09	6.0
20	24	26,827	-45.6		09	6.9
15	18	28,780	-42.7		08	9.1
10	13	31,542	-38.6		09	10.9
[illegible]	12	34,012	-35.0			
[illegible]	8	36,397	-32.1			
[illegible]	5	38,042	-28.5			

DAYTON, OHIO — 982 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	299	18.4	15.[illegible]	19	.8
1000	30	139				
950	3[illegible]	582	2[illegible].1	13.3	25	3.[illegible]
900	30	1,048	18.0	10.2	28	4.4
850	30	1,535	15.3	6.1	29	5.1
800	30	2,047	12.3	2.2	29	5.8
750	30	2,586	9.2	-2.[illegible]	29	6.9
700	3[illegible]	3,154	5.6	-7.5	29	6.4
650	3[illegible]	3,[illegible]57	.9	-11.9	29	6.3
600	30	4,398	-[illegible].8	-16.8	28	6.3
550	30	5,085	-5.6	-20.[illegible]	28	7.2
500	30	5,827	-1[illegible]	-26.[illegible]	28	8.3
450	3[illegible]	6,631	-15.2	-3[illegible].9	29	8.8
400	3[illegible]	7,510	-21.5	-37.9	28	9.9
350	3[illegible]	8,484	-28.5	-43.7	29	10.6
300	30	9,567	-35.9	-51.[illegible]	29	12.2
250	3[illegible]	10,802	-47.0		29	14.3
200	30	12,245	-57.0		29	15.[illegible]
175	30	13,083	-60.[illegible]		29	13.2
150	30	14,037	-62.0		29	11.3
125	30	15,162	-63.[illegible]		30	8.6
100	3[illegible]	16,529	-64.5		32	5.7
80	30	17,900	-62.5		34	3.4
70	30	18,727	-60.9		01	2.9
60	30	19,690	-59.0		04	3.4
50	2[illegible]	20,840	-55.9		07	5.0
40	29	22,268	-53.3		08	6.3
30	2[illegible]	24,136	-49.[illegible]		08	8.6
25	25	25,338	-4[illegible].8		09	9.6
20	25	26,819	-45.5		08	10.2
15	25	28,749	-42.6		08	11.3
10	17	31,529	-37.[illegible]		09	13.9

DEL RIO, TEXAS — 9[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	314	22.7	19.9	11	4.5
1000	30	110				
950	3[illegible]	558	21.8	18.9	13	7.9
900	3[illegible]	1,028	19.5	16.8	16	9.9
850	3[illegible]	1,520	17.8	12.8	16	9.9
800	3[illegible]	2,038	15.4	8.8	16	9.0
750	30	2,583	12.7	3.6	17	7.6
700	30	3,159	9.1	-.7	17	5.1
650	30	3,770	5.1	-3.3	17	2.9
600	3[illegible]	4,418	.8	-8.6	11	.4
550	3[illegible]	5,112	-3.7	-13.4	36	1.2
500	3[illegible]	5,858	-8.7	-19.8	27	.1
450	3[illegible]	6,667	-14.1	-25.2	21	1.5
400	30	7,551	-19.8	-31.6	22	2.8
350	30	8,531	-26.7	-37.2	24	5.0
300	3[illegible]	9,623	-35.2	-45.3	25	8.0
250	3[illegible]	10,868	-45.1		25	10.3
200	3[illegible]	12,321	-56.4		26	11.7
175	3[illegible]	13,159	-61.2		26	11.5
150	3[illegible]	14,109	-64.4		26	7.4
125	3[illegible]	15,213	-68.0		27	2.7
100	2[illegible]	16,544	-70.4		10	1.0
80	28	17,874	-68.6		08	5.1
70	28	18,679	-65.5		08	7.4
60	28	19,624	-62.6		09	9.7
50	2[illegible]	20,756	-59.3		09	11.6
40	27	22,166	-56.0		09	12.8
30	27	24,010	-52.7		09	14.7
25	27	25,194	-50.3		09	16.3
20	26	26,661	-47.0		09	16.8
15	24	28,580	-43.8		08	16.6
10	17	31,318	-40.2		08	18.6
[illegible]	6	33,772	-37.0			

DENVER, COLO. — 837 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,611	12.6	6.4	21	2.4
1000	3[illegible]	91				
950	3[illegible]	536				
900	30	1,000				
850	30	1,485				
800	3[illegible]	1,999	16.8	2.6	26	3.3
750	3[illegible]	2,548	14.5	-2.2	27	3.1
700	3[illegible]	3,126	10.3	-6.5	26	4.1
650	3[illegible]	3,738	5.5	-9.9	26	5.2
600	30	4,385	-.1	-12.9	26	6.9
550	30	5,074	-6.0	-16.6	26	8.6
500	30	5,811	-12.2	-20.9	25	9.8
450	30	6,608	-17.8	-29.4	25	9.2
400	30	7,479	-24.3	-37.4	24	9.9
350	30	8,440	-31.6	-44.2	24	12.4
300	3[illegible]	9,509	-39.9	-51.3	24	14.6
250	30	10,731	-48.5		24	17.3
200	30	12,173	-55.4		24	18.2
175	30	13,022	-57.0		25	16.9
150	30	13,995	-58.4		25	15.3
125	30	15,134	-61.7		25	11.2
100	30	16,505	-64.3		24	6.3
80	30	17,874	-62.5		17	1.2
70	30	18,702	-60.6		11	2.6
60	30	19,667	-58.5		09	3.7
50	30	20,820	-56.2		09	5.1
40	30	22,246	-53.8		09	7.0
30	28	24,106	-50.5		09	9.4
25	29	25,299	-49.0		09	10.2
20	27	26,775	-46.5		08	11.6
15	27	28,699	-43.3		09	12.1
10	18	31,464	-38.4			

DODGE CITY, KANS. — 922 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	791	18.6	13.0	19	3.0
1000	30	90				
950	30	536				
900	30	1,003	20.3	11.7	20	7.1
850	30	1,498	20.6	6.2	22	10.5
800	30	2,020	18.0	2.4	22	8.8
750	30	2,569	14.2	-1.5	23	6.8
700	30	3,146	9.5	-4.4	24	5.3
650	30	3,756	5.0	-8.3	24	4.9
600	30	4,403	.1	-14.1	26	4.4
550	30	5,094	-5.2	-18.8	27	4.7
500	30	5,834	-10.9	-24.5	27	6.0
450	30	6,635	-16.3	-31.7	27	6.7
400	30	7,512	-22.4	-38.2	25	8.6
350	30	8,482	-29.5	-44.1	24	9.7
300	30	9,560	-38.0	-50.4	24	12.6
250	30	10,790	-47.7		24	14.9
200	29	12,235	-57.2		24	17.6
175	28	13,069	-59.6		24	16.0
150	28	14,029	-61.2		25	11.8
125	28	15,156	-63.7		26	8.0
100	28	16,514	-66.4		25	3.6
80	27	17,867	-65.5		13	1.3
70	27	18,686	-61.9		10	3.2
60	27	19,645	-59.9		10	4.6
50	26	20,789	-57.5		09	5.6
40	26	22,206	-55.1		09	7.6
30	24	24,060	-51.5		09	10.1
25	24	25,251	-49.1		09	11.1
20	19	26,721	-47.0		09	11.3
15	16	28,638	-43.7		09	13.3
10	9	31,428	-38.5			

EL PASO, TEXAS — 881 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,193	21.3	2.3	25	.8
1000	30	75				
950	30	529				
900	30	1,003				
850	30	1,500	22.1	4.1	23	1.2
800	30	2,024	19.0	1.2	25	2.0
750	30	2,574	15.3	-2.3	26	2.8
700	30	3,154	10.9	-5.2	26	2.2
650	30	3,766	6.1	-6.7	25	2.4
600	29	4,415	.7	-11.6	23	3.0
550	29	5,106	-4.9	-14.5	23	3.3
500	29	5,847	-10.5	-20.8	22	4.3
450	29	6,650	-15.7	-29.0	23	5.2
400	29	7,527	-22.0	-35.0	24	6.9
350	29	8,499	-29.2	-42.3	24	8.8
300	29	9,578	-37.7	-49.1	25	10.3
250	29	10,812	-46.5		25	13.2
200	29	12,263	-55.8		25	15.7
175	29	13,105	-59.7		25	13.0
150	29	14,062	-62.9		25	9.1
125	28	15,177	-66.7		24	5.6
100	27	16,521	-69.1		21	2.7
80	27	17,860	-67.0		09	3.5
70	27	18,671	-64.3		09	6.1
60	26	19,619	-61.7		09	8.9
50	25	20,758	-58.9		09	9.9
40	25	22,166	-56.5		09	10.7
30	25	24,007	-52.8		09	12.6
25	2[illegible]	25,191	-50.4		09	14.3
20	25	26,659	-46.9		09	15.5
15	23	28,578	-44.6		09	15.6
10	19	31,309	-40.8		09	18.5
[illegible]	5	33,754	-35.6			

ELY, NEV. — 809 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	1,908	6.4	-.3	19	3.1
1000	3[illegible]	129				
950	3[illegible]	565				
900	3[illegible]	1,020				
850	3[illegible]	1,496				
800	3[illegible]	[illegible],998	1[illegible].1	1.4	19	2.4
750	3[illegible]	2,539	11.4	-2.1	2[illegible]	1.4
700	3[illegible]	3,[illegible]	7.4	-5.9	23	3.8
650	3[illegible]	3,717	2.9	-9.1	23	7.2
600	3[illegible]	4,358	-2.2	-12.2	23	9.4
550	3[illegible]	5,043	-7.4	-17.3	23	10.3
500	3[illegible]	5,778	-12.4	-24.9	24	10.9
450	3[illegible]	6,575	-17.7	-31.1	25	12.6
400	3[illegible]	7,446	-24.1	-37.5	25	13.8
350	3[illegible]	8,408	-3[illegible].6	-43.7	25	13.9
300	30	9,476	-40.[illegible]	-50.4	25	15.2
250	3[illegible]	10,697	-48.5		26	17.2
200	3[illegible]	12,143	-54.5		26	18.0
175	3[illegible]	12,995	-56.6		26	17.7
150	30	13,970	-58.3		25	16.0
125	30	15,110	-60.7		25	13.1
100	30	16,495	-61.7		24	5.7
80	3[illegible]	17,878	-6[illegible].0		19	2.1
70	[illegible]	18,711	-59.2		15	1.7
60	3[illegible]	19,682	-57.4		09	2.6
50	3[illegible]	20,839	-55.7		09	4.3
40	3[illegible]	22,269	-53.3		09	5.8
30	3[illegible]	24,137	-49.6		09	8.8
25	[illegible]	25,339	-4[illegible].8		09	9.7
20	[illegible]	26,821	-45.3		09	11.1
15	2[illegible]	28,754	-42.2		09	13.1
10	27	31,518	-37.6		09	15.6
[illegible]	[illegible]	33,938	-34.0			

EMPALME, MEXICO — 1009 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	12	22.2	[illegible]5.2	01	.5
1000	30	90	24.7	16.5	15	.3
950	3[illegible]	54[illegible]	24.9	9.9	18	1.9
900	3[illegible]	1,014	23.2	6.8	20	2.6
850	30	1,511	20.9	4.1	19	2.9
800	3[illegible]	2,032	18.0	[illegible].1	19	2.5
750	3[illegible]	2,581	14.2	-.8	19	2.4
700	30	3,159	10.4	-4.1	17	2.0
650	30	3,771	5.8	-7.[illegible]	18	2.7
600	3[illegible]	4,420	.8	-11.5	18	3.2
550	3[illegible]	5,112	-4.4	-17.[illegible]	17	3.7
500	3[illegible]	5,856	-9.0	-24.9	19	3.0
450	3[illegible]	6,664	-13.9	-3[illegible].0	23	3.8
400	3[illegible]	7,548	-20.2	-35.6	25	4.8
350	3[illegible]	8,526	-27.4	-41.1	26	7.4
300	3[illegible]	9,614	-35.7	-48.2	26	10.0
250	3[illegible]	10,857	-45.1		26	11.6
200	3[illegible]	12,314	-55.2		26	13.0
175	3[illegible]	13,158	-59.8		26	12.6
150	3[illegible]	14,11[illegible]	-64.3		25	9.3
125	30	15,216	-67.9		25	5.5
100	3[illegible]	16,549	-70.1		20	2.0
80	3[illegible]	17,878	-68.0		09	4.1
70	30	18,686	-65.1		08	7.0
60	3[illegible]	19,632	-62.3		09	10.1
50	3[illegible]	20,767	-59.3		09	12.4
40	3[illegible]	22,175	-56.4		09	12.9
30	2[illegible]	24,015	-52.8		09	15.4
25	2[illegible]	25,2[illegible]	-50.1		09	17.4
20	2[illegible]	26,670	-47.0		09	16.9
15	[illegible]	28,586	-44.7		09	[illegible].3

* FAIRBANKS, ALASKA — 993 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	135	13.1	3.0	34	2.1
1000	30	75				
950	3[illegible]	508	13.9	.9	08	1.5
900	3[illegible]	962	11.0	-1.7	13	2.2
850	30	1,435	7.5	-4.0	14	3.1
800	30	1,931	3.7	-6.1	14	3.2
750	3[illegible]	2,452	-.4	-8.7	14	3.3
700	30	2,999	-4.6	-11.8	14	2.7
650	30	3,579	-7.9	-17.2	15	2.4
600	3[illegible]	4,196	-12.1	-21.7	15	2.2
550	30	4,857	-16.2	-26.9	15	1.9
500	3[illegible]	5,567	-21.1	-32.1	17	2.0
450	3[illegible]	6,337	-26.4	-36.7	17	2.0
400	3[illegible]	7,178	-32.4	-41.6	19	2.6
350	3[illegible]	8,109	-39.2	-46.3	20	2.3
300	30	9,146	-46.2		18	2.0
250	3[illegible]	10,339	-53.1		16	2.4
200	3[illegible]	11,779	-50.7		15	2.6
175	3[illegible]	12,654	-48.6		13	2.2
150	3[illegible]	13,669	-48.4		14	2.4
125	3[illegible]	14,869	-48.4		13	2.1
100	3[illegible]	16,339	-48.1		11	2.8
80	3[illegible]	17,811	-48.0		10	3.4
70	3[illegible]	18,692	-47.9		09	3.8
60	3[illegible]	19,710	-47.5		10	4.3
50	3[illegible]	20,916	-47.0		09	5.1
40	30	22,398	-46.2		10	6.2
30	29	24,313	-45.1		09	7.1
25	2[illegible]	25,535	-43.9		08	8.0
20	2[illegible]	27,033	-42.3		09	8.9
15	26	28,989	-39.4		09	9.6
10	2[illegible]	31,785	-34.4		09	10.2
[illegible]	[illegible]4	34,294	-29.3		10	11.1
[illegible]	5	36,796	-24.1			

FLINT, MICH. — 988 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	236	15.8	13.6	22	1.5
1000	30	131				
950	30	569	18.1	11.5	25	4.7
900	30	1,033	16.4	9.5	28	5.0
850	30	1,517	13.7	5.4	29	5.1
800	30	2,027	11.0	1.4	28	6.4
750	30	2,562	7.7	-2.3	28	7.3
700	30	3,128	4.4	-7.1	29	8.1
650	30	3,728	1.1	-11.1	28	9.0
600	30	4,367	-2.7	-14.9	28	10.0
550	30	5,052	-6.8	-20.3	28	10.6
500	30	5,789	-11.4	-25.4	28	11.2
450	3[illegible]	6,589	-16.7	-31.1	29	12.5
400	30	7,464	-22.7	-37.9	29	14.0
350	30	8,433	-29.7	-43.5	29	15.4
300	30	9,510	-38.1	-50.9	29	17.7
250	30	10,740	-47.6		29	19.7
200	30	12,184	-56.4		29	21.6
175	30	13,026	-59.2		29	19.8
150	30	13,992	-59.6		29	15.9
125	30	15,129	-60.5		29	12.8
100	30	16,513	-62.0		30	8.7
80	30	17,896	-60.5		32	4.8
70	29	18,729	-59.1		35	3.1
60	29	19,700	-57.2		04	3.2
50	29	20,860	-54.9		07	4.6
40	27	22,295	-52.8		08	6.6
30	26	24,165	-49.5		09	8.1
25	25	25,366	-47.3		09	9.0
20	25	26,852	-44.6		08	10.0
15	23	28,776	-42.1		09	10.6
10	8	31,575	-37.4			

FORT WORTH, TEXAS — 993 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	23.2	18.8	17	2.3
1000	30	119				
950	30	568	22.6	17.4	20	9.0
900	30	1,039	21.3	13.3	21	10.4
850	30	1,533	19.1	9.8	20	8.1
800	30	2,052	15.9	5.1	19	6.4
750	30	2,597	12.4	-.8	19	5.0
700	30	3,172	8.4	-4.8	19	4.2
650	30	3,780	4.5	-9.1	20	3.3
600	30	4,427	.0	-12.6	22	3.2
550	30	5,118	-4.8	-16.6	21	2.8
500	30	5,861	-9.2	-22.3	22	2.6
450	30	6,669	-14.2	-29.6	25	2.4
400	30	7,552	-20.3	-36.0	27	3.3
350	30	8,530	-27.3	-41.8	27	4.5
300	30	9,619	-35.6	-49.0	27	5.7
250	29	10,861	-45.2		27	8.9
200	29	12,316	-55.6		26	10.0
175	28	13,159	-60.4		27	10.3
150	28	14,112	-62.8		27	8.1
125	28	15,228	-65.8		29	3.6
100	27	16,572	-68.2		07	.2
80	27	17,914	-66.3		09	3.5
70	27	18,729	-63.3		08	5.4
60	27	19,682	-61.0		08	7.5
50	26	20,823	-58.3		09	9.5
40	25	22,239	-54.6		09	10.8
30	24	24,099	-50.6		09	12.0
25	22	25,290	-48.8		09	13.0
20	21	26,768	-46.3		09	14.7
15	16	28,685	-43.4		09	15.8
10	7	31,455	-39.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT. — 931 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	696	12.4	[illegible]	07	.9
1000	[illegible]	92				
950	[illegible]	528				
900	[illegible]	985	15.0	[illegible]	27	1.5
850	[illegible]	[illegible]	12.7	[illegible]	25	2.8
800	[illegible]	[illegible]	9.6	-.2	26	4.2
750	[illegible]	[illegible]	5.9	-3.2	26	6.8
700	[illegible]	[illegible]	2.0	-6.5	26	8.2
650	[illegible]	3,661	-1.7	-11.4	26	9.5
600	[illegible]	[illegible]	-5.7	[illegible]	26	10.5
550	[illegible]	[illegible]	-9.7	-21.1	26	11.9
500	[illegible]	5,701	-14.3	-27.7	26	13.3
450	[illegible]	6,491	-19.7	-32.9	26	15.5
400	[illegible]	[illegible]	[illegible]	[illegible]	25	16.8
350	[illegible]	[illegible]	-33.0	[illegible]	25	18.9
300	[illegible]	9,374	-41.3	-49.0	24	19.4
250	[illegible]	10,587	[illegible]		24	21.9
200	[illegible]	[illegible]	-55.0		25	[illegible]
175	[illegible]	[illegible]	-54.2		25	19.5
150	[illegible]	[illegible]	-54.0		26	15.2
125	[illegible]	[illegible]	-55.2		25	12.0
100	[illegible]	[illegible]	-56.9		26	6.3
80	[illegible]	17,870	-56.5		25	2.8
70	[illegible]	18,719	-56.1		23	.8
60	30	19,702	-54.8		10	1.0
50	[illegible]	20,873	-53.1		08	3.0
40	[illegible]	22,316	-51.6		09	4.8
30	[illegible]	24,193	-49.2		09	6.4
25	[illegible]	25,395	-47.1		09	7.2
20	[illegible]	26,881	-44.7		09	8.4
15	26	28,819	-41.8		09	10.0
10	21	[illegible]	-36.5		09	10.9
7	8	34,049	-33.4			

GRAND JUNCTION, COLO. — 851 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	1,472	16.3	.7	12	3.7
1000	31	73				
950	31	520				
900	31	989				
850	31	1,479			13	3.8
800	31	1,999	17.9	[illegible]	16	3.7
750	31	2,547	14.5	[illegible]	21	3.4
700	31	3,125	10.0	[illegible]	23	4.9
650	31	3,735	4.9	-9.6	23	6.3
600	31	4,381	-.7	[illegible]	23	7.4
550	30	5,068	-6.6	[illegible]	23	9.2
500	31	5,804	-12.7	-20.0	23	11.0
450	31	6,600	-17.9	-29.3	24	11.0
400	31	[illegible]	-24.1	-36.5	24	12.3
350	31	8,434	-31.3	-43.3	25	12.1
300	31	9,503	-40.1	[illegible]	25	13.8
250	31	10,725	-48.7		25	15.0
200	31	12,170	-54.8		25	16.3
175	31	13,021	-56.4		25	14.8
150	[illegible]	[illegible]	-58.6		25	14.7
125	[illegible]	15,129	-61.5		25	11.0
100	29	[illegible]	-63.3		24	6.5
80	24	17,877	-62.4		21	1.7
70	[illegible]	18,706	-60.2		11	2.3
60	[illegible]	[illegible]	-58.3		09	[illegible]
50	[illegible]	20,821	-56.7		09	5.7
40	[illegible]	[illegible]	-53.9		09	6.4
30	[illegible]	24,109	-50.6		09	8.8
25	[illegible]	25,303	-48.5		09	10.2
20	[illegible]	[illegible]	-46.1		09	[illegible]
15	[illegible]	28,702	-43.3		09	12.6
10	14	31,455	-39.7			

* GREAT FALLS, MONT. — 886 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	1,118	[illegible]	[illegible]	23	[illegible]
1000	[illegible]	93				
950	[illegible]	530				
900	[illegible]	[illegible]				
850	[illegible]	1,466	[illegible]	[illegible]	24	[illegible]
800	[illegible]	1,970	8.4	-2.8	25	5.8
750	[illegible]	2,499	4.4	-4.8	25	6.4
700	[illegible]	3,057	.5	[illegible]	24	7.9
650	[illegible]	3,648	[illegible]	[illegible]	24	9.4
600	[illegible]	4,277	-7.3	-15.3	24	[illegible]
550	[illegible]	4,950	-11.6	-19.9	24	12.5
500	[illegible]	5,674	-15.3	-24.5	24	[illegible]
450	[illegible]	6,459	-21.4	-29.9	24	15.7
400	[illegible]	7,317	-27.5	-36.5	24	17.8
350	[illegible]	8,267	[illegible]	-43.5	24	20.4
300	[illegible]	9,323	[illegible]	[illegible]	24	[illegible]
250	[illegible]	10,535	[illegible]		24	23.8
200	[illegible]	11,978	[illegible]		24	21.9
175	[illegible]	12,839	[illegible]		24	18.5
150	[illegible]	13,833	[illegible]		24	15.0
125	[illegible]	15,002	-54.8		24	11.0
100	[illegible]	16,423	-56.5		24	5.7
80	[illegible]	17,838	-56.9		22	2.2
70	[illegible]	18,686	[illegible]		18	1.6
60	[illegible]	19,670	-54.9		[illegible]	1.7
50	[illegible]	20,840	-53.3		09	3.9
40	[illegible]	22,280	-51.8		08	5.0
30	[illegible]	[illegible]	-48.9		09	7.3
25	[illegible]	[illegible]	[illegible]		09	8.5
20	[illegible]	26,847	-44.8		08	8.7
15	[illegible]	28,781	-41.6		09	10.3
10	[illegible]	31,555	-36.5		08	12.2
7	[illegible]	34,060	[illegible]		09	14.9

GREEN BAY, WIS. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	.4
1000	[illegible]	[illegible]				
950	[illegible]	551	[illegible]	10.7	25	2.7
900	[illegible]	1,013	16.4	[illegible]	26	3.8
850	[illegible]	1,498	13.8	[illegible]	26	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	26	6.6
750	[illegible]	2,543	[illegible]	[illegible]	27	7.4
700	[illegible]	3,110	4.5	[illegible]	27	8.4
650	[illegible]	3,710	.1	[illegible]	27	9.1
600	[illegible]	4,348	-3.0	[illegible]	27	9.7
550	[illegible]	5,032	[illegible]	[illegible]	27	[illegible]
500	[illegible]	[illegible]	[illegible]	-29.1	28	[illegible]
450	[illegible]	6,567	[illegible]	-34.4	28	12.9
400	[illegible]	7,439	[illegible]	[illegible]	28	13.3
350	[illegible]	8,405	[illegible]	-45.6	28	14.5
300	[illegible]	[illegible]	[illegible]	[illegible]	28	16.1
250	[illegible]	10,705	-48.2		28	18.5
200	[illegible]	12,150	-56.6		27	20.8
175	[illegible]	12,992	[illegible]		28	16.4
150	[illegible]	13,958	[illegible]		27	15.7
125	[illegible]	[illegible]	[illegible]		29	13.2
100	[illegible]	16,462	[illegible]		29	9.7
80	[illegible]	17,866	[illegible]		31	4.4
70	[illegible]	18,702	-59.0		35	[illegible]
60	[illegible]	19,674	[illegible]		03	[illegible]
50	[illegible]	20,835	-54.5		06	3.5
40	[illegible]	22,269	-52.8		07	[illegible]
30	[illegible]	24,140	-49.5		08	7.6
25	[illegible]	25,340	-47.5		09	[illegible]
20	[illegible]	26,818	-45.4		09	9.9
15	[illegible]	28,750	-42.6		09	10.2
10	[illegible]	31,523	-36.0		09	14.1
7	[illegible]	33,985	-33.7			

GREENSBORO, N.C. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	[illegible]	19.5	[illegible]	[illegible]	[illegible]
1000	[illegible]	143				
950	[illegible]	588	21.1	[illegible]	[illegible]	2.2
900	[illegible]	1,056	18.8	[illegible]	[illegible]	2.4
850	[illegible]	1,545	15.8	[illegible]	[illegible]	2.9
800	[illegible]	2,057	12.5	6.1	[illegible]	[illegible]
750	[illegible]	2,596	9.5	-.7	[illegible]	4.2
700	[illegible]	3,165	6.1	-4.1	[illegible]	4.1
650	[illegible]	3,769	2.4	-8.3	[illegible]	3.9
600	[illegible]	4,412	-1.2	-13.1	[illegible]	[illegible]
550	[illegible]	5,101	-4.8	-18.8	[illegible]	5.0
500	[illegible]	5,845	-9.2	-24.0	[illegible]	5.6
450	[illegible]	6,652	-14.2	-30.4	[illegible]	6.4
400	[illegible]	7,535	-20.3	[illegible]	[illegible]	[illegible]
350	[illegible]	8,513	-27.5	[illegible]	[illegible]	6.8
300	[illegible]	9,601	-36.0	-49.5	[illegible]	[illegible]
250	[illegible]	10,841	[illegible]		[illegible]	9.2
200	[illegible]	12,289	-56.9		[illegible]	[illegible]
175	[illegible]	13,126	-61.3		[illegible]	10.6
150	[illegible]	[illegible]	-64.3		[illegible]	8.6
125	[illegible]	15,190	-65.0		31	[illegible]
100	[illegible]	16,548	-65.5		[illegible]	4.1
80	[illegible]	17,909	-64.0		[illegible]	4.1
70	[illegible]	18,732	-61.7		[illegible]	[illegible]
60	[illegible]	19,691	[illegible]		07	5.4
50	[illegible]	20,842	[illegible]		[illegible]	7.1
40	[illegible]	22,266	-53.9		04	8.9
30	[illegible]	24,133	[illegible]		09	10.4
25	[illegible]	25,322	[illegible]		[illegible]	11.2
20	[illegible]	26,808	-45.6		[illegible]	12.2
15	[illegible]	28,724	[illegible]		09	13.6
10	[illegible]	31,485	-38.3		[illegible]	15.7
7	[illegible]	34,002	[illegible]			

GUADALUPE IS., MEXICO — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	26	23	19.6	15.0	32	8.0
1000	26	142	15.7	9.4	32	7.8
950	26	577	16.7	4.5	32	4.7
900	26	1,041	19.4	-2.2	31	4.4
850	26	1,532	18.6	-4.9	31	3.1
800	26	2,049	16.2	-7.3	29	2.3
750	26	2,594	13.3	-10.0	28	2.0
700	26	3,170	9.9	-12.8	25	1.9
650	26	3,781	6.2	-15.9	26	3.0
600	26	4,431	2.2	-19.6	24	3.7
550	26	5,127	-2.5	-23.6	24	4.3
500	26	5,876	-7.3	-28.0	24	2.2
450	26	6,638	-12.8	-32.9	26	3.1
400	25	7,575	-19.4	-38.4	26	4.4
350	26	8,556	-27.1	-44.7	24	7.8
300	26	9,645	-35.8	-51.9	26	6.2
250	26	10,889	-44.6		26	5.5
200	25	12,346	-54.2		26	3.9
175	25	13,195	-58.1			
150	25	14,157	-61.9			
125	24	15,274	-65.1			
100	24	16,627	-66.7			
80	24	17,980	-64.8		09	6.0
70	24	18,800	-62.5		08	6.6
60	24	19,757	-59.9			
50	22	20,904	-57.3			
40	19	22,332	-54.3			
30	18	24,199	-49.9			
25	18	25,398	-47.3			
20	17	26,889	-44.3			
15	15	28,834	-40.8			
10	9	31,617	-35.8			
7						
5						
4						

* GUAM, MARIANA IS. — 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	111	24.8	23.4	09	2.8
1000	31	101				
950	31	553	23.2	19.4	10	7.9
900	30	1,024	20.3	15.7	10	7.9
850	30	1,516	17.5	12.6	10	6.9
800	30	2,033	14.8	9.2	10	6.4
750	30	2,578	12.0	5.8	10	6.2
700	30	3,153	9.0	.4	09	6.5
650	30	3,764	5.8	-4.6	09	6.0
600	30	4,415	1.9	-9.0	08	6.1
550	30	5,112	-2.2	-13.5	08	5.9
500	30	5,863	-6.5	-19.5	07	5.3
450	30	6,679	-11.5	-25.1	07	4.8
400	30	7,573	-17.0	-31.6	06	3.4
350	30	8,564	-23.9	-39.0	03	3.1
300	30	9,668	-32.3	-47.2	01	2.0
250	30	10,926	-42.7		26	2.6
200	30	12,391	-55.3		27	4.3
175	29	13,230	-62.0		27	4.6
150	28	14,165	-69.6		30	3.6
125	28	15,233	-76.3		04	2.8
100	27	16,510	-78.6		07	9.7
80	26	17,793	-74.6		08	13.2
70	25	18,577	-71.3		09	13.8
60	25	19,497	-67.9		09	15.1
50	25	20,604	-64.0		09	15.9
40	24	21,990	-58.9		08	14.8
30	24	23,817	-54.4		08	12.7
25	23	24,995	-50.8		08	13.8
20	23	26,455	-49.4		09	13.8
15	22	28,350	-46.7		08	16.6
10	15	31,060	-44.0		09	21.2
7	7	33,482	-39.8			

HILO, HAWAII — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	10	21.0	17.5	25	1.8
1000	30	158	21.2	17.5	27	.6
950	30	601	18.1	15.4	08	2.6
900	30	1,063	14.8	12.4	08	3.0
850	30	1,544	11.4	9.3	08	3.1
800	30	2,050	10.3	-.3	09	5.2
750	30	2,589	10.7	-12.6	09	6.2
700	30	3,160	7.8	-14.6	10	5.0
650	30	3,767	4.8	-17.1	10	3.7
600	30	4,415	1.2	-21.2	10	2.1
550	30	5,109	-3.1	-24.8	07	1.4
500	30	5,856	-8.3	-28.3	34	1.5
450	30	6,664	-14.1	-32.2	30	3.2
400	30	7,547	-20.5	-37.1	28	4.1
350	30	8,524	-27.7	-42.7	28	6.1
300	30	9,611	-36.0	-50.5	28	9.8
250	30	10,851	-45.9	-45.8	27	14.6
200	30	12,299	-57.4		27	16.6
175	30	13,132	-62.8		27	15.9
150	30	14,072	-66.9		27	12.5
125	30	15,166	-69.8		27	10.5
100	30	16,487	-71.6		29	3.4
80	30	17,808	-70.4		09	6.0
70	30	18,605	-68.3		09	10.3
60	30	19,537	-65.3		09	14.5
50	30	20,656	-62.1		09	16.6
40	29	22,047	-58.9		09	17.7
30	29	23,873	-54.2		09	18.7
25	27	25,051	-51.2		09	18.7
20	24	26,511	-48.7		09	19.2
15	25	28,415	-46.8		09	20.1
10	22	31,124	-42.4		09	22.4
7	10	33,536	-38.1			

HUNTINGTON, W. VA. — 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	246	18.3	16.9	16	.9
1000	30	138				
950	30	581	20.5	16.4	26	2.8
900	30	1,049	18.6	13.3	27	4.1
850	30	1,538	15.8	8.1	27	4.6
800	30	2,051	12.9	3.1	27	5.2
750	30	2,591	9.5	-1.0	27	5.4
700	30	3,159	5.9	-5.6	28	5.8
650	30	3,762	2.2	-10.5	28	5.8
600	30	4,405	-1.0	-14.1	29	5.8
550	30	5,094	-5.0	-21.0	29	6.1
500	30	5,837	-9.3	-25.7	29	6.5
450	30	6,644	-14.5	-30.2	29	7.0
400	30	7,526	-20.5	-35.0	29	7.9
350	30	8,504	-27.6	[illegible]	29	9.4
300	30	9,591	-36.1	-49.8	29	10.8
250	30	10,830	-46.2		29	12.8
200	30	12,277	-57.1		30	13.6
175	30	13,115	-60.7		29	12.8
150	30	14,068	-63.0		29	10.4
125	30	15,169	-63.7		31	7.3
100	30	16,555	-64.5		33	4.6
80	30	17,923	-63.0		01	3.1
70	30	18,749	-61.2		04	3.4
60	30	19,712	-58.6		06	4.2
50	30	20,865	-56.0		08	6.1
40	30	22,294	-53.1		08	7.5
30	28	24,163	-49.8		09	9.2
25	27	25,361	-47.7		09	10.6
20	25	26,843	-45.1		09	12.8
15	[illegible]	28,787	-41.8		09	13.3
10	14	31,569	-38.3			

* INTERNATIONAL FALLS, MINN. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	359	[illegible]	10.6	14	.7
1000	[illegible]	101				
950	[illegible]	535	14.4	9.5	19	[illegible]
900	[illegible]	993	13.5	7.2	24	[illegible]
850	[illegible]	1,472	11.0	4.2	25	2.1
800	[illegible]	1,976	8.2	-.2	26	4.4
750	[illegible]	2,507	5.4	-4.3	26	6.8
700	[illegible]	3,068	2.4	-8.8	27	6.7
650	30	3,664	-.8	-13.2	27	9.7
600	[illegible]	4,299	-4.2	-17.5	27	11.2
550	[illegible]	4,980	-8.5	-22.8	27	11.7
500	[illegible]	5,713	-13.3	-28.4	27	12.7
450	[illegible]	6,507	-18.7	-32.9	28	13.3
400	30	7,374	-24.9	-38.4	27	14.6
350	[illegible]	8,335	-31.7	-44.6	27	18.1
300	[illegible]	9,403	-40.1	-50.0	27	21.0
250	30	10,623	-49.2		27	23.4
200	[illegible]	12,058	-56.9		27	26.3
175	30	12,905	-56.1		28	21.8
150	30	13,884	-56.5		28	16.5
125	[illegible]	15,040	-57.0		28	13.3
100	[illegible]	16,450	-58.0		28	6.5
80	29	17,856	-57.4		29	5.3
70	29	18,702	-56.3		31	3.2
60	[illegible]	19,685	-54.9		36	1.7
50	29	20,856	-52.9		06	2.6
40	[illegible]	22,302	-50.9		08	4.2
30	28	24,190	-48.0		09	5.3
25	[illegible]	25,397	-46.1		08	7.6
20	[illegible]	26,889	-43.6		09	8.0
15	[illegible]	28,835	-41.0		09	9.1
10	26	31,620	-35.8		09	11.8
7	[illegible]	34,096	-31.6		09	[illegible]
5	12	36,547	-24.8			
4	[illegible]	38,212	-22.5			

JACKSON, MISS. — 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	100	20.8	19.0	20	1.2
1000	30	146	21.4	18.7	24	1.9
950	[illegible]	595	22.8	17.5	26	5.8
900	[illegible]	1,066	20.1	14.6	26	4.0
850	[illegible]	1,557	16.6	10.6	26	3.1
800	30	2,071	13.4	7.2	25	2.8
750	30	2,612	9.8	2.8	24	2.8
700	30	3,181	5.9	-1.3	25	3.1
650	30	3,785	2.5	-6.2	27	3.3
600	30	4,428	-1.2	-11.4	28	3.6
550	30	5,117	-5.2	-17.5	28	3.3
500	30	5,869	-9.5	-24.6	30	2.1
450	30	6,667	-14.4	-28.7	32	1.5
400	30	7,549	-20.6	-34.9	31	2.4
350	30	8,527	-27.4	-40.8	31	2.8
300	30	[illegible]	-35.9	-48.4	31	3.4
250	30	10,855	-45.9		31	3.8
200	30	[illegible]	-56.3		31	3.3
175	30	[illegible]	-61.1		31	2.9
150	30	[illegible]	-64.8		31	4.2
125	30	[illegible]	-66.7		35	2.9
100	30	16,543	-68.4		04	2.9
80	[illegible]	[illegible]	-66.5		06	5.7
70	[illegible]	[illegible]	-64.2		07	6.4
60	[illegible]	[illegible]	[illegible]		08	8.0
50	28	20,742	[illegible]		09	10.0
40	28	[illegible]	-55.6		09	11.0
30	[illegible]	[illegible]	[illegible]		09	12.8
25	[illegible]	25,237	[illegible]		09	14.2
20	[illegible]	[illegible]	-46.5		09	15.4
15	23	28,632	[illegible]		09	15.5
10	[illegible]	[illegible]	[illegible]			
7						
5						

JOHN F. KENNEDY INT. AP NY — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	5	19.3	12.0	36	1.2
1000	28	148	18.1	10.5	35	2.0
950	28	587	17.4	7.1	34	2.8
900	28	1,048	15.6	5.8	31	3.2
850	28	1,530	12.6	3.1	29	5.4
800	28	2,037	9.8	-1.8	30	7.7
750	28	2,570	7.0	-5.6	30	9.9
700	28	3,134	4.1	-10.1	30	10.3
650	28	3,734	1.1	-14.3	30	10.7
600	28	4,374	-2.4	-19.0	30	11.4
550	28	5,059	-6.1	-24.5	30	12.3
500	28	5,799	-10.8	-27.4	30	13.4
450	28	[illegible]	-16.0	-34.6	29	12.5
400	28	7,477	-22.2	-42.1	29	13.5
350	28	8,448	-29.4	-47.8	29	14.4
300	28	9,526	-38.0	-54.4	30	16.7
250	28	10,758	-47.2		30	19.5
200	[illegible]	[illegible]	-56.9		30	20.0
175	[illegible]	[illegible]	-60.2		31	19.4
150	[illegible]	13,999	[illegible]		30	17.3
125	[illegible]	15,131	[illegible]		30	14.9
100	[illegible]	16,514	[illegible]		31	11.4
80	[illegible]	[illegible]	[illegible]		33	5.5
70	[illegible]	[illegible]	-58.5		01	3.0
60	[illegible]	19,713	-56.3		[illegible]	3.1
50	27	20,878	-54.3		08	5.6
40	[illegible]	22,310	-51.8		09	7.4
30	[illegible]	24,191	-48.5		09	10.2
25	[illegible]	25,396	-46.7		09	[illegible]
20	[illegible]	[illegible]	-43.9		09	11.2
15	[illegible]	28,830	-41.1		09	[illegible]
10	[illegible]	[illegible]	-37.3			

JOHNSTON IS., PACIFIC AREA — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	3	25.6	21.5	09	8.0
1000	30	135	24.0	[illegible]	09	8.7
950	[illegible]	582	20.2	17.4	09	9.9
900	[illegible]	1,047	17.2	14.0	09	10.6
850	30	1,534	14.3	10.6	09	9.8
800	[illegible]	2,044	12.3	2.8	09	8.5
750	[illegible]	2,585	11.0	-6.6	09	6.5
700	[illegible]	3,158	8.7	-11.7	08	4.9
650	[illegible]	3,767	5.5	-15.3	09	4.5
600	[illegible]	4,416	1.7	-18.9	09	3.6
550	30	5,112	-2.6	[illegible]	[illegible]	3.0
500	[illegible]	5,860	-7.7	-25.4	08	1.9
450	[illegible]	6,671	-13.5	-28.4	11	1.0
400	[illegible]	7,556	-19.8	-33.8	21	1.4
350	30	8,536	-27.1	-39.8	26	2.9
300	[illegible]	9,625	-35.5	[illegible]	26	5.7
250	[illegible]	10,867	-45.6	-45.1	26	8.6
200	[illegible]	12,318	-56.9		26	11.5
175	[illegible]	13,153	[illegible]		27	11.8
150	[illegible]	14,093	[illegible]		27	[illegible]
125	[illegible]	15,188	-69.5		27	7.1
100	[illegible]	16,509	-72.0		[illegible]	.5
80	[illegible]	17,826	-71.5		08	7.3
70	[illegible]	18,619	-69.4		09	[illegible]
60	[illegible]	19,547	-66.2		09	13.2
50	[illegible]	20,662	-62.7		09	[illegible]
40	[illegible]	22,056	-59.4		09	16.3
30	[illegible]	23,874	-55.0		09	17.2
25	[illegible]	25,056	[illegible]		09	16.7
20	[illegible]	[illegible]	-48.3		09	[illegible]
15	[illegible]	28,411	[illegible]		09	[illegible]
10	[illegible]	31,133	-43.2			

KEY WEST, FLA. — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	3	26.5	22.9	12	1.2
1000	[illegible]	147	25.8	22.3	12	1.5
950	[illegible]	595	22.7	19.2	13	1.7
900	29	1,068	19.8	13.6	13	1.4
850	[illegible]	1,559	16.9	8.8	14	.9
800	[illegible]	2,075	14.0	4.5	14	.8
750	[illegible]	2,610	10.9	.5	12	.6
700	[illegible]	3,189	7.4	-3.9	17	1.0
650	[illegible]	3,790	4.0	-8.0	18	1.2
600	[illegible]	4,443	.2	-11.4	[illegible]	1.2
550	[illegible]	5,128	-3.8	-16.8	22	1.2
500	[illegible]	5,882	-8.5	-20.5	25	.6
450	[illegible]	6,683	-13.9	[illegible]	35	.2
400	[illegible]	7,576	-20.1	[illegible]	31	.7
350	[illegible]	8,552	-27.2	[illegible]	34	.5
300	[illegible]	9,644	-35.6	[illegible]	33	[illegible]
250	[illegible]	10,885	-45.7		33	1.3
200	[illegible]	[illegible]	-56.8		32	[illegible]
175	[illegible]	[illegible]	-62.3		33	[illegible]
150	[illegible]	[illegible]	-67.2		[illegible]	[illegible]
125	[illegible]	[illegible]	-70.2		34	[illegible]
100	[illegible]	[illegible]	-70.3		[illegible]	[illegible]
80	[illegible]	[illegible]	-68.1		[illegible]	[illegible]
70	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
60	[illegible]	[illegible]	[illegible]		[illegible]	13.6
50	[illegible]	[illegible]	[illegible]		[illegible]	15.5
40	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
30	[illegible]	[illegible]	[illegible]		[illegible]	17.3
25	[illegible]	[illegible]	[illegible]		[illegible]	18.1
20	[illegible]	[illegible]	[illegible]		[illegible]	18.6
15	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
10	22	31,337	[illegible]		[illegible]	[illegible]
7	13	[illegible]	[illegible]			
5	[illegible]	[illegible]	[illegible]			

KING SALMON, ALASKA — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	[illegible]	15	5.0	2.0	15	3.3
1000	[illegible]	79			17	4.5
950	[illegible]	498	5.2	1.7	16	4.8
900	[illegible]	939	4.0	1.7	15	3.4
850	[illegible]	[illegible]	1.8	-.6	13	4.5
800	[illegible]	1,890	-.4	-3.1	13	5.3
750	[illegible]	2,404	-2.9	-7.2	13	4.9
700	[illegible]	2,948	-5.8	-11.5	12	[illegible]
650	[illegible]	3,525	-9.2	-15.1	12	[illegible]
600	[illegible]	4,140	-13.3	-18.8	12	5.5
550	[illegible]	4,797	[illegible]	-23.9	13	5.6
500	[illegible]	5,506	-21.5	-31.0	13	6.1
450	[illegible]	6,275	-26.7	-36.0	13	6.0
400	[illegible]	7,115	-32.9	-42.2	14	[illegible]
350	[illegible]	8,043	-39.8	-47.4	13	[illegible]
300	[illegible]	9,079	-46.6		13	[illegible]
250	[illegible]	10,274	-51.5		14	[illegible]
200	[illegible]	11,738	[illegible]		15	[illegible]
175	[illegible]	12,618	-47.8		19	[illegible]
150	[illegible]	13,636	-47.9		23	[illegible]
125	[illegible]	[illegible]	-49.0		[illegible]	[illegible]
100	[illegible]	16,301	-49.0		[illegible]	[illegible]
80	[illegible]	17,765	[illegible]		[illegible]	[illegible]
70	[illegible]	18,641	[illegible]		[illegible]	[illegible]
60	[illegible]	19,651	-49.2		[illegible]	[illegible]
50	28	20,848	-49.0		[illegible]	[illegible]
40	28	22,316	-48.4		[illegible]	5.4
30	[illegible]	[illegible]	[illegible]		[illegible]	7.1
25	[illegible]	[illegible]	-46.1		[illegible]	[illegible]
20	27	26,912	-44.4		[illegible]	[illegible]
15	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
SURFACE	30		77.6	64.1	14	4.4
1000	30	82	26.5	1.4	18	1.7
950	30	534	21.6	14.6	20	4.6
900	30	1,000	20.8	6.1	21	4.6
850	30	1,464	18.0	4.4	21	4.8
800	30	1,922	15.5	-1.0	16	3.5
750	30	2,388	12.6	-6.2	15	4.2
700	30	3,144	9.3	-2.4	12	3.1
650	30	3,756	6.0	-.1	14	3.4
600	30	4,376	2.4	-3.7	09	5.1
550	30	5,107	-1.4	-8.2	09	5.1
500	30	5,861	-5.6	-13.3	10	5.4
450	30	6,681	-10.0	-19.1	10	6.0
400	30	7,581	-15.4	-24.4	10	6.7
350	30	8,587	-22.3	-34.4	10	5.7
300	30	9,755	-31.6	-43.4	10	8.3
250	30	10,957	-41.2	-53.1	10	4.5
200	30	12,432	-54.0			5.0
175	30	13,275	-61.2			5.7
150	30	14,214	-69.3			4.9
125	30	15,281	-76.4			5.3
100	30	16,556	-78.7			8.1
75	30	17,840	-74.2			11.1
70	30	18,627	-70.1			10.7
65	30	19,504	-65.9			9.7
60	30	20,446	-62.1			8.1
55	30	21,466	-58.1			5.8
50	30	22,583	-54.1			5.8
45	30	23,832	-50.1			3.8
40	30	25,239	-46.2			3.8
35	30	26,839	-42.1			3.8
30	30	28,686	-38.0			4.2
25	30	30,861	-33.8			5.7
20	30	31,172	-42.1			7.8
15	30	33,600	-39.7			
10						

KOTZEBUE, ALASKA — 1009 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	5	6.3	3.7	19	2.1
30	81	9.5	1.4	18	1.7
30	508	10.6	.4	10	1.7
30	957	8.5	-1.6	16	1.8
30	1,427	5.5	-3.6	16	2.4
30	1,920	2.1	-5.0	15	3.5
30	2,438	-1.5	-8.7	15	4.2
30	2,984	-5.0	-14.0	15	4.3
30	3,562	-8.6	-18.5	14	5.2
30	4,179	-12.1	-23.9	14	5.6
30	4,833	-16.4	-28.7	15	5.3
30	5,543	-21.2	-32.3	15	5.1
30	6,319	-26.3	-36.7	15	5.3
30	7,160	-32.5	-41.6	16	5.9
30	8,091	-39.5	-47.4	16	6.3
30	9,125	-47.6		16	7.2
30	10,312	-52.9		16	7.0
30	11,706	-49.1		14	4.5
30	12,642	-47.3		13	4.4
30	13,663	-47.1		13	3.5
30	14,870	-47.4		12	3.6
30	16,346	-47.3		11	3.6
30	17,824	-46.9		11	4.1
30	18,710	-46.6		10	4.5
30	19,736	-46.3		09	4.6
30	20,946	-45.9		09	5.2
30	22,433	-45.4		09	6.3
30	24,357	-44.4		09	7.5
30	26,583	-43.0		09	8.8
30	27,044	-41.1		09	9.0
30	29,061	-38.5		09	9.6
30	31,870	-34.0			

MAJURO, MARSHALL IS. — 1011 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	4	26.5	23.8	08	6.1
30	98	25.8	23.3	08	7.2
30	549	22.5	20.5	08	9.2
30	1,020	19.8	17.1	09	9.8
30	1,512	17.3	13.6	09	9.1
30	2,029	14.7	9.8	09	8.5
30	2,573	12.1	5.7	09	8.1
30	3,149	8.9	2.9	09	7.3
30	3,760	5.4	-1.3	10	6.4
30	4,410	1.8	-4.6	09	5.0
30	5,108	-2.0	-9.4	09	4.9
30	5,860	-6.3	-15.3	09	4.0
30	6,677	-11.2	-19.6	08	2.4
30	7,572	-16.9	-26.6	06	1.9
30	8,562	-23.9	-33.9	03	.9
30	9,668	-32.6	-41.8	25	1.2
30	10,925	-43.0	-51.5	26	4.0
30	12,387	-55.7	-63.2	26	7.9
30	13,224	-62.7		26	9.5
30	14,156	-70.5		26	11.4
30	15,218	-77.6		27	10.5
30	16,485	-78.7		25	1.5
30	17,770	-74.9		08	5.1
30	18,552	-72.1		09	7.9
29	19,469	-68.1		08	8.7
29	20,576	-63.6		09	9.3
29	21,960	-59.9		08	9.3
29	23,782	-54.9		08	6.0
28	26,055	-52.6		08	6.8
28	28,307	-49.7		09	6.8
19	28,306	-47.1		09	10.2
18	31,208	-44.3		09	13.2
13	33,406	-41.3		09	21.7
4	35,712	-36.1			

LAKE CHARLES, LA. — 10.6 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	5	23.0	22.0	14	.6
30	142	24.3	22.6	20	2.6
30	592	21.8	18.8	20	6.0
30	1,061	19.7	12.3	19	5.7
30	1,552	16.8	9.4	19	4.8
30	2,066	13.8	5.2	19	4.1
30	2,608	10.6	.4	20	3.5
30	3,179	6.8	-2.6	21	2.6
30	3,785	3.2	-8.6	25	1.4
30	4,429	-.5	-13.7	29	1.2
30	5,120	-4.6	-17.4	30	1.8
30	5,863	-9.5	-22.5	31	1.8
30	6,670	-14.6	-26.4	28	2.3
30	7,553	-20.2	-31.9	28	3.2
30	8,531	-27.2	-38.9	29	3.5
30	9,621	-35.6	-47.0	30	4.7
30	10,863	-45.5		30	6.5
30	12,317	-55.7		31	7.8
30	13,158	-60.4		32	7.8
30	14,108	-64.7		32	6.1
30	15,214	-67.5		34	3.5
30	16,552	-69.2		04	3.6
29	17,888	-67.3		07	6.4
29	18,699	-64.6		08	7.8
29	19,647	-61.8		08	9.5
29	20,784	-59.0		09	10.9
29	22,193	-56.1		09	12.9
29	24,039	-51.9		09	15.5
28	25,226	-49.7		09	15.8
28	26,698	-48.4		09	15.5
26	28,623	-44.2		09	15.6
15	31,357	-39.9			

LANDER, WYO. — 829 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	1,697	11.0	2.0	25	1.9
30	98				
30	541				
30	1,002				
30	1,485				
30	1,994	13.5	.0	28	.9
30	2,535	10.5	-3.6	27	1.5
30	3,106	6.7	-7.5	25	4.7
30	3,709	2.3	-10.5	24	8.4
30	4,350	-2.4	-15.0	24	12.3
30	5,034	-7.5	-19.8	24	13.3
30	5,768	-13.1	-24.3	24	13.8
30	6,563	-18.6	-30.6	24	13.2
30	7,430	-25.2	-37.3	24	13.1
30	8,388	-32.8	-44.0	24	14.3
30	9,450	-41.5	-49.9	24	15.0
30	10,663	-50.3		24	15.9
30	12,100	-55.2		24	16.8
30	12,952	-55.9		24	16.9
30	13,930	-57.0		25	13.8
30	15,078	-59.3		25	11.1
30	16,468	-61.3		24	6.5
30	17,886	-59.9		21	2.3
30	18,693	-58.4		15	1.4
30	19,665	-57.4		11	2.4
30	20,823	-55.4		09	4.4
30	22,253	-53.0		08	5.5
30	24,123	-49.9		08	7.5
30	25,319	-48.2		09	9.0
30	26,799	-45.7		09	10.5
30	28,729	-42.7		09	11.4
22	31,485	-38.1			

LIHUE AIRPORT, HAWAII — 10.5 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
SURFACE	30	36	23.8	19.3	07	4.2
1000	30	168	22.1	18.2	07	5.5
950	30	612	18.6	16.4	07	7.2
900	30	1,074	15.3	13.1	07	7.5
850	30	1,557	12.3	7.9	08	7.6
800	30	2,065	11.7	-5.3	08	8.0
750	30	2,604	10.3	-11.8	08	7.6
700	30	3,175	7.7	-15.2	09	6.5
650	30	3,782	4.6	-18.5	09	5.3
600	30	4,429	.8	-22.3	08	4.2
550	30	5,122	-3.6	-26.1	07	4.0
500	30	5,867	-8.9	-28.8	08	2.6
450	30	6,674	-14.6	-33.4	08	1.4
400	30	7,555	-20.9	-38.7	18	.3
350	30	8,531	-28.2	-45.0	30	1.7
300	30	9,615	-36.7	-52.2	28	3.3
250	30	10,850	-46.8	-46.3	27	6.3
200	30	12,293	-58.0		26	7.8
175	30	13,123	-63.2		27	7.0
150	30	14,062	-66.7		27	6.2
125	29	15,159	-68.9		27	5.8
100	29	16,466	-70.8		26	5.3
75	29	17,813	-68.9		08	6.3
70	29	18,616	-66.7		08	9.4
65	29	19,554	-64.3		09	12.4
60	29	20,678	-61.1		09	14.6
55	29	22,074	-58.2		09	16.6
50	29	23,909	-53.4		09	18.2
45	29	25,088	-51.1		09	18.8
40	29	26,550	-48.2		09	18.9
35	29	28,456	-45.3		09	19.7
30	29	31,181	-41.9		09	21.7
25	29	33,607	-38.5		09	26.4
20	14	35,948	-33.4			

LITTLE ROCK, ARK. — 1006 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	79	20.6	20.0	23	1.7
30	131	22.0	20.4	23	2.5
30	580	23.6	17.6	25	7.0
30	1,052	20.6	14.6	25	6.8
30	1,544	17.1	11.2	25	5.9
30	2,059	14.1	6.4	25	5.9
30	2,601	10.6	.7	25	4.9
30	3,172	6.5	-3.5	26	3.4
30	3,777	3.0	-8.0	25	2.6
30	4,421	-1.0	-13.5	26	2.4
30	5,110	-5.1	-18.6	25	2.7
30	5,853	-9.3	-24.0	25	3.6
30	6,660	-14.5	-29.0	25	3.2
30	7,542	-20.7	-35.7	26	2.8
30	8,519	-27.6	-40.8	28	3.0
30	9,606	-36.3	-47.9	28	4.5
28	10,845	-45.8		28	7.2
28	12,297	-56.0		29	6.5
30	13,137	-60.8		30	6.0
29	14,088	-65.3		29	6.0
31	15,204	-65.5		31	3.6
31	16,324	-67.5		36	2.6
30	17,599	-66.1		66	3.4
27	18,714	-63.4		08	4.8
27	19,667	-60.7		08	5.9
27	20,811	-57.5		08	8.0
27	22,230	-54.8		09	9.6
26	24,087	-51.0		09	11.1
25	25,279	-49.2		09	12.2
23	26,752	-46.5		09	14.5
20	28,672	-44.1		09	14.8
10	31,388	-39.1			

MCGRATH, ALASKA — 997 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	103	11.1	7.8	26	.7
23	74			23	1.2
30	504	11.9	2.8	11	1.0
30	955	9.1	.5	12	2.2
30	1,426	5.8	-2.2	13	3.3
30	1,919	2.5	-4.7	13	3.2
30	2,438	-1.1	-7.0	13	3.4
30	2,985	-4.8	-11.4	14	3.4
30	3,564	-8.0	-15.5	14	4.4
30	4,182	-12.1	-21.4	14	6.1
30	4,842	-16.5	-26.0	13	5.3
30	5,552	-21.3	-32.2	14	5.7
30	6,321	-26.6	-38.0	14	6.2
30	7,161	-32.9	-42.5	13	7.1
30	8,090	-39.5	-47.8	14	6.7
30	9,125	-47.0		13	5.7
30	10,312	-52.6		14	5.0
30	11,757	-49.4		13	4.6
29	12,636	-48.1		13	3.9
29	13,653	-48.0		13	3.2
28	14,851	-47.9		12	3.0
28	16,324	-48.0		12	3.5
28	17,795	-47.9		11	3.7
27	18,680	-47.9		10	4.3
27	19,698	-47.7		10	5.2
27	20,903	-47.5		09	5.7
27	22,380	-46.7		09	6.5
26	24,290	-45.6		09	8.0
24	25,509	-44.4		09	8.2
23	27,007	-42.7		09	9.0
20	28,968	-39.7		09	10.7
10	31,774	-34.3			

MEDFORD, OREG. — 970 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	401	10.0	7.3	32	.3
30	145				
30	574	11.2	6.5	29	.9
30	1,025	9.4	5.0	29	1.1
30	1,497	7.0	2.5	22	1.6
30	1,995	5.2	-5.1	24	4.5
30	2,520	3.2	-8.8	24	6.6
30	3,077	.6	-12.0	25	7.7
30	3,668	-2.5	-17.4	25	9.5
30	4,300	-5.8	-20.0	26	11.3
30	4,977	-9.6	-23.4	26	13.4
30	5,706	-14.4	-28.6	26	14.8
30	6,497	-19.9	-32.2	26	16.2
30	7,360	-26.2	-38.7	26	17.8
30	8,315	-33.2	-43.1	27	19.5
30	9,377	-41.5	-48.1	27	22.7
30	10,590	-50.1		26	24.5
30	12,027	-55.7		26	23.4
30	12,878	-55.7		26	22.3
30	13,858	-56.7		25	18.5
30	15,008	-58.1		25	14.1
29	16,410	-58.8		25	8.0
28	17,809	-58.6		24	3.2
28	18,650	-58.0		22	.9
28	19,624	-56.7		10	2.1
27	20,783	-55.7		09	4.0
27	22,212	-53.5		09	5.7
27	24,076	-50.4		09	7.4
27	25,272	-48.3		08	8.3
26	26,755	-45.9		09	10.5
26	28,680	-43.2		09	12.5
22	31,442	-37.1		09	14.8
20	33,945	-32.2		09	18.2
13	36,315	-28.7			

MERIDA, MEXICO — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
SURFACE	30	11	22.9	22.6	10	1.1
1000	30	128	24.0	22.4	11	3.3
950	30	578	22.	18.8	12	9.3
900	30	1,049	20.6	13.2	13	9.7
850	30	1,542	18.	7.6	12	8.8
800	30	2,060	15.3	3.	12	6.8
750	30	2,604	11.9	-.3	11	5.8
700	30	3,178	8.3	-3.3	11	5.8
650	30	3,736	4.5	-5.2	11	4.8
600	30	4,434	.5	-9.	11	3.7
550	30	5,127	-3.6	-14.	11	2.8
500	30	5,874	-8.0	-20.	07	2.3
450	30	6,685	-13.0	-25.8	06	2.3
400	30	7,573	-18.9	-33.8	2	2.2
350	30	8,557	-25.2	-41.0	34	2.3
300	30	9,650	-34.	-45.	30	3.8
250	30	10,898	-44.3		21	4.8
200	30	12,354	-57.1		22	7.2
175	30	13,201	-61.3		30	8.3
150	30	14,150	-65.8		31	7.9
125	30	15,245	-70.		33	3.9
100	30	16,563	-69.		24	4.4
75	30	17,887	-68.8		17	6.2
70	30	18,691	-66.		11	8.2
65	30	19,633	-63.		08	10.7
60	30	20,7	-60.		08	15.2
55	30	22,169	-56.6		08	18.1
50	30	24,015	-51.		09	19.1
45	30	25,237	-48.		09	18.4
40	30	26,882	-45.		08	18.4
35	30	28,9	-43.		08	18.4
30	30	31,369	-40.			

MIAMI, FLA. — 1017 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	4	24.2	21.8	33	1.0
30	152	25.1	21.6	04	.2
30	622	22.0	18.6	17	1.5
30	1,107	19.2	14.0	19	1.4
30	1,561	16.3	9.5	19	.6
30	2,075	13.3	5.9	19	.8
30	2,616	10.4	2.1	20	1.0
30	3,187	7.0	-2.9	22	1.1
30	3,793	3.5	-4.9	23	1.3
30	4,439	-.1	-10.2	22	1.7
30	5,131	-4.0	-15.1	22	1.9
30	5,876	-8.7	-20.6	25	1.6
30	6,685	-13.6	-26.1	25	1.8
30	7,571	-19.6	-32.4	25	1.6
30	8,552	-26.6	-38.5	27	1.9
30	9,644	-34.9	-46.8	28	1.8
30	10,890	-44.8		29	2.3
30	12,346	-56.6		31	3.3
30	13,184	-61.4		34	3.1
30	14,129	-65.2		33	2.7
30	15,225	-69.6		34	2.7
30	16,555	-69.2		05	3.8
30	17,894	-66.9		07	6.5
30	18,706	-64.6		07	9.7
30	19,653	-62.2		08	12.3
30	20,784	-58.7		09	15.1
30	22,201	-55.6		10	16.6
29	24,055	-51.6		09	17.7
28	25,235	-48.6		09	17.4
26	26,732	-45.5		09	18.2
25	28,656	-43.7		09	19.5
17	31,392	-41.1		09	23.4
3	33,806	-36.3			

MIDLAND, TEXAS — 915 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	874	20.6	16.2	15	4.0
30	98				
30	548				
30	1,018	20.7	15.4	16	6.3
30	1,513	19.4	11.4	18	10.2
30	2,034	17.7	5.7	20	7.9
30	2,583	14.5	.9	20	4.8
30	3,162	10.3	-3.6	18	2.5
30	3,774	6.0	-8.5	14	.8
30	4,424	1.1	-13.0	08	.1
30	5,117	-4.0	-18.2	35	1.1
30	5,861	-9.2	-24.9	32	1.3
30	6,668	-14.5	-30.7	25	2.5
30	7,550	-20.8	-35.9	24	4.0
30	8,526	-28.0	-42.6	25	5.7
30	9,611	-36.5	-48.7	24	8.1
30	10,849	-46.0		24	11.3
29	12,296	-56.3		24	13.9
29	13,135	-60.3		25	12.8
28	14,089	-63.1		25	10.7
28	15,203	-66.3		25	4.4
28	16,543	-68.9		22	2.4
28	17,880	-67.3		10	3.8
28	18,690	-64.7		08	5.7
28	19,639	-61.5		09	8.0
27	20,777	-58.6		09	9.6
26	22,186	-56.0		09	11.1
25	24,037	-51.8		09	13.4
25	25,225	-49.8		09	13.9
25	26,895	-46.6		09	15.1
23	28,617	-44.1		09	15.9
19	31,358	-39.8		09	20.6
6	33,825	-37.3			

MONTERREY, MEXICO — 962 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
30	423	22.6	20.9	12	1.7
30	109				
30	558	22.0	20.3	12	3.9
30	1,027	18.9	17.8	14	7.4
30	1,517	16.9	14.1	14	9.1
30	2,035	15.4	7.2	14	7.5
30	2,582	13.3	1.3	16	4.3
30	3,160	10.0	-2.6	18	2.7
30	3,772	5.8	-5.5	22	1.5
30	4,421	1.3	-8.3	26	1.2
30	5,116	-3.2	-12.1	28	1.5
30	5,864	-7.9	-19.2	25	1.0
30	6,676	-12.9	-25.7	24	1.6
30	7,565	-18.7	-33.7	24	3.5
30	8,550	-25.6	-39.5	25	5.2
30	9,645	-34.1	-47.8	27	6.2
27	10,895	-44.5		27	8.1
30	12,352	-56.0		27	10.3
30	13,190	-61.5		27	10.3
30	14,134	-66.5		28	6.8
29	15,227	-70.0		30	2.0
29	16,545	-72.5		06	3.4
28	17,863	-69.8		07	7.0
28	19,184	-66.3		08	9.7
28	19,605	-63.4		08	11.5
28	20,732	-60.9		08	14.1
28	22,129	-57.6		09	16.2
27	23,966	-53.1		09	17.2
26	25,147	-50.2		08	17.3
25	26,611	-47.7		08	17.7
21	28,527	-44.5		08	18.0
6	31,268	-42.0			

MONETT, MO. — 965 MB

No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed (M.P.H.)
29	438	19.7	18.1	17	2.3
29	129				
29	574	21.1	17.3	21	4.5
29	1,044	20.6	13.4	24	9.3
29	1,537	17.9	8.2	25	7.9
29	2,053	14.7	4.7	25	6.9
29	2,596	11.4	.1	25	6.0
29	3,169	7.3	-4.0	25	5.2
29	3,775	3.1	-7.9	24	4.5
29	4,418	-1.1	-13.5	24	4.3
29	5,107	-5.4	-18.9	24	4.5
29	5,849	-9.6	-26.5	25	5.4
29	6,654	-15.0	-30.9	25	5.7
29	7,534	-21.3	-35.2	26	6.1
29	8,508	-28.6	-42.7	26	6.1
29	9,591	-37.0	-50.0	27	6.4
27	10,826	-46.8		28	7.3
27	12,271	-57.0		28	9.0
27	13,109	-60.8		27	8.7
27	14,063	-62.3		28	7.8
28	15,184	-64.8		28	5.2
27	16,536	-67.2		27	1.9
27	17,886	-65.7		07	1.4
27	18,701	-63.1		08	3.3
27	19,655	-60.5		09	4.8
27	20,799	-57.5		09	6.2
27	22,217	-55.1		09	7.9
27	24,070	-51.6		09	9.8
27	25,258	-49.8		09	11.5
27	26,727	-46.5		09	11.8
18	31,404	-39.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	57	21.0	20.1	23	1.1
1000	30	148	22.1	19.2	27	1.8
950	30	597	23.1	17.4	29	4.2
900	30	1,068	20.2	14.5	29	3.8
850	30	1,559	16.8	10.6	28	3.8
800	30	2,074	13.5	7.1	28	3.6
750	30	2,615	9.9	2.9	28	3.2
700	30	3,185	6.1	-1.8	29	3.3
650	30	3,789	2.8	-6.3	30	3.8
600	30	4,433	-.9	-10.6	30	3.9
550	30	5,123	-4.4	-18.1	29	3.8
500	30	5,868	-8.8	-23.7	31	3.6
450	30	6,677	-14.0	-29.2	31	3.3
400	30	7,560	-20.2	-34.1	31	3.7
350	30	8,539	-27.2	-40.8	31	3.5
300	30	9,629	-35.3	-48.7	30	3.2
250	30	10,873	-45.1		31	2.8
200	29	12,327	-56.3		33	2.2
175	29	13,165	-61.2		31	2.3
150	29	14,113	-65.2		32	3.4
125	29	15,219	-66.7		36	3.6
100	29	16,564	-67.8		03	3.3
80	29	17,912	-65.8		07	5.1
70	29	18,729	-63.1		07	6.4
60	29	19,683	-60.6		08	7.7
50	28	20,827	-58.0		09	8.9
40	27	22,239	-55.4		09	10.2
30	26	24,091	-51.7		09	12.8
25	23	25,277	-49.3		09	14.1
20	23	26,751	-46.0		09	16.4
15	23	28,677	-43.3		09	16.9
10	15	31,440	-38.8			
7						

NASHVILLE, TENN. 995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	20.2	18.7	18	.6
1000	30	139				
950	30	585	22.0	16.3	25	3.9
900	30	1,055	19.5	12.9	27	4.3
850	30	1,545	16.2	9.3	27	4.2
800	30	2,058	12.9	5.1	28	4.4
750	30	2,598	9.3	1.1	28	4.8
700	30	3,166	5.8	-4.9	29	4.1
650	30	3,769	2.2	-9.3	29	3.4
600	30	4,412	-1.3	-13.9	29	3.7
550	30	5,100	-5.2	-19.7	29	3.7
500	30	5,843	-9.5	-26.8	29	4.5
450	30	6,649	-14.5	-32.7	30	4.7
400	30	7,531	-20.7	-37.2	30	5.2
350	30	8,508	-27.8	-43.4	30	6.2
300	30	9,594	-36.1	-51.5	30	7.1
250	30	10,833	-46.3		30	7.7
200	30	12,281	-56.6		29	8.3
175	30	13,119	-61.0		28	8.1
150	30	14,068	-64.3		29	7.4
125	30	15,183	-65.2		31	4.9
100	30	16,538	-66.1		35	3.7
80	30	17,893	-65.1		04	3.7
70	30	18,712	-62.4		06	4.3
60	29	19,671	-59.8		07	5.3
50	29	20,817	-57.5		08	7.3
40	29	22,239	-54.5		08	8.3
30	29	24,096	-50.8		09	10.8
25	28	25,290	-48.7		08	12.2
20	27	26,769	-45.9		09	14.1
15	26	28,699	-42.9		09	14.4
10	19	31,461	-38.4		09	16.1
7	7	33,919	-32.5			

* NOME, ALASKA 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	7.4	3.9	02	1.7
1000	30	73			05	1.2
950	30	500	10.2	2.1	09	2.6
900	30	948	7.5	.3	13	3.2
850	30	1,416	4.3	-2.1	13	4.5
800	30	1,907	1.1	-4.8	13	5.4
750	30	2,423	-2.2	-7.2	14	6.2
700	30	2,968	-5.6	-12.0	14	6.3
650	30	3,546	-8.6	-17.2	14	7.1
600	30	4,163	-12.5	-22.4	14	7.2
550	30	4,822	-15.7	-27.3	14	7.1
500	30	5,532	-21.3	-32.1	14	7.3
450	30	6,301	-26.9	-38.1	14	8.7
400	30	7,139	-33.2	-44.0	14	9.1
350	30	8,067	-40.[illegible]	-49.5	14	10.[illegible]
300	30	9,098	-48.1		14	10.5
250	30	10,285	-53.0		14	9.1
200	30	11,735	-48.8		14	5.3
175	30	12,615	-47.5		13	4.7
150	30	13,635	-47.3		12	3.5
125	30	14,840	-47.8		12	3.3
100	30	16,313	-47.9		11	3.6
80	30	17,787	-47.5		11	4.1
70	30	18,671	-47.2		10	3.9
60	30	19,691	-47.1		09	4.3
50	30	20,899	-46.9		09	4.9
40	2[illegible]	22,393	-46.2		09	5.2
30	2[illegible]	24,307	-45.2		09	7.4
25	26	25,525	-43.9		09	7.8
20	24	27,026	-41.8		09	8.9
15	21	28,992	-38.2		09	9.8
10	17	31,812	-32.8		08	12.1
7	1[illegible]	34,331	-28.0			

NORTH PLATTE, NEBR. 9[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	84[illegible]	15.5	12.4	[illegible]	1.[illegible]
1000	[illegible]	9[illegible]				
950	[illegible]	534				
900	[illegible]	[illegible]	17.9	[illegible]	[illegible]4	2.2
850	[illegible]	1,4[illegible]8	[illegible]	[illegible]	[illegible]	4.5
800	[illegible]	2,008	16.8	3.[illegible]	[illegible]	5.5
750	[illegible]	2,559	13.5	-.6	23	5.9
700	[illegible]	3,13[illegible]	9.2	-4.5	24	6.4
650	[illegible]	3,741	4.5	-[illegible].4	25	7.1
600	[illegible]	4,387	-.6	-11.[illegible]	26	7.5
550	[illegible]	5,075	-5.9	-16.9	26	9.1
500	[illegible]	5,814	-11.5	-21.6	[illegible]	10.3
450	[illegible]	6,611	-16.8	-27.8	[illegible]	10.8
400	[illegible]	7,[illegible]35	-2[illegible]	-35.9	25	12.7
350	[illegible]	8,[illegible]53	-3[illegible]	-43.2	25	14.3
300	[illegible]	9,529	-38.6	-50.9	24	14.9
250	[illegible]	10,756	-48.1		24	17.9
200	[illegible]	12,199	-55.9		24	20.7
175	[illegible]	13,045	-57.6		25	17.1
150	[illegible]	14,017	-58.5		25	14.1
125	[illegible]	15,157	-61.2		25	9.7
100	[illegible]	16,531	-63.8		25	5.8
80	[illegible]	17,901	-62.1		23	2.3
70	[illegible]	18,[illegible]32	-59.5		11	1.2
60	[illegible]	19,700	-58.1		09	3.2
50	28	20,853	-55.8		09	4.9
40	28	22,283	-52.9		09	6.4
30	26	24,151	-50.0		09	8.6
25	24	25,344	-48.1		09	9.2
20	21	26,822	-45.7		09	10.5
15	20	28,750	-42.9		09	10.6
10	16	31,516	-37.6		09	13.1

[illegible], CALIF. 101[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	6	11.9	9.8	22	.[illegible]
1000	[illegible]	132	11.5	9.[illegible]	24	[illegible]
950	[illegible]	561	12.2	5.9	29	[illegible]
900	[illegible]	1,018	1[illegible]	-[illegible]	[illegible]	[illegible]
850	[illegible]	1,502	1[illegible]	-3.0	[illegible]	[illegible]
800	[illegible]	2,010	11.5	-7.3	[illegible]	4.[illegible]
750	[illegible]	2,547	[illegible].6	-9.6	[illegible]	[illegible]
700	[illegible]	3,113	[illegible]	-13.2	[illegible]	[illegible]
650	[illegible]	[illegible]	[illegible]	-18.5	[illegible]	[illegible]
600	[illegible]	4,355	-[illegible]	-22.[illegible]	28	7.[illegible]
550	[illegible]	5,041	-6.1	-25.[illegible]	27	9.4
500	[illegible]	5,780	-1[illegible]	-29.1	27	11.3
450	[illegible]	6,580	-1[illegible].8	-33.5	27	12.2
400	[illegible]	7,453	-2[illegible].4	-39.5	27	13.7
350	[illegible]	8,419	-[illegible].9	-45.2	28	13.5
300	[illegible]	9,490	-3[illegible].5	-50.6	28	14.4
250	[illegible]	10,712	-4[illegible].2		27	16.0
200	[illegible]	12,148	-5[illegible].6		27	17.8
175	[illegible]	12,990	-58.8		27	[illegible]
150	[illegible]	13,955	-6[illegible].3		26	[illegible]
125	[illegible]	15,086	-6[illegible].4		25	13.6
100	[illegible]	16,458	-6[illegible].9		26	8.0
80	[illegible]	17,837	-6[illegible].6		23	1.8
70	[illegible]	18,668	-6[illegible]		10	1.3
60	[illegible]	19,633	-58.7		09	3.5
50	[illegible]	20,781	-5[illegible].0		09	5.[illegible]
40	[illegible]	22,203	-55.1		09	7.1
30	[illegible]	24,055	-51.6		08	9.7
25	[illegible]	25,247	-49.[illegible]		09	10.7
20	[illegible]	26,713	-47.0		09	12.0
15	[illegible]	28,633	-44.1		09	13.4
10	[illegible]	31,374	-4[illegible].2		09	15.7
7	[illegible]	33,831	-35.2			

OMAHA, NEBR. 965 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	19.0	15.8	17	2.0
1000	30	97				
950	30	541	20.4	15.4	20	2.9
900	30	1,010	20.9	11.9	23	6.7
850	30	1,504	18.6	7.4	24	7.4
800	30	2,022	15.6	4.5	24	6.7
750	30	2,566	11.8	.3	24	7.1
700	30	3,139	7.5	-4.4	25	7.1
650	30	3,745	3.5	-9.8	26	7.7
600	30	4,389	-1.1	-16.0	26	8.6
550	30	5,077	-5.8	-20.0	26	10.1
500	30	5,818	-10.4	-26.4	26	10.2
450	30	6,621	-15.6	-31.3	26	10.0
400	30	7,499	-21.9	-36.1	26	11.5
350	30	8,470	-29.1	-42.0	26	14.1
300	30	9,550	-37.5	-49.3	25	16.0
250	30	10,783	-47.1		25	19.1
200	29	12,229	-56.3		25	20.8
175	29	13,071	-58.9		26	16.8
150	29	14,036	-59.9		26	13.1
125	29	15,172	-61.4		26	9.5
100	29	16,548	-63.9		27	4.4
80	28	17,915	-62.6		30	1.6
70	28	18,744	-60.2		07	1.8
60	28	19,710	-58.2		08	3.5
50	28	20,866	-55.5		09	5.5
40	27	22,294	-53.1		08	7.7
30	26	24,163	-49.9		09	9.4
25	26	25,361	-47.8		09	9.6
20	24	26,839	-45.5		09	10.6
15	22	28,769	-42.9		09	12.6
10	16	31,531	-37.1			
7						
5						

+ PAGO PAGO, AMERICAN SAMOA 10.3 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	27.9	23.4	11	4.5
1000	30	120	26.5	19.8	10	5.5
950	30	571	22.8	17.3	09	6.6
900	30	1,040	19.3	14.2	09	6.7
850	30	1,530	16.3	9.9	09	6.6
800	30	2,045	14.3	5.2	09	6.0
750	30	2,588	11.8	.1	09	5.1
700	30	3,162	8.9	-5.2	10	4.8
650	30	3,773	5.9	-9.6	11	4.9
600	30	4,424	2.8	-14.5	11	5.0
550	30	5,124	-1.1	-19.2	11	3.8
500	30	5,877	-5.7	-23.5	12	3.7
450	30	6,695	-11.0	-28.3	13	3.2
400	30	7,589	-17.2	-34.2	14	3.0
350	30	8,580	-24.3	-40.2	15	3.1
300	30	9,680	-33.0	-47.9	18	4.6
250	30	10,936	-43.1		20	7.8
200	30	12,402	-54.5		22	8.3
175	30	13,245	-60.4		22	10.5
150	30	14,192	-66.3		22	8.5
125	30	15,281	-72.3		22	6.1
100	30	16,576	-76.4		23	2.8
80	30	17,867	-74.6		22	1.9
70	29	18,653	-70.1		23	.9
60	29	19,578	-66.6		27	.8
50	29	20,693	-62.4		30	1.9
40	29	22,084	-58.3		29	4.5
30	29	23,920	-52.8		28	8.3
25	29	25,105	-50.0		28	10.6
20	27	26,578	-47.0		28	11.7
15	26	28,502	-43.1		28	12.4
10	14	31,258	-38.9			

* PEORIA, ILL. 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	18.6	14.9	16	1.8
1000	30	121				
950	30	564	20.6	14.7	23	4.2
900	30	1,032	19.0	11.9	25	5.9
850	30	1,521	16.3	7.6	26	6.4
800	30	2,035	13.5	2.3	26	6.5
750	30	2,576	10.2	-2.3	26	7.1
700	30	3,146	6.3	-6.3	26	7.8
650	30	3,749	2.4	-10.7	27	7.5
600	30	4,392	-1.5	-15.4	27	7.7
550	30	5,079	-6.1	-19.7	27	8.4
500	30	5,819	-10.5	-26.0	27	9.3
450	30	6,622	-15.8	-31.6	28	10.1
400	30	7,499	-22.0	-37.2	28	10.9
350	30	8,471	-29.1	-43.5	28	12.4
300	30	9,550	-37.7	-50.7	28	14.0
250	30	10,782	-47.3		29	14.4
200	30	12,227	-56.7		29	16.8
175	30	13,067	-59.7		28	14.3
150	30	14,025	-61.7		28	10.4
125	30	15,153	-62.7		28	9.1
100	30	16,524	-64.3		30	6.2
80	30	17,889	-63.4		33	2.7
70	30	18,714	-61.4		04	2.5
60	30	19,677	-58.7		07	3.8
50	30	20,830	-56.1		08	5.3
40	30	22,259	-53.1		08	7.4
30	30	24,129	-49.6		09	8.2
25	30	25,327	-48.3		09	9.4
20	30	26,804	-45.7		09	11.3
15	30	28,737	-42.0		09	12.9
10	29	31,520	-36.4		09	15.2
7	21	34,013	-32.4		09	17.9
5	9	36,406	-28.8			

* PITTSBURGH, PA. 974 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	17.7	15.3	20	1.2
1000	30	136				
950	30	576	18.3	13.6	24	2.6
900	30	1,040	16.4	11.2	28	4.3
850	30	1,525	13.8	7.5	28	5.7
800	30	2,034	11.3	.9	28	6.1
750	30	2,571	8.1	-3.2	28	7.2
700	30	3,137	4.6	-8.1	28	7.6
650	30	3,738	1.4	-12.8	28	8.3
600	30	4,378	-2.1	-17.5	28	9.0
550	30	5,064	-6.2	-23.1	28	9.2
500	30	5,804	-10.8	-26.6	28	9.6
450	30	6,607	-15.7	-32.5	29	10.7
400	30	7,484	-22.0	-38.7	29	11.7
350	30	8,455	-29.4	-45.1	29	12.3
300	30	9,534	-37.7	-52.7	29	14.4
250	30	10,765	-47.5		30	17.3
200	30	12,207	-57.4		30	18.1
175	30	13,043	-60.6		30	16.3
150	30	14,000	-62.0		29	13.3
125	30	15,127	-62.6		30	10.6
100	30	16,498	-64.0		31	7.2
80	30	17,871	-62.0		35	3.8
70	30	18,701	-60.3		02	3.1
60	30	19,668	-57.7		05	3.1
50	30	20,826	-55.2		07	4.9
40	30	22,257	-53.0		08	6.5
30	30	24,128	-49.6		09	8.4
25	30	25,327	-47.9		09	9.7
20	28	26,814	-45.4		09	11.4
15	27	28,751	-41.7		09	13.2
10	25	31,510	-37.4		10	15.3
7	20	33,990	-33.1		09	17.6
5	12	36,399	-27.6			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	27.9	24.3	07	2.7
1000	30	83	26.7	21.4	08	3.[illegible]
950	30	536	23.4	19.[illegible]	09	7.0
900	30	1,0[illegible]7	20.4	15.8	[illegible]	8.2
850	30	1,499	17.5	11.6	[illegible]	8.1
800	30	2,016	15.2	8.4	[illegible]	7.6
750	30	2,561	12.3	4.9	1[illegible]	6.2
700	30	3,137	9.0	1.2	10	6.3
650	30	3,747	5.7	-1.9	[illegible]	6.4
600	30	4,399	2.2	-6.0	09	6.3
550	30	5,097	-1.4	-10.8	09	5.1
500	30	5,851	-5.5	-16.6	10	4.3
450	30	6,671	-10.1	-22.1	11	3.5
400	30	7,570	-15.5	-28.3	12	2.2
350	30	8,568	-22.3	-36.2	15	1.6
300	30	9,679	-30.7	-44.9	20	1.7
250	30	10,946	-41.2		25	2.3
200	30	12,420	-54.2		25	4.8
175	30	13,263	-61.1		26	6.4
150	30	14,203	-68.7		27	7.9
125	30	15,277	-75.5		26	7.8
100	29	16,556	-77.6		27	.4
80	29	17,847	-73.3		09	7.0
70	29	18,635	-70.3		09	8.2
60	29	19,560	-66.7		09	7.1
50	29	20,676	-61.8		10	5.7
40	29	22,070	-58.1		10	4.0
30	29	23,902	-53.3		09	2.3
25	29	25,084	-50.7		15	1.5
20	29	26,546	-48.3		13	1.1
15	29	28,453	-45.6		10	4.6
10	29	31,177	-42.0		10	8.5
7	9	33,605	-40.0			

PORTLAND, MAINE 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	14.6	6.9	30	1.7
1000	30	126	15.0	5.6	30	2.4
950	30	562	15.4	3.7	31	3.8
900	30	1,019	13.3	1.3	32	5.1
850	30	1,498	10.2	-.1	30	6.7
800	30	2,000	7.0	-2.7	30	8.0
750	30	2,527	4.1	-8.4	30	9.3
700	30	3,086	2.0	-15.8	29	11.0
650	30	3,681	-.7	-20.1	29	12.7
600	30	4,316	-4.1	-23.4	29	14.5
550	30	4,998	-8.0	-27.5	29	16.2
500	30	5,732	-12.6	-33.4	29	17.6
450	30	6,529	-17.6	-37.4	29	18.6
400	30	7,400	-23.8	-42.1	29	20.4
350	30	8,364	-31.0	-48.5	29	22.2
300	30	9,436	-39.4	-53.0	29	25.0
250	30	10,659	-48.8		29	26.2
200	30	12,099	-55.7		29	25.7
175	30	12,947	-57.0		29	22.1
150	30	13,921	-57.2		29	18.2
125	30	15,075	-57.9		29	14.8
100	29	16,479	-58.1		30	9.3
80	29	17,889	-56.8		30	4.6
70	29	18,737	-55.5		32	3.1
60	28	19,720	-54.5		03	2.2
50	27	20,892	-52.7		08	3.6
40	2[illegible]	22,340	-50.8		09	5.5
30	25	24,225	-48.1		09	8.1
25	24	25,432	-46.3		09	8.9
20	24	26,923	-44.1		08	10.3
15	22	28,856	-41.1		09	11.0
10	1[illegible]	31,635	-35.5		09	12.9
7	5	34,113	-31.8			
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* QUILLAYUTE, WASH. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	58	9.0	7.7	14	.9
1000	30	142	8.8	7.1	15	1.2
950	30	566	6.6	4.9	19	3.1
900	30	1,009	4.4	2.5	20	3.9
850	30	1,473	2.5	-1.0	20	4.5
800	30	1,962	.5	-5.9	21	4.8
750	30	2,478	-1.5	-10.8	22	5.2
700	30	3,025	-4.4	-14.1	23	6.2
650	30	3,605	-7.6	-16.4	23	7.0
600	30	4,224	-11.1	-22.7	23	8.0
550	30	4,887	-15.1	-27.2	23	9.4
500	30	5,601	-20.0	-31.8	24	10.7
450	30	6,375	-25.2	-35.5	24	12.2
400	30	7,219	-31.5	-41.4	24	13.8
350	30	8,155	-38.0	-46.1	25	16.2
300	30	9,198	-45.0		25	18.9
250	30	10,400	-50.9		25	19.2
200	30	11,850	-50.5		25	16.3
175	30	12,722	-50.3		24	14.3
150	30	13,724	-51.9		24	13.2
125	3[illegible]	14,903	-53.1		24	9.8
100	3[illegible]	16,336	-54.7		23	5.9
80	2[illegible]	17,763	-55.2		21	3.2
70	2[illegible]	18,615	-55.6		[illegible]9	2.0
60	2[illegible]	19,599	-55.1		[illegible]4	1.4
50	2[illegible]	20,766	-54.3		[illegible]1	2.6
40	2[illegible]	22,202	-52.7		09	4.0
30	2[illegible]	24,069	-50.6		08	6.0
25	28	25,259	-48.7		09	7.1
20	27	26,[illegible]34	-46.5		09	8.8
15	2[illegible]	28,659	-43.5		09	10.1
10	2[illegible]	31,420	-38.0		08	11.9
7	1[illegible]	33,877	-32.7		09	12.2
5	[illegible]	36,250	-28.5			

RAPID CITY, S. DAK. 903 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	966	13.5	10.3	30	1.8
1000	29	91				
950	29	532				
900	29	991	14.1	10.0	30	2.0
850	29	1,478	16.5	6.4	23	3.2
800	29	1,993	14.4	2.7	23	4.4
750	29	2,536	11.4	-1.0	24	5.5
700	29	3,108	7.3	-4.8	26	6.9
650	29	3,714	2.8	-8.1	27	8.8
600	29	4,355	-2.2	-12.6	27	10.9
550	29	5,040	-7.4	-18.[illegible]	26	12.5
500	29	5,775	-12.7	-25.5	26	13.2
450	29	6,571	-18.1	-31.4	26	12.3
400	29	7,441	-24.3	-38.0	26	12.2
350	29	8,403	-31.5	-44.[illegible]	25	12.1
300	29	9,472	-40.1	-51.[illegible]	24	13.1
250	29	10,692	-49.2		23	15.8
200	29	12,130	-56.0		24	17.9
175	29	12,978	-56.9		25	17.5
150	29	13,953	-57.4		25	14.4
125	29	15,101	-59.3		25	10.9
100	28	16,488	-61.6		23	6.5
80	2[illegible]	17,872	-59.9		22	2.5
70	28	18,710	-58.5		[illegible]7	.9
60	28	19,682	-57.1		08	2.[illegible]
50	27	20,844	-54.6		09	3.9
40	2[illegible]	22,278	-53.0		09	5.8
30	2[illegible]	24,146	-50.2		09	7.8
25	27	25,343	-48.0		09	8.2
20	26	26,823	-45.1		09	9.8
15	24	28,758	-42.4		09	10.7
10	18	31,541	-36.9		09	12.[illegible]

ST CLOUD, MINN. 975 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	16.1	14.0	14	1.1
1000	30	102				
950	30	542	17.9	12.8	20	2.1
900	30	1,005	16.7	9.6	23	4.4
850	30	1,491	14.7	7.7	25	5.6
800	30	2,002	12.1	3.0	26	5.8
750	30	2,540	8.8	-.7	26	6.6
700	30	3,108	5.1	-7.0	25	6.9
650	30	3,709	1.4	-12.2	26	7.2
600	30	4,349	-2.2	-16.2	26	8.0
550	30	5,034	-6.7	-21.2	26	9.4
500	30	5,772	-11.4	-25.8	26	10.7
450	30	6,572	-16.6	-30.4	27	11.5
400	30	7,446	-23.1	-37.2	27	12.6
350	30	8,413	-30.3	-43.4	27	14.0
300	30	9,489	-38.6	-49.1	26	15.7
250	30	10,716	-48.1		27	19.7
200	30	12,156	-56.5		27	22.3
175	30	12,998	-58.8		27	19.7
150	30	13,968	-58.0		27	14.3
125	30	15,114	-59.3		27	12.2
100	30	16,505	-61.0		27	8.5
80	30	17,895	-59.4		29	3.8
70	30	18,734	-58.2		32	1.7
60	2[illegible]	19,707	-56.5		03	1.8
50	29	20,869	-54.6		07	3.6
40	2[illegible]	22,302	-52.5		08	6.4
30	2[illegible]	24,175	-49.2		09	7.6
25	2[illegible]	25,374	-47.7		09	8.1
20	2[illegible]	26,855	-45.2		09	9.1
15	2[illegible]	28,796	-42.1		09	1[illegible].5
10	[illegible]	31,592	-37.1			

* ST PAUL IS., ALASKA [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	[illegible]	10	1.1	.8	28	.3
1000	[illegible]	[illegible]			35	.[illegible]
950	[illegible]	5[illegible]	.8	-1.1	20	[illegible]
900	[illegible]	93[illegible]	.3	-2.8	20	[illegible]
850	[illegible]	1,395	-.9	-4.6	20	[illegible]
800	[illegible]	1,87[illegible]	-2.9	-7.5	21	2.[illegible]
750	[illegible]	[illegible],337	-4.9	-10.3	21	2.[illegible]
700	[illegible]	[illegible],927	-7.3	-14.4	20	2.4
650	[illegible]	3,5[illegible]	-10.4	-18.4	20	2.[illegible]
600	[illegible]	4,[illegible]	-1[illegible].8	-2[illegible]	21	[illegible].6
550	[illegible]	4,[illegible]	-17.7	-27.2	22	[illegible]
500	[illegible]	5,[illegible]	-22.4	-31.9	22	6.1
450	[illegible]	6,243	-27.6	-36.3	23	[illegible]
400	[illegible]	7,[illegible]	-33.6	-41.6	2[illegible]	7.[illegible]
350	[illegible]	8,[illegible]	-40.1	-45.2	23	8.[illegible]
300	[illegible]	9,[illegible]	-46.1		24	8.[illegible]
250	[illegible]	[illegible]	-48.9		24	[illegible]
200	[illegible]	[illegible]	-46.4		25	[illegible]
175	[illegible]	[illegible]	-46.3		25	5.5
150	[illegible]	13,628	-47.2		26	4.2
125	[illegible]	[illegible]	-4[illegible]		25	3.[illegible]
100	[illegible]	[illegible]	-4[illegible].9		[illegible]	[illegible]
80	[illegible]	[illegible]	-49.0		[illegible]	[illegible]
70	[illegible]	[illegible]	-48.8		[illegible]	[illegible]
60	[illegible]	[illegible]	-4[illegible].9		[illegible]	3.[illegible]
50	[illegible]	[illegible]	-48.9		[illegible]	3.[illegible]
40	[illegible]	[illegible]	-48.6		[illegible]9	5.1
30	[illegible]	[illegible]	-47.4		09	[illegible]
25	[illegible]	[illegible]	-46.5		09	7.0
20	[illegible]	[illegible]	-44.6		09	7.6
15	[illegible]	[illegible]	-41.7		09	8.7
10	[illegible]	[illegible]	[illegible]		[illegible]9	9.7
7	[illegible]	[illegible]	[illegible]		[illegible]9	10.1

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALEM, ILL. 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	174	19.7	17.6	18	1.0
1000	3[illegible]	125				
950	3[illegible]	5[illegible]	22.3	[illegible]	26	4.1
900	3[illegible]	1,0[illegible]	19.9	12.[illegible]	27	5.0
850	3[illegible]	1,531	16.5	9.0	27	5.3
800	3[illegible]	[illegible]	13.4	[illegible]	27	5.3
750	3[illegible]	[illegible]	10.1	[illegible]	27	5.9
700	3[illegible]	3,[illegible]	6.5	-3.6	27	5.8
650	3[illegible]	3,[illegible]	2.6	-8.6	28	5.8
600	3[illegible]	4,4[illegible]3	-1.5	-13.5	28	5.9
550	3[illegible]	5,091	-5.5	-20.9	28	5.7
500	3[illegible]	5,833	-9.[illegible]	-25.5	29	6.1
450	3[illegible]	6,637	-15.1	-3[illegible]	28	7.6
400	3[illegible]	7,517	-21.2	-37.5	28	8.5
350	3[illegible]	8,492	-28.5	-43.8	28	9.4
300	3[illegible]	9,575	-36.8	-51.[illegible]	29	10.5
250	3[illegible]	[illegible]	-46.8		28	11.9
200	3[illegible]	12,257	-56.8		28	12.4
175	3[illegible]	13,095	-60.8		28	11.1
150	3[illegible]	14,049	-62.0		29	9.1
125	3[illegible]	15,174	-63.6		29	7.3
100	3[illegible]	16,537	-65.6		31	4.4
80	3[illegible]	17,896	-64.2		01	2.4
70	3[illegible]	18,719	-62.1		05	3.3
60	3[illegible]	19,677	-59.7		07	4.8
50	3[illegible]	[illegible]	-56.4		08	5.9
40	3[illegible]	22,251	-54.0		09	7.4
30	3[illegible]	24,114	-50.5		09	9.2
25	2[illegible]	25,307	-48.6		09	10.2
20	2[illegible]	26,784	-45.7		09	11.9
15	2[illegible]	28,714	-42.4		09	13.8
10	2[illegible]	31,475	-38.1		09	13.4
7	[illegible]	33,924	-35.8			

SALEM, OREG. 101[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	[illegible]1	9.8	8.[illegible]	19	.8
1000	3[illegible]	[illegible]	10.5	7.[illegible]	20	.7
950	3[illegible]	575	9.0	5.7	22	1.3
900	3[illegible]	1,[illegible]22	7.0	3.5	23	2.9
850	3[illegible]	1,490	4.8	-2.3	24	4.2
800	30	1,983	3.0	-6.4	25	5.4
750	3[illegible]	2,5[illegible]4	1.1	-[illegible]3.2	25	7.0
700	30	3,057	-[illegible].6	-16.2	25	7.9
650	30	3,644	-4.4	-17.7	25	8.4
600	30	4,271	-7.9	-22.4	25	10.2
550	3[illegible]	4,942	-11.6	-25.5	25	12.1
500	3[illegible]	5,666	-16.4	-29.6	25	14.0
450	30	6,450	-21.9	-33.8	26	15.3
400	30	7,307	-28.0	-39.4	26	17.3
350	30	8,255	-34.8	-44.7	26	19.7
300	3[illegible]	9,310	-43.0	-50.3	26	21.6
250	30	10,518	-50.5		26	23.5
200	3[illegible]	11,959	-53.8		26	22.1
175	3[illegible]	12,819	-52.9		25	19.4
150	3[illegible]	13,8[illegible]2	-53.7		25	15.4
125	3[illegible]	14,979	-55.2		25	12.2
100	2[illegible]	16,399	-56.2		24	6.4
80	27	17,814	-56.4		22	3.2
70	27	18,662	-56.1		19	.8
60	2[illegible]	19,643	-55.5		09	1.4
50	27	20,810	-54.0		09	3.5
40	2[illegible]	22,247	-52.6		09	5.3
30	2[illegible]	24,118	-49.5		09	6.8
25	27	25,316	-48.2		09	8.2
20	26	26,792	-45.8		09	9.4
15	26	28,719	-43.1		08	11.1
10	2[illegible]	31,460	-37.5		09	12.4
7	5	34,[illegible]08	-32.3			

SALT LAKE CITY, UTAH 870 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,288	12.8	5.3	14	2.8
1000	3[illegible]	99				
950	3[illegible]	541				
900	30	1,002				
850	30	1,486	16.9	2.8	15	2.6
800	3[illegible]	2,001	15.0	-1.0	19	2.6
750	30	2,544	11.3	-4.0	22	3.1
700	3[illegible]	3,115	6.8	-6.4	24	4.7
650	30	3,719	2.1	-9.3	25	7.2
600	3[illegible]	4,359	-2.7	-13.2	24	10.4
550	30	5,042	-8.1	-18.7	23	12.3
500	30	5,775	-13.6	-26.1	24	12.5
450	3[illegible]	6,568	-18.[illegible]	-30.9	24	12.8
400	3[illegible]	7,435	-25.0	-38.5	24	14.2
350	30	8,395	-32.3	-45.2	24	15.7
300	30	9,460	-41.0	-52.4	25	15.5
250	30	10,676	-49.6		25	17.0
200	3[illegible]	12,116	-55.5		25	17.7
175	30	12,965	-56.5		25	17.4
150	30	13,940	-57.9		25	15.9
125	30	15,064	-59.8		25	11.6
100	30	16,471	-61.9		24	6.2
80	30	17,852	-60.9		23	2.7
70	30	18,686	-59.0		15	1.4
60	30	19,656	-57.7		10	3.2
50	30	20,811	-56.2		09	4.5
40	29	22,237	-53.9		09	6.2
30	28	24,100	-50.6		09	7.8
25	27	25,292	-48.8		09	9.4
20	27	26,767	-46.3		09	10.3
15	26	28,692	-43.7		09	12.1
10	21	31,443	-39.0		09	13.8
7	8	33,892	-35.4			

SAN DIEGO, CALIF. 999 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	124	14.7	12.5	18	.3
1000	3[illegible]	1[illegible]4			06	.8
950	30	548	14.1	8.0	18	.4
900	30	1,007	16.8	-1.3	31	1.8
850	30	1,495	16.8	-4.6	29	4.1
800	30	2,009	15.4	-8.2	27	5.0
750	30	2,553	12.3	-10.7	26	4.8
700	30	3,126	8.7	-14.2	24	5.1
650	30	3,735	4.8	-16.6	24	5.2
600	30	4,382	.4	-19.9	24	5.2
550	30	5,073	-4.5	-24.1	26	5.1
500	30	5,816	-9.7	-28.3	26	5.7
450	30	6,621	-15.2	-33.0	26	7.1
400	30	7,499	-21.9	-39.9	27	7.9
350	30	8,470	-29.6	-47.1	27	9.6
300	30	9,546	-38.5	-53.1	26	11.1
250	30	10,776	-47.3		26	12.9
200	3[illegible]	12,225	-55.0		26	14.2
175	30	13,072	-58.3		26	14.7
150	30	14,034	-61.9		26	12.7
125	29	15,148	-65.6		25	8.7
100	29	16,499	-66.4		25	4.2
80	27	17,859	-65.6		12	1.7
70	27	18,676	-63.1		09	3.5
60	27	19,631	-60.4		09	6.1
50	27	20,774	-58.1		09	8.7
40	27	22,188	-55.3		09	10.8
30	27	24,041	-51.5		09	12.9
25	25	25,235	-49.5		09	14.0
20	25	26,705	-47.0		09	15.2
15	25	28,622	-44.2		09	15.8
10	22	31,371	-38.7		09	17.4

SAN JUAN, P. R. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	25.9	20.7	14	2.4
1000	30	158	24.9	19.6	10	4.8
950	30	607	21.7	16.8	10	7.7
900	30	1,074	18.7	12.5	10	8.8
850	30	1,563	15.8	7.0	10	8.2
800	30	2,077	13.8	1.4	10	7.8
750	30	2,619	10.9	-4.4	11	6.6
700	30	3,191	7.2	-9.0	10	5.5
650	30	3,797	3.7	-14.7	10	5.2
600	30	4,442	.3	-20.6	10	4.6
550	30	5,135	-3.6	-24.6	09	4.4
500	30	5,881	-8.3	-28.1	11	3.0
450	30	6,690	-13.3	-32.7	10	1.9
400	30	7,576	-19.7	-37.5	32	1.0
350	30	8,556	-26.8	-43.5	31	2.6
300	30	9,647	-35.3	-50.8	30	5.0
250	30	10,890	-45.6		30	8.3
200	29	12,339	-57.1		30	11.8
175	29	13,172	-62.9		30	13.2
150	29	14,108	-68.6		30	11.5
125	29	15,193	-71.1		28	8.9
100	29	16,509	-72.4		30	2.5
80	29	17,826	-70.2		08	8.2
70	29	18,626	-67.4		09	12.0
60	27	19,562	-64.7		08	14.9
50	26	20,686	-60.6		09	16.6
40	25	22,084	-57.8		09	16.5
30	25	23,918	-53.3		09	17.8
25	24	25,099	-50.1		09	16.9
20	22	26,566	-46.9		09	17.4
15	19	28,486	-43.5		09	19.5
10	13	31,213	-40.0			

* SAULT STE MARIE, MICH. 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	221	12.1	6.3	10	.6
1000	30	121				
950	30	554	14.6	8.0	19	1.4
900	30	1,012	14.2	6.8	26	3.5
850	3[illegible]	1,493	11.1	4.2	27	5.2
800	30	1,997	8.1	.8	28	6.1
750	3[illegible]	2,527	5.4	-3.7	27	8.2
700	30	3,088	2.7	-8.8	28	10.0
650	3[illegible]	3,685	-.6	-13.1	28	10.5
600	3[illegible]	4,320	-4.2	-18.0	28	11.6
550	3[illegible]	5,001	-8.3	-22.6	28	12.8
500	3[illegible]	5,734	-12.9	-27.9	28	13.7
450	30	6,530	-18.1	-32.5	28	13.9
400	3[illegible]	7,399	-24.4	-37.4	29	15.3
350	3[illegible]	8,361	-31.5	-43.8	29	16.9
300	30	9,430	-40.0	-50.3	29	19.3
250	3[illegible]	10,651	-49.4		29	23.2
200	3[illegible]	12,088	-56.2		30	25.3
175	30	12,933	-58.0		29	22.8
150	2[illegible]	13,905	-57.0		29	18.8
125	29	15,058	-57.8		29	14.4
100	2[illegible]	16,461	-58.9		30	11.1
80	29	17,864	-57.9		31	5.3
70	29	18,709	-56.8		32	3.7
60	29	19,689	-55.4		36	2.5
50	29	20,857	-53.5		06	2.7
40	27	22,296	-51.5		07	4.9
30	26	24,176	-48.7		08	6.9
25	26	25,379	-47.1		09	7.6
20	26	26,864	-44.8		08	9.3
15	26	28,802	-41.5		09	10.9
10	2[illegible]	31,594	-36.3		09	13.8
7	2[illegible]	34,100	-31.0		09	15.2
5	11	36,494	-27.1		09	16.1
4	7	38,021	-25.6			

* SHEMYA, ALASKA 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	38	4.6	2.3	20	2.5
1000	29	71			19	3.4
950	29	487	2.1	.7	20	4.8
900	29	923	.5	-1.5	21	4.5
850	29	1,381	-.3	-3.6	23	4.3
800	29	1,866	-1.4	-7.4	24	5.4
750	29	2,379	-3.0	-8.6	25	6.1
700	29	2,924	-5.1	-11.3	26	7.0
650	29	3,504	-7.5	-15.4	26	7.9
600	29	4,124	-10.6	-21.2	27	8.4
550	2[illegible]	4,788	-14.9	-24.8	27	8.4
500	29	5,502	-19.6	-30.4	27	9.2
450	2[illegible]	6,277	-24.7	-36.5	27	9.9
400	29	7,124	-3[illegible].9	-42.4	27	11.5
350	29	8,060	-37.6	-44.5	27	13.7
300	29	9,105	-44.7	-47.2	27	15.7
250	29	10,309	-50.3		27	17.8
200	2[illegible]	11,762	-51.1		27	15.9
175	29	12,633	-49.9		27	12.9
150	29	13,641	-50.2		26	10.4
125	29	14,829	-51.2		27	7.4
100	29	16,277	-51.9		26	4.2
80	28	17,718	-51.7		26	2.0
70	28	18,585	-51.5		21	.3
60	28	19,587	-51.1		12	1.5
50	28	20,774	-50.7		1[illegible]	2.8
40	28	22,229	-50.2		10	3.6
30	28	24,113	-49.3		08	6.0
25	28	25,312	-47.9		09	6.7
20	28	26,791	-46.1		09	7.9
15	28	28,715	-43.5		09	8.6
10	2[illegible]	31,473	-38.8		09	9.7
7	21	33,920	-35.8		08	9.5
5	9	36,292	-33.5			
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* SHREVEPORT, LA. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	22.2	20.6	19	1.6
1000	30	136	21.9	20.1	22	2.9
950	30	584	22.7	17.0	23	8.0
900	30	1,055	20.3	13.5	22	5.9
850	30	1,546	16.9	10.2	21	4.4
800	30	2,061	14.1	6.1	21	4.0
750	30	2,603	10.5	1.7	22	3.6
700	30	3,174	6.4	-2.8	23	2.6
650	30	3,778	2.5	-7.5	24	2.4
600	3[illegible]	4,421	-1.2	-12.2	25	2.5
550	3[illegible]	5,110	-5.3	-17.4	25	1.8
500	30	5,851	-10.1	-24.1	24	2.8
450	30	6,657	-14.9	-28.0	26	2.6
400	30	7,538	-21.0	-33.3	26	3.1
350	30	8,513	-27.8	-40.4	26	3.6
300	30	9,599	-36.2	-49.0	27	5.4
250	30	10,839	-45.9		28	5.9
200	30	12,290	-56.1		29	7.4
175	30	13,129	-61.0		29	6.1
150	30	14,078	-64.4		29	6.1
125	30	15,187	-66.8		32	3.4
100	30	16,527	-68.9		03	2.1
80	30	17,863	-67.3		08	4.8
70	29	18,677	-64.2		08	6.9
60	29	19,627	-61.2		08	7.8
50	29	20,767	-58.4		09	9.2
40	29	22,179	-55.7		09	10.9
30	29	24,029	-51.8		09	13.1
25	28	25,222	-49.8		09	14.4
20	28	26,693	-46.5		09	15.5
15	28	28,614	-43.6		09	16.5
10	28	31,365	-39.5		09	18.4
7	21	33,837	-34.2		09	22.3
5	13	36,223	-28.4		09	24.2
4	7	37,879	-27.4			

SPOKANE, WASH. 931 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	720	10.1	5.5	18	2.4
1000	30	115				
950	30	547				
900	30	998	11.2	4.3	20	5.1
850	30	1,474	8.8	1.4	23	5.5
800	30	1,973	5.2	-.9	23	5.5
750	30	2,497	1.4	-3.3	24	5.8
700	30	3,049	-2.1	-7.7	24	6.6
650	30	3,635	-5.3	-11.2	24	7.9
600	30	4,260	-8.7	-16.4	24	8.8
550	30	4,930	-12.8	-21.2	24	9.8
500	30	5,650	-17.5	-25.7	24	10.9
450	30	6,431	-22.8	-31.9	24	12.5
400	30	7,284	-29.0	-38.3	24	14.7
350	30	8,228	-36.0	-44.3	24	16.9
300	30	9,279	-43.6		24	19.9
250	30	10,487	-49.6		25	20.7
200	30	11,941	-50.8		24	18.6
175	30	12,812	-50.7		24	16.5
150	30	13,813	-52.4		24	12.5
125	30	14,989	-53.9		24	10.4
100	30	16,418	-55.1		23	6.3
80	30	17,842	-55.4		22	3.4
70	30	18,693	-55.4		19	.9
60	30	19,679	-54.6		09	1.9
50	29	20,849	-53.4		09	2.9
40	28	22,290	-51.6		09	5.1
30	26	24,169	-49.3		08	7.0
25	26	25,369	-47.7		08	7.3
20	26	26,851	-45.2		09	7.9
15	26	28,783	-42.3		09	10.3
10	23	31,551	-37.1		08	12.2
7	8	33,986	-33.2			

* SWAN ISLAND, W. I. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	26.8	23.1	09	6.1
1000	30	124	25.8	22.2	10	6.8
950	30	574	22.3	19.6	10	8.3
900	30	1,043	19.3	15.1	11	9.7
850	30	1,534	16.4	10.5	11	9.6
800	30	2,048	13.7	5.4	11	9.2
750	30	2,590	10.9	-.7	11	9.0
700	30	3,163	7.4	-4.7	11	8.3
650	30	3,770	4.5	-9.6	11	6.5
600	30	4,418	1.0	-12.6	12	5.5
550	30	5,113	-2.9	-17.0	12	3.9
500	30	5,862	-7.4	-19.9	12	2.9
450	30	6,674	-12.7	-24.0	14	1.7
400	29	7,563	-18.9	-29.7	17	1.4
350	29	8,547	-25.9	-36.4	25	4.0
300	29	9,642	-34.3	-44.4	26	7.1
250	29	10,891	-44.1		26	11.7
200	29	12,349	-56.1		26	14.0
175	29	13,186	-62.6		26	13.8
150	29	14,120	-69.5		27	11.4
125	29	15,195	-73.9		29	6.0
100	29	16,495	-73.8		05	2.6
80	28	17,803	-71.3		09	9.0
70	28	18,599	-68.0		09	12.0
60	28	19,531	-65.5		09	14.9
50	28	20,650	-61.8		08	16.7
40	27	22,044	-58.4		09	18.3
30	26	23,878	-53.0		09	16.[illegible]
25	25	25,061	-50.4		09	16.4
20	2[illegible]	26,529	-47.6		09	16.[illegible]
15	20	28,439	-44.5		09	18.3
10	20	31,176	-40.9		09	22.2
7	16	33,614	-38.1		09	25.7
5	6	35,979	-31.3			

TAMPA, FLA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	3[illegible]	8	23.9	21.6	28	.2
1000	3[illegible]	152	24.2	20.6	27	.6
950	3[illegible]	601	21.8	17.5	28	2.4
900	3[illegible]	1,070	19.0	13.0	29	2.4
850	30	1,559	15.9	8.8	29	2.2
800	3[illegible]	2,072	13.2	4.0	27	1.5
750	3[illegible]	2,613	10.2	.0	26	2.1
700	3[illegible]	3,184	6.7	-3.7	26	2.6
650	3[illegible]	3,789	3.4	-7.7	26	2.9
600	3[illegible]	4,434	-.3	-10.8	26	2.6
550	3[illegible]	5,125	-4.3	-15.8	27	2.7
500	3[illegible]	5,871	-8.6	-22.4	28	2.7
450	30	6,680	-13.8	-27.8	28	2.3
400	3[illegible]	7,565	-19.7	-35.1	30	2.2
350	3[illegible]	8,545	-26.9	-41.0	30	1.9
300	3[illegible]	9,635	-35.3	-49.9	31	2.2
250	3[illegible]	10,878	-45.4		32	2.5
200	3[illegible]	12,330	-56.5		33	2.6
175	30	13,167	-62.0		35	2.7
150	30	14,108	-66.8		35	2.[illegible]
125	30	15,201	-69.6		01	2.1
100	30	16,531	-69.4		04	4.3
80	3[illegible]	17,868	-67.2		07	6.7
70	3[illegible]	18,679	-64.9		08	9.0
60	3[illegible]	19,627	-61.9		09	11.1
50	3[illegible]	20,764	-58.3		09	12.9
40	2[illegible]	22,178	-55.6		09	13.8
30	2[illegible]	24,024	-52.4		09	14.7
25	2[illegible]	25,210	-50.0		09	16.0
20	2[illegible]	26,679	-47.2		09	17.4
15	2[illegible]	28,595	-43.6		09	18.6
10	[illegible]	31,340	-39.2			
7						
5						

TOPEKA, KANS. 982 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	268	20.1	17.7	19	1.7
1000	30	108				
950	30	554	22.[illegible]	16.6	22	7.0
900	30	1,025	21.3	13.3	23	9.4
850	3[illegible]	1,519	18.7	9.4	24	8.4
800	30	2,038	15.8	4.5	24	6.8
750	30	2,583	12.3	-.1	24	6.4
700	30	3,157	8.1	-4.2	25	6.1
650	30	3,764	3.9	-8.4	25	6.4
600	30	4,410	-.7	-14.0	25	6.4
550	30	5,098	-5.4	-19.0	25	6.7
500	3[illegible]	5,839	-10.2	-24.6	26	7.6
450	3[illegible]	6,643	-15.6	-29.1	26	8.3
400	30	7,522	-21.5	-35.2	26	9.0
350	3[illegible]	8,495	-2[illegible].7	-40.9	26	9.4
300	3[illegible]	9,577	-37.0	-47.4	26	11.0
250	3[illegible]	10,812	-46.7		26	12.6
200	3[illegible]	12,258	-56.9		26	15.0
175	30	13,[illegible]	-59.8		26	12.3
150	3[illegible]	14,058	-60.9		26	10.6
125	3[illegible]	15,185	-63.4		26	7.6
100	3[illegible]	16,549	-65.3		27	4.4
80	3[illegible]	17,910	-64.1		31	.6
70	30	18,733	-61.8		07	1.6
60	29	19,691	-59.6		08	4.3
50	29	20,840	-56.2		08	5.9
40	29	22,266	-54.0		09	6.9
30	28	24,129	-50.4		09	9.3
25	27	25,328	-48.6		09	9.8
20	2[illegible]	26,[illegible]	-46.0		09	11.1
15	2[illegible]	28,728	-43.3		09	12.3
10	[illegible]	31,510	-38.8			

+ TRUK, CAROLINE IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	2	27.9	24.2	07	3.2
1000	30	97	27.0	21.3	08	3.6
950	30	550	23.5	18.9	09	5.9
900	30	1,021	20.6	15.7	10	6.8
850	30	1,513	17.6	12.7	10	7.0
800	30	2,031	15.3	9.1	10	6.3
750	30	2,576	12.7	5.7	10	6.6
700	30	3,153	9.3	2.2	10	6.8
650	30	3,764	6.0	-.8	10	6.7
600	30	4,417	2.4	-4.4	10	6.0
550	30	5,116	-1.2	-8.8	10	4.4
500	3[illegible]	5,871	-5.3	-13.8	10	3.8
450	30	6,691	-9.7	-19.9	10	3.5
400	30	7,591	-15.4	-27.0	10	2.5
350	30	8,590	-22.0	-34.8	07	1.7
300	30	9,702	-30.6	-43.6	06	1.3
250	3[illegible]	10,969	-41.2		31	1.4
200	30	12,445	-53.8		29	3.0
175	3[illegible]	13,289	-61.0		29	4.3
150	30	14,229	-68.8		29	5.4
125	3[illegible]	15,298	-76.6		29	4.2
100	3[illegible]	16,572	-78.1		06	2.5
80	30	17,862	-73.4		08	8.1
70	30	18,650	-69.7		09	8.8
60	30	19,577	-66.0		09	9.4
50	29	20,696	-61.6		10	7.5
40	27	22,092	-57.7		09	5.3
30	27	23,925	-53.5		09	3.4
25	26	25,104	-50.8		10	2.2
20	25	26,566	-48.4		10	3.8
15	23	28,478	-45.1		11	6.8
10	16	31,215	-41.9		10	7.8

* TUCSON, ARIZ. 922 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	789	20.1	1.5	15	2.2
1000	30	85				
950	30	533				
900	30	1,003	24.2	3.0	17	.5
850	30	1,501	21.7	.7	30	1.4
800	30	2,022	17.8	-1.8	27	2.0
750	30	2,570	13.6	-4.8	23	2.6
700	30	3,145	9.4	-8.8	22	3.6
650	30	3,755	5.0	-11.3	21	5.3
600	30	4,402	.2	-14.4	21	6.7
550	30	5,093	-5.0	-18.2	21	6.8
500	30	5,834	-10.6	-22.3	22	6.4
450	30	6,636	-15.8	-29.2	23	7.4
400	30	7,514	-21.9	-35.5	24	8.2
350	30	8,486	-29.3	-42.7	25	9.3
300	30	9,565	-37.6	-50.3	25	11.6
250	30	10,798	-46.9		26	13.0
200	30	12,248	-55.2		26	14.9
175	3[illegible]	13,094	-58.6		25	13.2
150	30	14,054	-62.6		26	10.0
125	30	15,169	-66.3		25	7.5
100	30	16,513	-68.0		22	3.5
80	30	17,855	-66.6		12	1.3
70	30	18,670	-63.8		09	4.7
60	30	19,623	-60.5		09	7.0
50	3[illegible]	20,765	-57.9		09	8.8
40	30	22,181	-55.4		09	11.3
30	3[illegible]	24,031	-52.0		09	13.4
25	3[illegible]	25,218	-49.8		09	14.3
20	30	26,690	-46.5		09	14.6
15	29	28,612	-43.5		09	15.6
10	27	31,365	-38.8		09	19.3
7	22	33,857	-33.4		09	21.5
5	8	36,287	-28.2			

* VANDENBERG AFB, CALIF. 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	100	10.3	9.8	30	1.2
1000	26	124			32	1.8
950	26	553	13.5	5.5	36	5.5
900	26	1,013	16.2	1.1	36	6.3
850	26	1,498	15.0	-2.0	35	5.8
800	26	2,009	12.5	-6.3	33	5.5
750	26	2,547	10.0	-10.2	33	5.0
700	26	3,117	7.1	-13.4	31	5.0
650	26	3,722	3.6	-16.1	29	5.9
600	26	4,367	-.4	-20.4	28	6.7
550	26	5,057	-4.9	-24.7	28	6.6
500	26	5,798	-10.2	-29.5	28	7.0
450	26	6,601	-16.1	-34.4	27	7.4
400	26	7,476	-23.1	-39.3	27	8.1
350	26	8,441	-30.8	-45.1	28	10.0
300	26	9,513	-39.4	-51.1	28	10.8
250	26	10,737	-48.4		27	12.6
200	26	12,178	-56.1		27	14.2
175	26	13,022	-58.6		27	15.3
150	26	13,986	-60.9		26	14.9
125	26	15,111	-64.0		25	11.3
100	26	16,473	-64.9		26	5.7
80	26	17,837	-63.3		18	.3
70	26	18,662	-61.4		09	2.8
60	26	19,623	-59.6		10	4.8
50	26	20,768	-57.8		09	6.1
40	26	22,184	-55.4		08	8.2
30	26	24,033	-52.1		09	10.9
25	26	25,220	-50.0		09	12.9
20	25	26,686	-47.2		09	13.7
15	23	28,606	-44.4		09	14.7
10	21	31,348	-39.1		09	16.4
7	17	33,825	-33.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

VICTORIA, TEXAS — 1001 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	33	23.5	22.3	14	2.4
1000	30	125	24.3	23.4	16	4.2
950	30	574	21.8	19.8	17	9.7
900	30	1,044	19.7	14.7	18	10.2
850	30	1,536	18.1	7.7	18	9.8
800	30	2,054	15.2	3.7	17	7.9
750	30	2,598	12.0	-1.7	17	6.1
700	30	3,172	8.2	-6.1	17	4.0
650	30	3,780	4.3	-8.6	17	2.9
600	30	4,426	.0	-11.4	17	2.6
550	30	5,118	-4.1	-16.4	18	2.4
500	30	5,863	-8.8	-20.1	20	1.9
450	30	6,672	-13.8	-25.4	23	2.0
400	30	7,557	-19.6	-31.0	27	3.3
350	30	8,538	-26.7	-37.8	27	4.1
300	30	9,629	-35.0	-45.3	28	6.7
250	30	10,874	-44.9		28	8.4
200	30	12,330	-55.7		29	9.6
175	30	13,170	-61.1		29	8.9
150	30	14,117	-65.1		30	6.2
125	30	15,218	-68.7		32	3.0
100	29	16,546	-70.8		06	3.9
80	28	17,872	-68.0		08	6.8
70	28	18,679	-65.3		08	8.2
60	28	19,624	-62.7		09	10.2
50	28	20,757	-59.5		09	12.2
40	28	22,162	-56.8		09	13.8
30	28	24,004	-52.2		09	14.7
25	26	25,192	-49.6		09	16.2
20	24	26,665	-46.9		09	17.0
15	24	28,584	-44.3		09	18.2
10	17	31,325	-39.7		09	19.6
7						

WALLOPS IS., VA. NASA — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	4	20.4	18.4	02	.2
1000	28	141	20.2	16.6	27	.9
950	28	585	19.6	14.1	29	2.6
900	28	1,050	17.5	11.2	29	2.8
850	28	1,536	14.5	8.0	30	3.2
800	28	2,047	11.7	4.0	30	4.3
750	28	2,584	8.6	-.4	29	5.2
700	28	3,151	5.0	-5.2	29	6.3
650	28	3,753	1.9	-8.8	29	6.8
600	28	4,395	-1.6	-12.6	29	6.9
550	28	5,083	-5.5	-16.2	29	7.5
500	28	5,825	-9.7	-24.8	29	7.2
450	28	6,630	-15.0	-30.3	29	8.4
400	28	7,510	-21.1	-35.2	29	9.5
350	28	8,485	-28.2	-42.7	29	11.2
300	28	9,570	-36.6	-50.1	28	12.3
250	28	10,806	-46.7		29	13.4
200	28	12,251	-57.1		30	14.9
175	28	13,087	-61.5		30	13.3
150	28	14,038	-63.2		30	11.3
125	28	15,157	-64.1		31	9.3
100	28	16,522	-64.2		33	5.4
80	28	17,893	-62.3		01	3.4
70	28	18,722	-60.3		05	3.1
60	28	19,688	-58.4		07	4.6
50	28	20,843	-55.6		08	6.1
40	28	22,275	-52.8		09	8.2
30	28	24,146	-49.4		09	9.6
25	26	25,347	-47.4		09	10.9
20	24	26,822	-44.9		09	11.5
15	24	28,759	-42.0		10	12.3
10	18	31,540	-37.9		09	15.3
7	5	34,065	-32.3			

WAKE IS., PACIFIC AREA — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	3	5	27.3	22.9	09	4.9
1000	30	135	26.1	21.6	09	6.4
950	30	586	22.3	19.7	10	7.2
900	30	1,055	19.1	15.3	10	7.2
850	30	1,544	15.8	11.7	10	7.2
800	30	2,058	13.3	6.8	09	7.4
750	30	2,599	10.7	1.8	09	6.6
700	30	3,172	7.9	-3.6	09	6.4
650	30	3,780	4.6	-8.7	09	6.2
600	30	4,428	1.2	-14.2	09	5.2
550	30	5,123	-2.9	-19.0	10	4.3
500	30	5,872	-7.7	-23.0	09	3.7
450	30	6,683	-12.8	-29.2	10	2.9
400	30	7,571	-18.8	-32.9	10	1.6
350	30	8,556	-25.7	-38.6	33	.3
300	30	9,651	-34.3	-46.4	25	1.7
250	30	10,900	-44.4		26	4.9
200	29	12,353	-56.3		28	7.2
175	29	13,189	-62.7		29	7.4
150	29	14,123	-69.4		29	6.0
125	29	15,200	-73.2		32	2.4
100	29	16,508	-72.5		08	3.6
80	28	17,823	-71.0		08	8.6
70	28	18,619	-68.7		09	11.3
60	28	19,549	-65.7		09	14.3
50	28	20,666	-62.3		09	16.6
40	28	22,055	-59.1		09	17.8
30	28	23,881	-53.9		09	19.3
25	26	25,063	-51.4		09	19.7
20	24	26,526	-48.0		09	20.4
15	25	28,434	-45.7		09	21.5
10	21	31,158	-41.8		09	23.2
7						

WASHINGTON [illegible] INT, AP

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	3	85	17.8	15.5	35	.6
1000	3	141	18.4	15.4	33	.6
950	3	594	19.7	13.0	30	2.3
900	30	1,049	17.4	10.4	31	3.8
850	30	1,536	14.4	8.0	30	4.7
800	30	2,046	11.5	3.7	29	5.1
750	30	2,583	8.4	-2.1	29	5.8
700	30	3,150	5.2	-6.7	28	6.3
650	30	3,752	1.7	-12.2	29	6.9
600	30	4,393	-1.5	-19.8	28	7.2
550	30	5,081	-5.3	-25.1	29	7.8
500	30	5,823	-9.9	-28.5	29	8.5
450	30	6,628	-15.2	-33.6	29	9.3
400	30	7,507	-21.5	-39.4	29	10.0
350	30	8,480	-28.7	-46.0	29	10.5
300	30	9,562	-37.1	-52.2	30	12.4
250	30	10,797	-46.9		30	15.3
200	30	12,242	-57.0		30	15.9
175	30	13,079	-61.0		30	14.2
150	30	14,031	-62.7		30	12.5
125	30	15,152	-63.7		30	9.5
100	30	16,520	-64.1		32	6.9
80	30	17,891	-62.3		35	4.2
70	30	18,721	-60.4		03	3.3
60	30	19,688	-58.1		06	3.8
50	30	20,843	-55.6		08	5.1
40	29	22,273	-53.1		08	7.2
30	28	24,143	-49.5		09	8.8
25	28	25,343	-47.5		09	10.2
20	27	26,823	-45.2		09	11.7
15	27	28,757	-41.9		09	13.2
10	20	31,507	-37.5		09	14.1
7	5	34,004	-35.3			

WAYCROSS, GA. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	3	44	21.0	19.4	06	1.4
1000	30	139	21.8	19.6	25	2.3
950	30	587	22.2	16.8	28	4.7
900	30	1,056	19.5	13.0	27	4.0
850	30	1,546	16.1	10.1	29	3.2
800	30	2,060	12.8	6.2	30	2.6
750	30	2,599	9.8	.9	29	2.6
700	30	3,170	6.8	-4.2	28	2.8
650	30	3,775	3.2	-8.0	27	3.3
600	30	4,420	-.3	-12.6	28	3.8
550	30	5,111	-4.1	-17.2	29	3.7
500	30	5,856	-8.9	-22.2	28	3.4
450	30	6,655	-13.7	-27.7	26	2.7
400	30	7,550	-19.7	-33.4	28	3.1
350	30	8,531	-26.8	-40.5	28	2.7
300	30	9,622	-35.2	-48.4	30	2.8
250	30	10,865	-45.3		30	3.4
200	30	12,317	-56.6		32	3.5
175	30	13,154	-61.8		33	2.9
150	30	14,095	-66.0		33	3.0
125	30	15,199	-67.6		36	3.0
100	30	16,540	-67.9		03	4.0
80	30	17,887	-65.6		06	6.1
70	30	18,704	-63.2		07	7.1
60	30	19,659	-60.5		08	8.7
50	30	20,803	-57.9		09	10.6
40	29	22,221	-54.6		09	11.7
30	29	24,075	-51.7		09	13.1
25	29	25,264	-49.4		09	15.2
20	29	26,735	-46.8		09	16.5
15	28	28,659	-43.3		09	17.5
10	24	31,408	-39.4		09	20.1
7	5	33,889	-35.7			

WINNEMUCCA, NEV. — 869 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1,312	9.0	2.3	21	.6
1000	30	134				
950	30	569				
900	30	1,024				
850	30	1,501	13.6	1.2	25	.9
800	30	2,010	11.2	-1.4	27	2.7
750	30	2,546	7.4	-4.1	26	3.9
700	30	3,107	2.9	-6.9	24	6.5
650	29	3,704	-.5	-12.5	24	8.9
600	29	4,339	-4.3	-18.0	24	11.1
550	29	5,020	-8.8	-22.4	25	11.6
500	29	5,751	-13.7	-27.5	25	12.0
450	29	6,544	-19.3	-33.8	25	13.4
400	29	7,408	-25.6	-39.4	25	15.4
350	29	8,366	-32.7	-44.5	26	17.3
300	29	9,431	-40.3	-49.4	26	18.0
250	29	10,652	-48.6		26	17.9
200	29	12,094	-55.6		26	18.4
175	29	12,942	-56.9		26	18.6
150	29	13,917	-57.9		25	15.4
125	29	15,060	-60.2		25	12.7
100	29	16,448	-61.0		25	6.3
80	29	17,834	-60.4		22	2.1
70	29	18,670	-58.8		14	1.9
60	29	19,641	-57.7		10	4.4
50	29	20,796	-56.0		09	4.0
40	29	22,224	-53.5		09	5.9
30	27	24,084	-50.9		08	7.5
25	26	25,279	-48.7		08	8.6
20	24	26,758	-46.5		09	10.3
15	24	28,683	-43.1		09	12.2
10	18	31,438	-38.6			
7						

WINSLOW, ARIZ. — 851 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1,487	14.1	-5.0	22	1.9
1000	30	101				
950	30	547				
900	31	1,012				
850	30	1,498			24	1.9
800	30	2,016	18.0	-2.3	28	4.0
750	30	2,564	14.3	-4.9	27	4.5
700	30	3,141	9.5	-7.9	24	5.2
650	30	3,750	4.7	-11.1	23	7.0
600	29	4,396	-.6	-14.9	22	7.8
550	30	5,084	-5.9	-19.2	22	8.8
500	30	5,823	-11.3	-24.0	23	9.6
450	30	6,622	-17.0	-30.1	23	10.0
400	30	7,495	-23.1	-36.7	24	11.3
350	30	8,462	-30.4	-43.5	25	10.4
300	30	9,537	-38.4	-50.3	25	12.7
250	30	10,766	-47.2		26	15.3
200	29	12,216	-54.8		26	14.8
175	30	13,064	-57.6		26	14.3
150	30	14,030	-60.8		25	12.0
125	30	15,155	-64.4		25	9.6
100	30	16,511	-66.7		24	5.3
80	30	17,867	-65.0		15	1.5
70	30	18,689	-61.9		09	3.2
60	29	19,648	-59.8		09	6.1
50	29	20,794	-57.7		10	7.1
40	29	22,209	-55.4		09	8.8
30	29	24,061	-51.8		09	11.8
25	29	25,253	-49.7		09	12.7
20	25	26,722	-47.1		09	13.8
15	24	28,653	-43.1		09	15.6
10	19	31,393	-39.8			
7	8	34,244	-30.0			

YAKUTAT, ALASKA — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	12	5.8	5.3	12	.3
1000	30	123	8.1	5.2	13	.6
950	30	547	6.9	3.2	14	1.6
900	30	990	4.9	.6	14	2.5
850	30	1,455	2.8	-1.7	13	2.9
800	30	1,944	.4	-6.0	13	3.1
750	30	2,460	-2.3	-6.7	13	4.0
700	30	3,004	-5.6	-11.5	13	4.0
650	30	3,583	-8.2	-16.8	13	3.6
600	30	4,200	-11.6	-21.1	13	4.2
550	30	4,862	-15.9	-25.5	12	4.1
500	30	5,574	-20.6	-30.9	12	3.8
450	30	6,345	-26.0	-34.6	11	3.3
400	30	7,187	-32.0	-40.0	12	3.2
350	30	8,120	-38.7	-44.6	11	2.9
300	30	9,158	-46.8		08	2.7
250	30	10,347	-53.7		10	3.5
200	30	11,791	-49.7		14	2.7
175	30	12,668	-48.3		16	1.9
150	30	13,683	-48.4		15	1.7
125	30	14,881	-49.2		15	2.1
100	30	16,346	-48.8		13	2.0
80	30	17,810	-49.3		11	2.3
70	30	18,686	-49.4		10	3.1
60	29	19,699	-49.1		10	3.8
50	29	20,897	-48.7		10	4.6
40	29	22,367	-47.8		09	5.1
30	29	24,272	-46.5		09	7.3
25	26	25,493	-44.9		09	8.5
20	24	26,993	-42.9		09	9.3
15	22	28,945	-39.9		09	9.5
10	19	31,757	-34.8		09	11.7
7	8	34,244	-30.0			

YAP, CAROLINE IS. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	14	28.1	24.7	11	2.7
1000	30	87	26.5	22.5	11	3.2
950	30	539	23.4	19.6	11	4.3
900	30	994				
850	30	1,480	20.1	-1.1	24	2.5
800	30	1,999	16.8	-3.7	20	6.1
750	30	2,544	11.9	-6.7	21	5.4
700	30	3,118	8.5	-9.1	20	3.3
650	30	3,725	3.6	-12.2	18	3.1
600	30	4,369	-1.2	-17.1	17	3.4
550	30	5,056	-6.1	-22.3	13	5.2
500	30	5,795	-11.0	-27.3	14	7.0
450	30	6,596	-16.7	-33.1	15	9.1
400	30	7,468	-23.0	-38.9	15	11.5
350	30	8,432	-31.1	-44.8	14	12.7
300	30	9,504	-39.6	-51.7	15	13.7
250	30	10,728	-48.3		15	16.4
200	30	12,174	-54.8		16	17.7
175	30	13,024	-57.0		16	17.7
150	30	13,993	-59.8		16	15.8
125	30	15,125	-62.7		15	12.4
100	30	16,494	-64.1		15	6.5
80	29	17,860	-62.8		19	1.6
70	28	18,694	-61.1		12	2.4
60	28	19,657	-58.9		09	4.8
50	28	20,807	-57.0		08	6.3
40	28	22,259	-54.8		09	8.6
30	25	24,079	-51.5		09	11.1
25	24	25,268	-49.6		09	12.3
20	22	26,742	-47.3		09	13.5
15	18	28,655	-44.4		09	14.5
10	12	31,413	-40.1			

YUCCA FLAT, NEV. — 878 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1,198	11.8	-4.5	43	.2
1000	30	96				
950	30	536				
900	30	994				
850	30	1,480	20.1	-1.1	24	2.5
800	30	1,999	16.8	-3.7	20	6.1
750	30	2,544	11.9	-6.7	21	5.4
700	30	3,118	8.5	-9.1	20	3.3
650	30	3,725	3.6	-12.2	18	3.1
600	30	4,369	-1.2	-17.1	17	3.4
550	30	5,056	-6.1	-22.3	13	5.2
500	30	5,795	-11.0	-27.3	14	7.0
450	30	6,596	-16.7	-33.1	15	9.1
400	30	7,468	-23.0	-38.9	15	11.5
350	30	8,432	-31.1	-44.8	14	12.7
300	30	9,504	-39.6	-51.7	15	13.7
250	30	10,728	-48.3		15	16.4
200	30	12,174	-54.8		16	17.7
175	30	13,024	-57.0		16	17.7
150	30	13,993	-59.8		16	15.8
125	30	15,125	-62.7		15	12.4
100	30	16,494	-64.1		15	6.5
80	29	17,860	-62.8		19	1.6
70	28	18,694	-61.1		12	2.4
60	28	19,657	-58.9		09	4.8
50	28	20,807	-57.0		08	6.3
40	28	22,259	-54.8		09	8.6
30	25	24,079	-51.5		09	11.1
25	24	25,268	-49.6		09	12.3
20	22	26,742	-47.3		09	13.5
15	18	28,655	-44.4		09	14.5
10	12	31,413	-40.1			

YUMA, ARIZ. — 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	22	131	23.2	7.7	33	.0
1000	22	75				
950	22	526	25.8	5.8	27	3.1
900	22	1,000	23.7	3.4	25	4.2
850	22	1,495	20.6	.7	23	3.5
800	22	2,015	16.9	-2.7	21	4.0
750	22	2,561	12.7	-5.6	20	5.2
700	22	3,134	8.0	-8.0	20	5.6
650	22	3,741	4.0	-12.8	20	6.6
600	22	4,386	-.3	-17.8	20	7.6
550	22	5,076	-5.1	-22.1	21	6.8
500	22	5,817	-10.6	-26.0	21	6.7
450	22	6,619	-16.0	-31.6	24	7.4
400	22	7,495	-22.5	-37.1	24	8.9
350	22	8,464	-30.1	-44.3	24	10.1
300	22	9,540	-38.5	-50.5	25	12.0
250	22	10,768	-47.5		25	12.6
200	18	12,177	-55.3			

[illegible] the average monthly station pressures for the month of record, corrected to the height of the [illegible]

[illegible] speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

[illegible] bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance								
	A M				*	P M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	1.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
June									
1	0.68	0.77	0.90	1.05	1.27	----	0.99	0.80	0.79
2	----	----	----	----	----	----	----	----	----
3	----	1.03	1.14	1.27	D(1.33)	----	----	----	----
4	.80	.87	.98	1.10	1.29	1.09	.96	.86	.80
5	.83	.92	1.03	1.17	1.34	1.10	1.00	.92	.87
6	.72	.81	.91	1.06	1.29	1.09	.92	.78	.72
7	----	----	----	----	(1.25)	----	----	----	----
8	----	----	----	1.00	----	----	----	----	----
9	----	----	----	----	----	----	----	----	----
10	----	----	----	1.09	1.30	1.00	.86	.75	.69
11	----	(.87)	----	----	----	(1.17)	----	----	----
12	----	----	.95	1.11	1.34	----	----	----	----
13	----	----	----	----	----	1.14	.97	.85	.76
14	.79	.87	.99	1.13	1.33	1.14	.98	----	----
15	.76	.83	.96	1.10	1.34	1.06	----	----	----
16	.67	.74	.89	1.06	1.32	----	----	----	----
17	.62	.69	.82	1.00	1.23	----	----	.66	----
18	----	----	----	.96	1.28	----	----	----	----
19	.43	.69	.83	1.01	(1.18)	----	----	----	----
20	----	.65	.85	1.03	1.25	----	(.75)	----	----
21	.68	.76	.90	1.06	1.28	----	----	.77	.70
22	.80	.87	.98	1.13	1.29	----	----	----	----
23	.76	.83	.94	1.09	1.31	----	----	----	----
24	.69	.78	.91	1.05	1.25	(1.06)	(.90)	----	----
25	.59	.69	.85	1.00	1.22	----	----	----	----
26	.52	.62	.76	.93	1.18	----	----	----	----
27	----	----	.82	1.01	----	----	----	----	----
28	----	----	.48	.65	1.21	----	----	----	----
29	.65	.73	.86	1.04	1.21	1.03	.95	.82	.72
30	----	----	----	----	----	----	.75	.61	.52
Averages	0.69	0.79	0.89	1.05	1.28	1.08	0.93	0.79	0.73

TUCSON, ARIZ.

Date	Sun's zenith distance								
	A M				*	P M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
June									
1	0.72	0.83	0.96	1.12	1.30	1.17	1.03	0.92	0.82
2	----	----	----	----	----	----	----	----	.78
3	.83	.93	1.03	1.17	1.35	1.17	1.01	.89	.80
4	.77	.86	.97	1.12	1.37	1.17	1.00	.88	.78
5	.82	.94	1.06	1.20	1.40	1.21	1.04	.94	.84
6	.90	1.00	1.10	1.24	1.40	1.15	----	----	----
7	.87	.97	1.07	1.20	1.35	1.18	1.04	.96	.85
8	.80	.88	1.00	1.15	----	----	----	----	----
9	----	----	----	----	1.28	1.10	.93	.81	.69
10	.72	.82	.96	1.05	----	----	----	----	----
11	.71	.79	.90	1.06	1.32	1.12	----	----	----
12	.73	.81	.94	1.11	1.32	1.10	----	----	----
13	.71	.81	.92	1.10	1.32	1.09	.92	.81	.71
14	.62	.73	.87	1.03	1.25	1.01	.84	.70	.58
15	.56	.67	.79	.97	1.20	.89	.62	.45	----
16	.45	.55	.65	.80	1.12	----	----	----	.38
17	----	----	----	----	----	----	----	----	----
18	.52	.61	.72	.91	----	.88	.70	----	----
19	.68	.79	.91	1.08	1.28	1.04	.87	.75	.65
20	.71	.81	.96	1.13	1.32	1.11	.98	.86	.78
21	.63	.73	.86	1.02	1.23	.97	.71	.52	.50
22	.40	.50	.63	.86	1.14	.91	.71	.55	.44
23	.47	.56	.68	.86	1.17	.97	.77	.63	.51
24	----	.50	.62	.83	1.14	.92	.74	.61	.56
25	.42	.52	.67	.87	1.20	.98	.81	.65	.56
26	.43	.58	.71	.87	1.15	.92	.75	.62	.52
27	.63	.75	.86	1.03	1.23	1.00	.85	.72	.63
28	.57	.70	.82	1.00	1.29	1.11	.96	.85	.75
29	.77	.88	.99	1.14	1.32	1.10	.99	.92	.78
30	.64	.76	.89	1.03	1.28	1.07	.91	.81	.71
Averages	0.66	0.75	0.87	1.04	1.27	1.05	0.87	0.75	0.66

OMAHA, NEBR

Date	Sun's zenith distance								
	A M				*	P M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
June									
5	----	----	HM0.90	HS1.06	HS1.34	HS1.05	HM0.82	----	----
16	----	----	----	----	----	HS .95	HS .74	HS0.65	HS0.54
21	----	----	----	----	----	----	HS .80	HS .69	HS .56
22	----	0.77	.95	----	----	----	----	----	----
23	----	.84	.94	1.12	1.26	HS .98	HS .78	HS .68	HS .56
24	HS0.54	HS .64	HS .84	HS .97	HM1.18	HM .88	HM .72	HM .52	HM .41
26	----	----	----	----	1.34	----	----	----	----
27	HS .53	HS .65	HS .80	HS1.03	1.26	HS .96	HS .80	HS .60	HS .42
28	----	----	----	----	HS1.23	----	----	----	----
29	.61	.70	.83	.95	----	----	----	----	----
Averages	0.56	0.72	0.71	0.85	1.27	0.96	0.76	0.63	0.48

MADISON, WIS

Date	Sun's zenith distance								
	A M				*	P M			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
June									
8	S 0.73	S 0.85	S 0.98	S 1.14	----	----	----	----	----
10	M .58	M .68	M .81	----	----	----	----	----	----
21	S .77	S .86	S .98	S 1.15	S 1.32	----	----	----	----
26	----	----	----	----	S 1.19	----	----	----	----
27	S .58	S .68	S .79	S .95	----	----	----	----	----
Averages	0.67	0.77	0.89	1.08	1.26	----	----	----	----

) Clouds Present
* Values corresponding to true solar noon
BD Blowing Dust
BN Blowing Sand
D Dust
DI Intense Dust
DM Moderate Dust
DS Slight Dust
F Fog
GF Ground Fog
H Haze
HI Intense Haze
HM Moderate Haze
HS Slight
I Intense Haze-indeterminable
K Smoke
KI Intense Smoke
KM Moderate Smoke
KS Slight Smoke
M Moderate Haze-indeterminable
N Sand
S Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JUNE 1971

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	826	470	803	829	838	826	694	778	711	811	745	739	725	802	794	706	772	587	751	757	729	669	742	790	734	752	727	682	813	705		744
AMES IOWA	680	614	737	661	723	527	596	553	655	625	487	572	546	349	394	658	667	701	669	724	694	685	755	705	525	608	743	656	656	576		625
ANNETTE ALASKA	469	728	772	832	872	643	745	262	289	254	279	427	755	762	297	229	561	578	168	334	276	450	302	608	313	475	375	---	---	313		477
APALACHICOLA FLORIDA	673	638	650	646	613	439	324	687	591	501	381	666	588	444	507	681	569	672	445	559	635	689	618	540	339	377	540	539	614	634		560
ARGONNE NAT. LAB.	281	595	624	618	601	449	622	673	597	574	368	583	561	665	614	670	625	583	596	321	726	518	418	652	465	587	688	662	647	468		569
ASTORIA OREGON	191	395	---	---	512	160	560	435	356	331	291	331	263	488	441	569	326	367	310	312	686	366	655	101	589	637	336	332	686	678		418
ATLANTA GEORGIA	651	640	572	635	630	417	576	597	250	430	468	649	420	659	506	477	407	488	366	569	662	666	671	720	597	666	570	669	578	497		557
BARROW ALASKA	461	481	612	717	725	777	830	825	745	712	586	631	489	365	630	806	489	522	539	774	819	823	789	664	577	759	826	778	570	626		665
BETHEL ALASKA	615	---	324	193	284	277	395	468	394	451	647	498	693	219	376	269	287	476	651	385	692	360	539	660	588	313	241	409	605	180		431
BISMARCK N.DAK.	776	593	689	183	664	770	188	566	581	737	400	784	746	755	267	609	795	600	653	709	587	747	444	723	628	366	126	564	243	784		576
BLUE HILL MASS.	755	704	291	705	796	740	648	570	---	801	734	670	495	592	726	676	623	678	711	700	693	753	623	643	675	697	743	754	441	671		666
BOISE IDAHO	387	618	653	646	745	761	702	723	578	419	807	664	633	793	793	756	656	418	692	779	588	729	763	734	256	93	478	634	818	796		637
BROOKINGS SOUTH DAK.	100	453	619	654	687	629	336	305	377	539	624	539	637	640	629	624	542	614	423	652	320	631	646	436	536	616	627	118	227	701		516
BROWNSVILLE TEXAS	670	576	557	743	739	764	731	725	752	616	638	715	784	625	740	696	723	477	---	536	499	634	719	577	438	219	464	572	---	539		624
BURLINGTON VERMONT	828	553	369	618	872	520	720	346	818	858	795	562	743	748	368	---	---	---	626	664	131	756	751	506	214	698	585	666	599	648		614
CAPE HATTERAS N.C.	680	670	722	693	624	624	630	685	379	562	712	637	506	471	278	417	608	629	463	630	619	580	390	543	609	564	553	562	412	612		569
CARIBOU MAINE	724	684	83	658	544	731	419	193	432	562	744	624	434	400	648	395	681	560	480	533	139	700	452	279	525	576	447	728	237	359		499
CHARLESTON S.C.	682	637	649	677	631	604	658	569	535	404	498	659	603	543	646	495	366	565	490	509	430	543	---	542	483	593	582	491	473	508		554
CLEVELAND OHIO	441	388	585	648	467	---	460	133	642	---	---	370	536	211	510	644	643	---	580	657	246	706	667	576	---	---	606	660	576	---		520
COLUMBIA MISSOURI	645	333	591	693	681	702	671	636	654	394	449	494	676	431	502	712	692	631	726	658	732	517	724	741	693	701	734	723	713	602		628
DAVIS CALIFORNIA	518	751	669	734	723	736	726	730	590	754	746	624	746	744	752	751	740	743	743	765	742	775	747	743	648	206	743	754	750	736		704
E. LANSING MICHIGAN	251	405	627	605	521	438	581	179	736	751	515	583	591	469	701	596	657	698	667	628	401	719	519	517	557	558	702	712	641	465		566
EL CENTRO CALIF. NPF	691	585	703	666	687	662	682	558	672	685	670	664	666	668	677	666	660	685	679	684	661	646	666	612	691	592	666	683	693	677		663
EL PASO TEXAS	758	610	702	773	680	782	756	668*	677	736	721	746	740	717	697	736	738	665	644	559	659*	722	740	740	736	715	699	706	737	695		709
ELY NEVADA	667	531	415	534	575	655	522	659	682	515	770	818	685	752	822	685	775	757	822	821	830	839	846	847	843	824	627	723	731	736		710
EPPLEY NEWPORT R.I.	680	670	311	---	724	670	641	601	454	734	657	596	325	519	547	695	676	680	690	480	434	---	346	413	633	625	699	665	385	564		576
FAIRBANKS ALASKA	630	526	634	652	654	---	692	714	637	530	605	479	576	376	533	603	713	562	571	387	505	684	564	679	668	637	730	498	565	665		596
FLAMING GORGE UTAH	309	646	603	520	479	---	810	400	559	---	---	180	530	623	177	527	628	551	629	635	788	698	743	794	828	759	667	647	429	789		591
FORT WORTH TEXAS	378	628	572	642	709	685	---	685	628	569	520	599	583	293	661	671	698	712	621	631	233	533	626	670	690	684	624	310	438	---		582
FRESNO CALIFORNIA	761	749	725	740	749	720	746	739	681	727	745	740	767	769	752	754	766	778	773	769	764	762	770	755	765	720	705	764	762	743		749
GENEVA NEW YORK	615	118	411	527	503	429	485	412	638	644	617	442	258	194	213	407	603	519	474	492	227	590	545	573	316	477	567	432	381	456		452
GLASGOW MONTANA	481	679	550	433	613	369	177	576	650	611	653	754	561	719	731	679	725	436	658	698	730	740	629	744	617	283	377	361	609	728		586
GLOUCESTER POINT VA	687	528	649	628	665	623	622	611	417	717	654	428	597	598	112	98	514	639	613	581	---	593	146	584	583	425	579	587	257	538		527
GRAND JUNCTION COLO.	632	644	472	693	635	648	543	489	647	488	529	551	704	765	665	715	681	389	770	781	783	---	---	---	---	---	---	---	---	---		6[illegible]
GREAT FALLS MONTANA	321	785	---	743	411	168	660	538	529	671	702	797	---	740	700	799	774	392	635	591	774	734	583	796	572	394	442	118	434	786		593
GREENSBORO N.C.	652	552	645	639	643	663	306	329	637	454	613	462	485	501	527	134	188	223	508	485	630	579	270	633	657	441	582	640	520	380		499
INDIANAPOLIS INDIANA	246	450	640	655	615	641	519	672	624	685	493	459	636	509	289	618	694	676	500	645	558	611	664	606	524	627	650	615	658	566		578
ITHACA NEW YORK	741	187	490	644	623	500	540	413	729	756	727	577	370	220	179	453	662	616	618	591	303	601	523	603	445	474	689	419	591	540		528
LAKE CHARLES LA.	518	574	561	575	669	481	710	709	551	568	639	656	619	684	495	370	597	304	323	593	360	519	548	634	560	546	453	357	432	695		543
LAKELAND FLORIDA	666	633	551	404	646	545	350	536	391	324	437	437	585	505	546	560	587	443	435	527	620	406	366	317	270	409	511	452	398	496		478
LANDER WYOMING	604	606	368	671	501	463	656	715	620	528	589	734	650	680	739	710	728	602	664	711	717	696	720	736	754	709	763	614	774	764		660
LARAMIE WYOMING	714	713	392	522	706	416	714	583	460	515	505	503	608	652	617	703	561	606	748	771	766	612	765	711	779	775	641	720	503	662		632
LAS VEGAS NEVADA	768	416	652	664	744	653	606	754	739	713	759	757	748	753	755	750	775	777	774	772	762	747	767	785	778	700	760	777	768	773		732
LEXINGTON KENTUCKY	614	537	575	612	---	---	---	---	---	---	---	---	---	---	---	---	---	---	261	---	---	---	624	656	---	597	491	589	584	442		---
LITTLE ROCK ARKANSAS	596	586	295	555	633	551	614	451	462	535	611	629	529	610	576	659	521	531	616	590	513	---	631	662	664	675	498	---	647	438		567
LOS ANGELES CALIF.	718	476	555	754	548	552	408	131	239	208	513	706	683	739	716	732	709	707	704	750	748	702	744	539	523	461	406	630	682	740		591
LOS ANGELES CALIF. U	696	264	361	726	595	578	273	98	154	83	384	719	706	714	692	701	693	680	695	709	706	686	701	673	614	587	554	518	641	718		564
MADISON WISCONSIN	334	386	707	648	655	577	475	773	687	440	479	707	611	607	575	685	676	438	528	497	741	610	683	584	355	595	714	707	688	473		588
MANHATTAN KANSAS	672	106	597	589	655	632	709	564	450	312	537	448	581	536	638	722	669	703	673	479	729	711	688	708	635	715	721	726	605	628		605
MATANUSKA ALASKA	284	383	532	569	714	743	457	246	390	259	---	---	---	---	---	451	323	441	444	421	184	729	707	706	697	---	---	---	68	297		457
MEDFORD OREGON	326	539	667	662	694	654	555	729	363	578	728	468	528	732	717	675	456	482	669	715	639	707	624	529	166	425	569	740	724	716		593
MIAMI FLORIDA	526	605	505	346	399	166	203	385	381	331	243	298	390	547	519	598	526	604	575	562	475	402	426	431	386	477	267	231	533	610		432
MIDLAND TEXAS	721	584	470	662	674	739	677	635	617	670	475	634	389	705	569	726	657	639	727	288	654	451	733	665	725	735	508	525	659	451		612
NASHVILLE TENNESSEE	423	709	490	540	484	620	563	448	359	513*	676	453	538	620	590	569	484	487	684	597	611	553	592	605	525	629	366	539	470	---		543

SOLAR RADIATION TOTALS - Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg
NEW YORK CENTRAL PK	715	570	390	727	683	498	656	567	---	---	---	395	390	336	78	579	673	680	706	601	437	705	514	579	574	592	724	247	590	496		537
NORTH OMAHA NEBRASKA	511	542	662	506	744	570	735	430	475	---	647	441	503	416	716	681	623	606	568	663	700	642	717	693	393	682	700	708	581	709		606
OAK RIDGE TENNESSEE	640	524	661	581	637	634	593	335	348	599	551	383	387	433	477	377	435	516	514	282	597	530	451	653	634	468	488	547	493	439		503
OKLAHOMA CITY OKLA.	610	495	543	606	644	581	---	---	643	365	409	592	397	581	663	638	697	682	700	386	351	686	672	669	686	661	681	546	600	471		581
PHOENIX ARIZONA	695	401	684	689	698	706	707	566	420	676	506	682	680	662	668	649	584	634	671	686	675	659	648	645	597	---	---	---	---	---		636
PORTLAND MAINE	719	670	214	572	745	634	636	311	686	---	651	596	603	---	785	690	613	646	616	590	484	691	487	443	568	591	458	731	540	597		592
RAPID CITY S.DAK.	308	649	449	489	635	369	394	631	439	639	603	495	558	482	674	546	645	593	693	499	530	631	638	626	685	690	493	460	393	768		555
RENO NEVADA	298	599	527	476	663	664	669	584	407	585	682	429	681	678	673	677	671	579	635	677	675	685	686	663	479	143	695	685	681	663		597
RICHLAND 25 NW WASH.	543	382	220	670	730	684	595	784	526	333	747	463	567	821	797	677	---	376	775	605	705	654	654	498	751	730	---	---	787	732		622
RIVERSIDE CALIFORNIA	742	441	634	717	725	745	560	509	262	206	670	814	836	835	819	830	835	822	824	831	832	825	812	812	747	755	755	761	814	797		718
RUSTON LOUISIANA	542	541	484	603	594	567	603	648	668	620	707	662	688	683	443	569	676	693	585	364	466	506	574	619	655	655	516	662	392	325		576
SAINT CLOUD MINN.	88	676	659	411	747	618	379	560	579	286	531	651	691	676	719	593	544	645	377	656	433	632	522	237	362	195	707	443	94	713		514
SALT LAKE CITY	779	495	605	656	640	675	784	640	612	588	403	807	589	777	782	726	711	669	793	787	783	791	795	794	798	780	699	739	810	794		710
SAN ANTONIO TEXAS	461	637	578	616	574	667	708	710	581	503	541	626	627	499	203	559	680	541	335	382	233	484	596	559	512	315	364	365	409	561		514
SANTA MARIA CALIF.	793	534	555	639	708	213	470	560	599	641	440	557	664	727	740	735	746	752	708	747	741	641	725	732	746	712	623	717	663	642		648
SAULT STE MARIE MICH	805	177	620	726	228	721	258	811	796	782	263	492	164	650	578	698	654	335	527	373	---	444	526	522	723	740	380	714	648	378		543
SEATTLE-TACOMA WASH.	303	189	92	542	751	446	631	421	691	485	485	528	372	622	537	588	486	224	578	325	729	381	767	188	635	667	630	165	438	532		481
SPOKANE WASHINGTON	476	115	219	286	684	694	359	585	706	130	589	547	463	695	737	744	669	293	693	412	677	660	538	587	627	734	447	204	721	644		531
STERLING VIRGINIA	747	253	596	663	697	552	522	662	---	767	699	278	406	563	62	248	496*	639	521*	---	539	699	459	631	658	587	598	558	246	545		532
SWAN ISLAND W.I.	593	558	532	125	400	543	571	279	515	548	550	558	557	429	193	391	575	576	399	484	505	515	597	606	543	419	483	495	530	570		488
TALLAHASSEE FLORIDA	596	557	612	620	580	388	623	550	605	510	523	559	537	465	399	402	442	489	---	511	506	485	515	542	486	444	369	450	460	378		490
TAMPA FLORIDA	625	667	519	417	629	579	336	574	698	640	353	548	643	586	642	693	703	683	477	494	659	511	339	92	310	735	707	558	363	348		538
TUCSON ARIZONA	709	394	715	718	720	694	720	682	673	573	604	672	685	678	671	659	495	630	677	694	680	645	653	655	638	569	624	646	654	637		649
WAKE ISLAND PACIFIC	537	671	655	613	704	642	727	663	649	690	573	708	609	569	681	686	648	558	680	588	705	688	524	707	615	603	689	658	680	697		647

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.
t Indicates urban sites

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

JUNE 1971

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	96	176	206	210	243	238	118	63	153	103	89	63	118	69	146	174	160	199	180	193	80	274	274	286	265	265	144	59	13	141		159

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they are measured has not been checked by the NOAA National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (3900 Å) at Ames, Iowa

Date. . . .	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. .	21.66	19.18	21.78	20.24	21.47	16.69	16.93	18.17	20.48	20.48	15.62	17.28	17.04	11.60	11.95	18.94	19.65	21.43	20.36	22.37	21.07	20.95	21.66	20.83	17.86	18.58	21.78	19.65	20.48	17.87		19.07

These data are from an U - V Epply total ultra violet sensor and Speedomax H (Leeds Nertrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo cms.

Station	Day of month																															Mo. Obs
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
SINGAPORE, S. [illegible]	00376	05385	00380	-	00369	00379	05378	35349	05341	00343	04362	00355	00332	00331	04357	00345	00345	05339	00342	00348	00323	00341	05326	00340	00335	00348	05336	05326	[illegible]	[illegible]		349
BOULDER, COLO.	00352	00351	00336	00377	-	-	00359	00399	04361	00365	04380	-	-	00348	00348	00332	00337	00327	-	-	00317	00337	00321	-	00333	-	-	00321	35358	[illegible]		316
FAIRBANKS, ALASKA	00410	05436	00406	-	00372	00363	-	00353	05347	00365	00378	06405	-	06422	06366	05353	03457	-	05366	-	00347	00358	-	-	00340	00345	00390	00340	05359	[illegible]		280
GREEN BAY, WIS.	00392	05425	00372	00367	00356	00340	05359	00363	00349	03352	00355	00354	00350	00318	00370	00353	00380	35362	-	-	35355	06371	00365	00341	00375	00351	00341	00342	00341	00319		338
SAN JUAN, PR.	00259	00260	00258	00255	00247	00256	00256	00257	00259	00269	00256	00259	00261	00263	00261	00263	00263	00264	00266	00267	00266	00260	00264	00270	05265	-	-	00261	00260	[illegible]		261
WAHIAWA, HAWAII	-	00290	-	00285	-	-	00286	-	00295	00291	00300	-	-	00309	-	03294	-	00286	-	-	00288	-	00292	-	-	-	-	00284	-	-		291
NASHVILLE, TENN.	00356	00362	00349	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		[illegible]
WALLOPS ISLAND, VA.	00412	02477	00412	00353	00365	00333	00323	00313	05372	00345	05344	-	00332	00341	05350	05357	00329	00323	00321	00533	00339	05366	05345	00322	00279	[illegible]	00321	35388	35401	-		316

[illegible]

SOLAR RADIATION TOTALS — LATE REPORTS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
JANUARY 1970																																
UPPER MARBORO MD.	63	226	69	229	206	45	95	263	186	264	197	117	259	247	248	265	147	159	136	111	281	278	130	262	128	174	152	216	47	249	306	186
FEBRUARY 1970																																
UPPER MARBORO MD.	299	58	28	328	168	270	290	143	49	82	288	324	288	74	80	138	141	357	310	343	376	336	411	397	224	431	319	409				249
MARCH 1970																																
UPPER MARBORO MD.	353	287	23	36	144	312	346	407	219	400	457	92	264	355	328	476	472	44	124	43	308	44	325	337	293	387	518	492	44	179	176	267
JUNE 1970																																
STATE COLLEGE PENN	303	285	294	213	274	503	579	562	514	574	544	315	682	624	78	171	410	400	466	702	90	525	586	573	448	357	309	674	356	447		429
JULY 1970																																
STATE COLLEGE PENN	585	537	367	332	280	634	526	473	147	447	408	458	527	384	319	410	524	502	500	237	497	605	273	455	472	559	468	365	334	296	344	428
AUGUST 1970																																
STATE COLLEGE PENN	344	539	301	592	470	436	418	398	293	515	521	389	477	458	493	464	502	514	221	215	575	494	423	380	423	494	465	412	453	324	505	436
SEPTEMBER 1970																																
SEATTLE WASH. UNIV	228	258	278	330	99	102	137	285	457	429	463	443	437	361	368	252	86	252	274	184	115	69	288	337	354	357	355	342	292	313		285
STATE COLLEGE PENN	511	502	282	367	391	501	501	422	338	314	467	458	395	228	363	381	412	67	323	402	352	367	245	370	292	345	115	230	191	239		346
OCTOBER 1970																																
LEXINGTON KEN	447	343	453	469	411	423	239	102	201	320	148	170	264	226	26	434	414	396	261	136	47	185	324	124	268	233	319	85	22	347	301	263
SEATTLE WASH. UNIV	304	291	247	48	84	261	156	50	77	92	41	158	296	305	293	278	183	275	98	149	37	101	78	178	157	212	214	233	242	198	211	179
STATE COLLEGE PENN	308	312	204	215	269	282	354	257	216	43	72	73	230	265	119	150	181	349	324	83	21	88	101	61	162	65	112	289	---	---	---	186
NOVEMBER 1970																																
INYOKERN CALIF	353	337	301	102	243	298	324	335	302	328	296	---	329	317	307	315	257	---	---	295	277	291	266	295	194	252	280	119	42	293		272
LEXINGTON KEN	265	47	111	117	306	318	305	299	152	142	241	92	154	14	34	167	267	177	183	78	290	27	212	226	189	84	66	83	111	141		163
PALMER ALASKA	67	66	69	16	22	20	26	66	40	19	54	47	27	38	66	53	5	32	56	13	14	11	31	22	12	39	8	28	31	30		34
SEATTLE WASH. UNIV	224	222	218	59	45	---	141	141	159	70	61	103	113	139	52	141	65	92	45	174	171	83	38	18	109	62	69	165	58	49		106
STATE COLLEGE PENN	---	---	---	---	---	25	233	256	36	19	40	89	57	51	28	107	96	145	228	18	211	141	167	181	122	61	56	78	23	194		106
DECEMBER 1970																																
INYOKERN CALIF	280	259	275	270	272	231	---	---	271	277	261	271	270	217	199	116	258	143	114	228	126	268	180	249	276	116	134	266	269	253	268	228
LARAMIE WYOMING	226	90	226	158	208	193	201	82	107	123	171	217	212	105	155	207	183	152	209	202	205	136	212	109	204	205	201	159	199	189	205	176
LEXINGTON KEN	163	236	95	220	42	255	253	227	126	160	61	14	32	259	172	63	22	208	52	110	14	44	175	248	68	249	219	263	204	145	74	144
PALMER ALASKA	27	24	26	23	25	15	12	10	8	10	8	12	12	5	7	5	7	11	7	9	9	6	2	17	12	13	16	20	18	20	26	14
PROSSER WASH.	141	154	94	139	118	85	67	123	159	91	149	130	69	30	12	55	153	144	44	68	121	145	160	136	76	42	78	73	122	63	165	102
SEATTLE WASH. UNIV	65	102	76	116	15	35	129	119	76	26	135	117	47	45	25	40	125	95	35	41	134	103	104	72	54	47	66	15	77	32	111	74
STATE COLLEGE PENN	91	220	78	74	87	109	190	158	39	36	22	14	48	140	117	25	43	61	101	92	42	22	26	109	166	154	112	179	172	212	140	99

SOLAR RADIATION TOTALS — LATE REPORTS -Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
JANUARY 1971																																
GLOUCESTER PT. VA.	121	184	206	88	52	139	157	88	51	49	59	188	96	97	30	279	168	255	232	292	248	116	153	68	138	252	309	222	165	108	61	151
PALMER ALASKA	23	6	11	5	6	17	29	25	33	33	25	39	28	30	32	32	54	62	24	42	45	35	69	73	44	51	59	62	71	89	53	39
STATE COLLEGE PENN	152	69	200	27	103	229	212	134	139	195	180	180	37	60	139	122	154	142	184	141	154	235	240	105	107	124	188	191	189	207	249	154
FEBRUARY 1971																																
INYOKERN CALIF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	400	331	419	426	276	438	410	464	464	468				---
LARAMIE WYOMING	265	109	170	243	199	195	282	200	322	151	251	318	289	329	235	349	182	114	323	253	302	376	363	377	271	250	402	328				266
PALMER ALASKA	31	72	75	46	14	7	53	19	28	65	70	53	62	76	45	87	32	54	49	32	49	73	89	161	164	135	68	46				63
SEATTLE WASH. UNIV	38	92	77	151	174	229	242	218	49	166	109	88	108	43	144	160	193	56	120	217	104	150	90	213	203	103	141	292				142
STATE COLLEGE PENN	472	268	173	47	56	302	73	78	271	265	282	284	25	350	182	248	85	294	160	101	61	31	154	109	362	220	342	420				196
MARCH 1971																																
E. LANSING MICH	363	343	191	442	282	33	292	268	484	132	329	166	263	395	63	164	344	164	117	220	262	430	133	354	564	558	313	204	194	560	405	291
INYOKERN CALIF	445	487	470	474	479	484	486	473	472	400	473	499	488	438	512	471	510	544	387	546	527	511	303	474	361	562	504	557	573	532	531	483
ITHACA NEW YORK	---	157	96	165	378	201	195	267	372	297	156	360	177	489	255	129	285	423	93	141	360	495	414	300	387	528	609	222	192	231	558	298
SEATTLE WASH. UNIV	341	115	209	196	213	128	69	225	95	93	76	275	294	208	321	327	324	404	406	303	317	104	130	449	319	99	264	132	226	277	314	234
STATE COLLEGE PENN	367	115	88	326	431	203	194	296	352	242	213	232	319	263	137	203	248	406	55	243	465	248	339	396	545	388	538	326	217	332	545	299
APRIL 1971																																
GLOUCESTER PT. VA.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	512	526	591	338	656	680	---	526	130	---	631		---
PALMER ALASKA	368	333	290	225	241	281	366	440	402	359	94	85	202	137	294	331	339	330	446	488	485	337	319	242	229	403	458	370	289	428		320
MAY 1971																																
BLUE HILL MASS	397	250	27	113	587	102	657	207	36	299	605	---	39	645	622	40	373	619	533	597	---	210	675	623	369	345	362	427	586	88	---	373
GLOUCESTER PT. VA.	659	441	433	709	617	488	187	502	635	580	519	451	---	590	250	98	682	724	674	630	163	679	745	537	386	---	640	116	59	79	260	467
PROSSER WASH.	478	447	605	616	565	494	656	575	696	678	656	446	634	653	396	542	737	709	---	521	701	710	663	644	497	520	603	681	342	306	151	564
STATE COLLEGE PENN	489	103	310	656	430	102	476	76	320	549	571	202	117	619	407	286	643	595	521	306	428	555	648	234	408	139	247	504	377	313	529	392

Note.--Langley is the unit used to denote one gram calorie per square centimeter. Values with an asterisk are interpolated.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

RAWINSONDE DATA—CORRECTIONS

Average monthly values

ATHENS, GEORGIA — 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	30	246	5.4	2.5	32	1.3
1000	30	156				
950	30	579	[illegible]	1.9	30	2.8
900	30	1,025	6.8	-2.0	28	3.3
850	30	1,493	5.1	-5.7	26	4.7
800	30	1,987	3.7	-8.7	27	6.8
750	30	2,510	2.1	-12.2	26	9.0
700	30	3,064	-.3	-16.8	27	11.3
650	30	3,654	-3.6	-18.8	26	12.7
600	30	4,282	-7.4	-22.6	26	14.7
550	30	4,954	-11.8	-26.3	26	16.6
500	30	5,676	-16.7	-30.1	27	19.8
450	30	6,460	-21.9	-35.2	27	23.0
400	30	7,317	-28.1	-40.0	26	24.4
350	30	8,264	-35.1	-46.0	26	27.8
300	30	9,318	-43.0	-51.4	27	27.8
250	30	10,528	-50.0		27	30.2
200	30	11,966	-56.3		27	33.7
175	30	12,810	-58.6		27	32.4
150	30	13,773	-61.1		27	28.1
125	30	14,898	-63.9		27	25.8
100	30	16,259	-65.5		27	20.5
80	29	17,618	-65.1		27	15.5
70	29	18,434	-64.0		27	12.1
60	28	19,382	-61.7		26	10.7
50	28	20,518	-59.6		25	10.4
40	[illegible]	21,919	-58.1		26	9.8
30	[illegible]	23,741	-55.8		25	11.2
25	27	24,902	-54.9		26	12.5
20	23	26,333	-54.7		27	14.9
15	18	28,182	-53.2		27	18.3
10	[illegible]	30,812	-50.4		27	21.2
7	9	33,166	-47.0			

CHARLESTON, S. C. — [illegible] 197[illegible] — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	13	23.1	21.1	25	1.1
1000	31	148	24.3	21.0	25	2.5
950	31	599	23.2	18.4	26	3.9
900	31	1,070	20.6	15.0	25	3.4
850	31	1,562	17.2	12.0	24	3.4
800	31	2,078	13.9	8.2	25	3.2
750	31	2,620	10.9	3.9	25	3.5
700	31	3,193	7.9	-.3	26	3.9
650	31	3,801	4.4	-4.8	27	4.3
600	31	4,449	.5	-9.5	27	4.4
550	31	5,142	-3.3	-12.4	27	4.3
500	31	5,891	-7.4	-19.9	28	3.6
450	31	6,704	-12.5	-25.3	27	2.5
400	31	7,594	-18.2	-30.6	27	2.5
350	31	8,581	-25.0	-36.7	26	2.9
300	31	9,680	-33.4	-45.0	26	3.6
250	31	10,934	-43.4		27	3.8
200	31	12,397	-55.1		30	3.3
175	31	13,239	-60.8		31	4.1
150	31	14,185	-66.0		34	2.9
125	31	15,285	-67.8		01	2.2
100	31	16,635	-65.2		05	3.5
80	31	18,000	-63.1		07	5.8
70	31	18,826	-61.1		08	8.3
60	31	19,790	-58.4		08	11.1
50	31	20,947	-54.7		09	13.0
40	31	22,383	-52.6		09	14.4
30	25	24,259	-48.2		09	15.0
25	23	25,467	-46.5		09	14.8
20	16	26,952	-43.9		09	16.3
15	[illegible]	28,902	-42.6			

CHARLESTON, S. C. — [illegible] 197[illegible] — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	13	23.2	21.4	27	.8
1000	31	131	24.0	22.3	27	1.5
950	31	581	22.6	19.2	27	3.0
900	31	1,052	20.1	16.2	28	3.1
850	31	1,543	17.0	13.2	27	2.9
800	31	2,059	14.3	9.7	27	3.3
750	31	2,602	11.3	5.1	27	3.6
700	31	3,176	8.0	1.5	26	3.9
650	31	3,785	4.7	-3.5	26	4.7
600	31	4,434	1.3	-8.4	26	5.2
550	31	5,131	-2.2	-12.9	26	4.8
500	31	5,882	-6.3	-19.6	27	5.6
450	31	6,699	-11.0	-23.7	27	5.4
400	31	7,594	-16.8	-29.2	27	5.9
350	31	8,588	-23.3	-37.8	28	6.2
300	31	9,694	-31.8	-44.8	28	6.7
250	31	10,956	-41.9	-52.6	29	7.5
200	31	12,430	-53.5		30	9.2
175	31	13,278	-59.4		31	9.2
150	31	14,229	-65.5		32	8.7
125	31	15,327	-69.4		34	5.7
100	31	16,660	-67.8		05	3.3
80	31	18,016	-64.0		07	5.2
70	30	18,841	-61.6		08	7.2
60	30	19,801	-59.3		08	10.4
50	30	20,952	-56.2		09	13.1
40	29	22,380	-52.9		09	15.7
30	29	24,251	-49.4		09	15.6
25	23	25,452	-47.6		09	15.2
20	13	26,954	-45.7		08	15.2
15	5	28,918	-44.3			

CHARLESTON, S. C. — SEPT. 197[illegible] — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	30	13	20.6	19.3	02	1.6
1000	30	162	23.5	21.6	06	1.5
950	30	610	21.4	17.4	08	1.1
900	30	1,078	18.7	12.4	04	.7
850	30	1,568	16.1	8.3	34	.7
800	30	2,082	13.4	5.1	33	1.0
750	30	2,623	10.9	-.6	33	1.1
700	30	3,196	8.0	-5.1	28	1.4
650	30	3,804	4.7	-9.6	28	1.3
600	30	4,452	1.3	-14.8	29	1.0
550	30	5,148	-2.5	-18.9	28	.4
500	30	5,898	-7.0	-24.2	32	1.1
450	30	6,712	-12.2	-28.9	33	1.7
400	30	7,602	-18.2	-35.3	33	3.0
350	30	8,588	-25.5	-41.2	34	3.7
300	30	9,684	-34.2	-48.1	35	4.8
250	30	10,933	-44.0		35	6.6
200	30	12,395	-54.9		35	9.7
175	30	13,238	-60.3		35	9.5
150	30	14,186	-65.7		35	7.2
125	30	15,283	-69.8		35	5.8
100	30	16,609	-69.6		01	3.8
80	30	17,949	-66.2		06	2.6
70	30	18,765	-63.0		07	3.6
60	29	19,721	-60.2		07	4.9
50	29	20,868	-57.0		08	6.6
40	29	22,292	-53.8		09	7.8
30	25	24,149	-50.7		09	7.8
25	21	25,347	-49.3		09	10.1
20	16	26,826	-46.8		08	11.7
15	7	28,760	-44.6			

MIAMI, FLA. — NOV. 197[illegible] — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	30	4	17.4	15.1	35	1.9
1000	30	151	19.0	13.9	01	2.6
950	30	591	16.7	12.6	04	2.6
900	30	1,050	14.0	8.7	04	1.6
850	30	1,531	11.3	3.4	35	1.0
800	30	2,036	9.4	-2.0	28	1.8
750	30	2,571	8.5	-10.1	27	3.0
700	30	3,139	6.5	-14.4	28	4.1
650	30	3,743	3.3	-17.1	28	5.7
600	30	4,388	-.4	-21.1	28	7.9
550	30	5,078	-4.6	-25.4	27	9.2
500	30	5,821	-9.8	-29.7	27	10.9
450	30	6,625	-15.3	-33.4	27	13.4
400	30	7,504	-21.6	-38.6	28	16.5
350	30	8,477	-28.4	-44.0	28	21.3
300	30	9,562	-36.2	-50.6	27	25.7
250	30	10,804	-45.0		27	27.9
200	30	12,260	-55.6		27	31.0
175	30	13,101	-60.6		27	32.6
150	30	14,051	-64.5		27	29.5
125	29	15,154	-68.2		27	26.0
100	29	16,479	-72.2		27	18.5
80	27	17,792	-70.7		28	9.2
70	27	18,590	-67.5		27	4.2
60	25	19,532	-63.9		24	1.7
50	23	20,659	-60.2		09	.8
40	22	22,062	-57.2		07	4.0
30	21	23,899	-53.7		08	4.0
25	21	25,076	-51.9		07	4.8
20	21	26,529	-49.8		06	3.5
15	21	28,421	-47.4		22	2.0
10	12	31,123	-43.3			

WASHINGTON DULLES INT. AP — [illegible] 197[illegible] — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	85	19.0	16.2	26	.8
1000	31	145	20.1	16.0	28	.8
950	31	590	20.3	13.7	30	2.8
900	31	1,056	18.1	11.0	29	4.6
850	31	1,544	15.1	8.0	29	4.5
800	31	2,055	12.2	4.5	28	4.9
750	31	2,594	9.2	.3	28	5.8
700	31	3,163	5.8	-2.6	27	7.0
650	31	3,767	2.9	-7.0	27	8.2
600	31	4,411	-.4	-12.8	27	9.0
550	31	5,103	-4.3	-17.6	26	9.6
500	31	5,848	-8.5	-21.9	26	10.4
450	31	6,658	-13.5	-27.5	26	10.4
400	31	7,544	-19.6	-32.8	27	10.3
350	31	8,524	-26.6	-39.9	27	10.2
300	31	9,616	-34.7	-47.9	28	10.9
250	31	10,864	-44.5		28	12.1
200	31	12,322	-55.6		29	13.2
175	31	13,164	-60.2		29	13.2
150	31	14,117	-63.2		29	10.2
125	31	15,234	-64.3		30	6.9
100	31	16,604	-62.7		33	3.1
80	31	17,986	-60.5		04	3.3
70	31	18,821	-58.9		06	4.3
60	31	19,793	-57.0		07	5.7
50	31	20,956	-53.9		08	7.4
40	31	22,396	-51.7		09	8.0
30	28	24,272	-48.5		09	10.2
25	27	25,478	-47.0		09	10.4
20	26	26,961	-45.1		09	11.2
15	18	28,888	-43.2		09	12.7
10	11	31,542	-38.9			
7						

WASHINGTON DULLES INT. AP — AUG. 197[illegible] — 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	31	85	18.0	15.7	30	.7
1000	31	135	19.8	17.1	31	1.1
950	31	581	21.3	15.1	31	2.7
900	31	1,048	18.3	11.9	31	3.4
850	31	1,536	14.9	8.5	30	4.4
800	31	2,047	11.8	4.9	29	5.4
750	31	2,585	8.9	-.9	29	5.7
700	31	3,153	6.4	-6.7	29	6.9
650	31	3,758	3.3	-11.1	28	7.6
600	31	4,404	.2	-15.4	28	8.1
550	31	5,096	-3.7	-20.4	28	9.1
500	31	5,842	-8.4	-24.9	28	10.6
450	31	6,652	-13.5	-30.5	28	11.5
400	31	7,537	-19.7	-35.8	28	13.5
350	31	8,517	-26.9	-41.8	28	15.2
300	31	9,609	-34.8	-48.1	28	18.2
250	31	10,857	-43.9		28	20.5
200	31	12,324	-53.0		28	20.2
175	31	13,177	-57.0		28	19.5
150	31	14,143	-61.1		28	15.7
125	31	15,267	-64.0		28	11.5
100	31	16,633	-63.8		28	6.9
80	31	18,011	-60.5		32	2.3
70	31	18,848	-58.4		03	1.2
60	31	19,822	-56.6		08	3.0
50	31	20,984	-54.6		08	5.8
40	31	22,420	-52.5		09	7.2
30	29	24,291	-49.1		09	8.6
25	26	25,495	-47.5		09	8.1
20	17	26,977	-45.8		09	9.3
15	16	28,898	-44.1		09	11.2

WASHINGTON DULLES INT. AP — SEPT. 197[illegible] — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	30	85	14.8	12.3	22	.6
1000	30	161	17.6	14.6	26	1.0
950	30	603	18.9	12.5	27	4.0
900	30	1,067	16.6	9.7	29	4.6
850	30	1,552	13.9	5.3	29	6.1
800	30	2,062	11.5	1.0	28	7.1
750	30	2,599	8.8	-3.3	28	7.5
700	30	3,168	6.4	-9.4	28	9.0
650	30	3,772	3.2	-12.6	27	9.9
600	30	4,416	-.4	-18.3	27	11.1
550	30	5,107	-4.1	-22.0	28	11.8
500	30	5,852	-8.6	-27.6	28	12.8
450	30	6,661	-14.2	-32.2	28	13.3
400	30	7,543	-20.7	-36.2	28	14.1
350	30	8,519	-27.7	-42.8	29	15.3
300	30	9,607	-35.6	-48.8	29	16.3
250	30	10,851	-45.0		29	18.6
200	30	12,308	-54.9		30	18.2
175	30	13,154	-59.2		30	17.8
150	30	14,110	-63.3		29	15.7
125	30	15,221	-66.7		29	12.5
100	30	16,568	-66.5		29	9.2
80	30	17,928	-63.7		30	4.8
70	30	18,753	-60.8		32	2.7
60	30	19,718	-58.4		36	1.6
50	30	20,872	-55.7		03	1.5
40	29	22,301	-53.6		06	2.3
30	29	24,164	-50.8		07	3.1
25	27	25,355	-49.4		08	3.7
20	21	26,817	-47.4		09	3.6
15	15	28,743	-44.9		09	4.2
10	10	31,466	-41.8			

* LIHUE KAUAI, HAWAII — APR. 1971 — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	30	36	23.2	19.3	07	5.1
1000	30	156	21.5	17.8	07	6.4
950	30	610	17.7	16.3	08	7.5
900	30	1,070	14.5	13.0	08	7.1
850	30	1,551	11.6	9.0	08	6.2
800	30	2,057	9.4	2.9	09	5.8
750	30	2,592	7.4	-2.8	10	4.6
700	30	3,157	4.0	-6.1	13	2.3
650	30	3,755	.3	-10.3	12	1.5
600	30	4,393	-3.5	-14.2	14	1.0
550	30	5,075	-7.9	-19.7	20	.5
500	30	5,810	-12.9	-23.9	25	1.3
450	30	6,625	-18.3	-28.7	26	1.7
400	30	7,474	-24.5	-35.1	26	4.0
350	30	8,434	-32.3	-41.6	25	5.0
300	30	9,498	-41.2	-47.1	26	6.8
250	30	10,710	-51.1		27	10.2
200	29	12,134	-59.5		27	16.1
175	28	12,963	-61.5		27	15.5
150	[illegible]	13,917	-62.8		27	12.9
125	27	15,031	-66.8		28	10.7
100	27	16,368	-70.0		28	7.4
80	27	17,695	-70.1		27	3.0
70	27	18,491	-69.0		24	1.2
60	27	19,419	-66.4		23	1.2
50	26	20,536	-63.4		12	.5
40	[illegible]	21,914	-60.7		09	2.4
30	[illegible]	23,726	-55.5		08	5.3
25	23	24,894	-53.1		08	6.2
20	[illegible]	26,348	-49.4		09	6.0
15	[illegible]	28,259	-45.6		09	3.8
10	15	30,993	-40.8		10	3.9
7	10	33,477	-36.6			

SALEM, OREG. — APR. 1971 — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Speed M.p.s.
SURFACE	30	61	4.4	1.4	19	1.0
1000	30	146	6.4	2.0	21	1.0
950	30	567	5.2	.0	21	1.9
900	30	1,007	3.0	-2.7	20	3.0
850	30	1,468	.5	-6.5	22	4.6
800	30	1,953	-1.8	-10.7	23	5.3
750	30	2,464	-4.7	-13.8	23	6.8
700	30	3,004	-7.3	-18.5	23	7.5
650	30	3,578	-10.3	-22.3	24	8.1
600	30	4,190	-14.2	-26.2	25	8.9
550	30	4,845	-18.4	-30.9	25	9.4
500	30	5,550	-23.3	-34.8	25	10.3
450	30	6,313	-28.6	-38.1	25	11.3
400	30	7,146	-34.8	-43.4	25	12.8
350	30	8,058	-41.4	-46.1	26	15.0
300	30	9,097	-48.0		26	16.7
250	30	10,281	-55.0		27	18.1
200	30	11,689	-58.1		26	15.4
175	30	12,534	-56.6		26	12.4
150	30	13,514	-56.2		26	11.7
125	30	14,669	-57.1		26	11.2
100	30	16,081	-57.0		26	10.0
80	30	17,493	-57.2		25	8.4
70	30	18,338	-57.3		25	7.6
60	29	19,314	-56.9		25	5.5
50	27	20,478	-57.0		25	4.5
40	27	21,892	-56.6		25	3.5
30	26	23,723	-55.7		26	3.5
25	25	24,883	-55.3		26	3.6
20	24	26,307	-53.5		28	5.6
15	20	28,177	-50.8		27	6.9
10	16	30,852	-44.9			

See [illegible] current data [illegible] 307.

TOTAL OZONE DATA

[illegible] approximately [illegible] local apparent noon. The data are presented in the [illegible]

Station	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean [illegible]
[illegible]																																
[illegible]	[illegible]	20288	20287	[illegible]	20279	[illegible]	[illegible]	20297	20298	20296	20297	20289	20284	20257	20287	20286	20290	-	-	20282	20276	20274	20246	-	20257	-		-				284
[illegible]																																
AMUNDSEN-SCOTT	-				-	-		-		-		-		[illegible]	-	-	[illegible]	20276	20275		-		-	[illegible]	20318	[illegible]				20321	20360	300
DECEMBER 1970																																
AMUNDSEN-SCOTT	20318	20336	20344	[illegible]	20381	[illegible]	20397	[illegible]	20399	[illegible]	[illegible]	20422	[illegible]	20382	20391	20383	[illegible]	[illegible]	20375	20411	[illegible]	20379	[illegible]	[illegible]	[illegible]	[illegible]	20335	34346	20347	20350	[illegible]	373

[illegible] page 311.

[illegible], Gre[illegible]

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), June.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), June 1971.

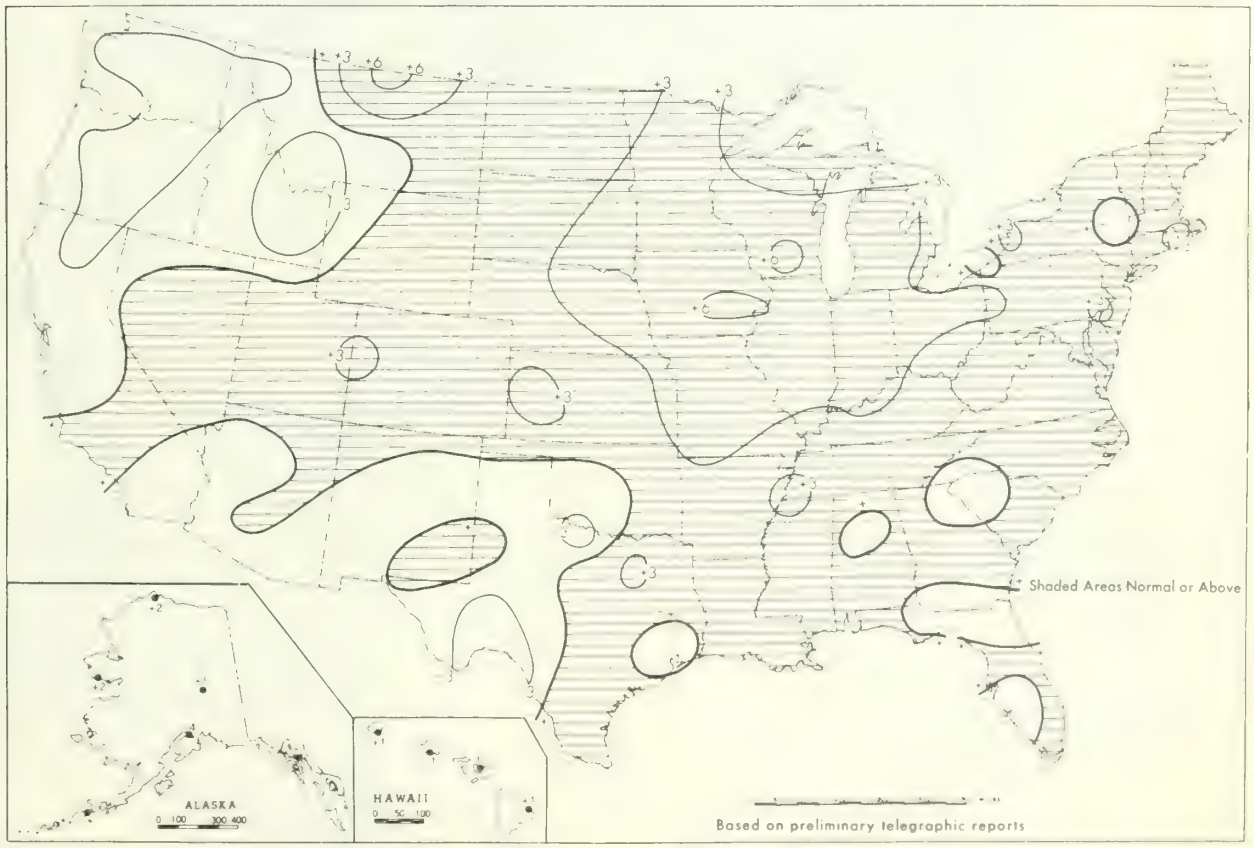


Chart II Total Precipitation (Inches), June 1971.

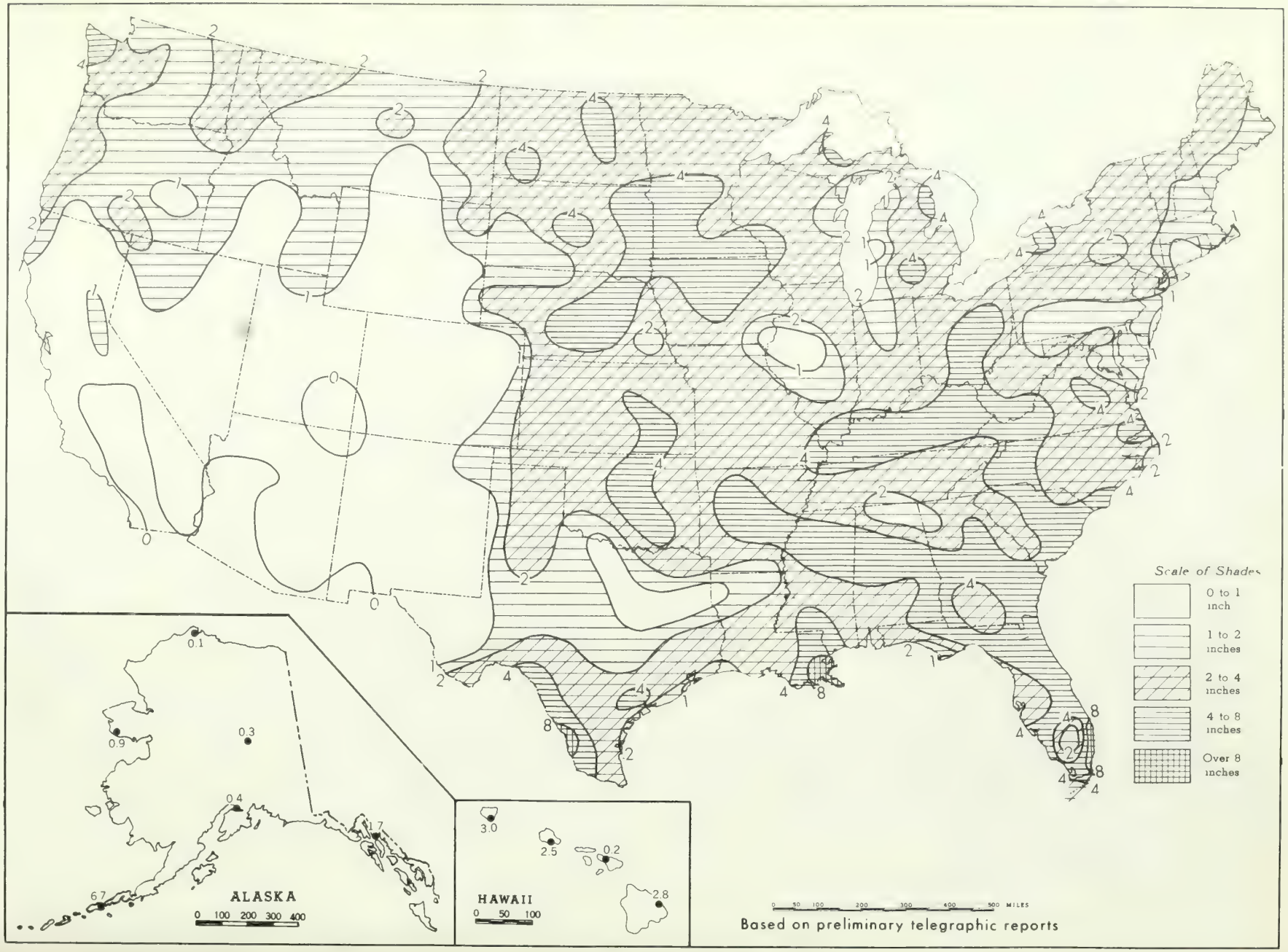


Chart III. Percentage of Normal Precipitation, **June 1971.**

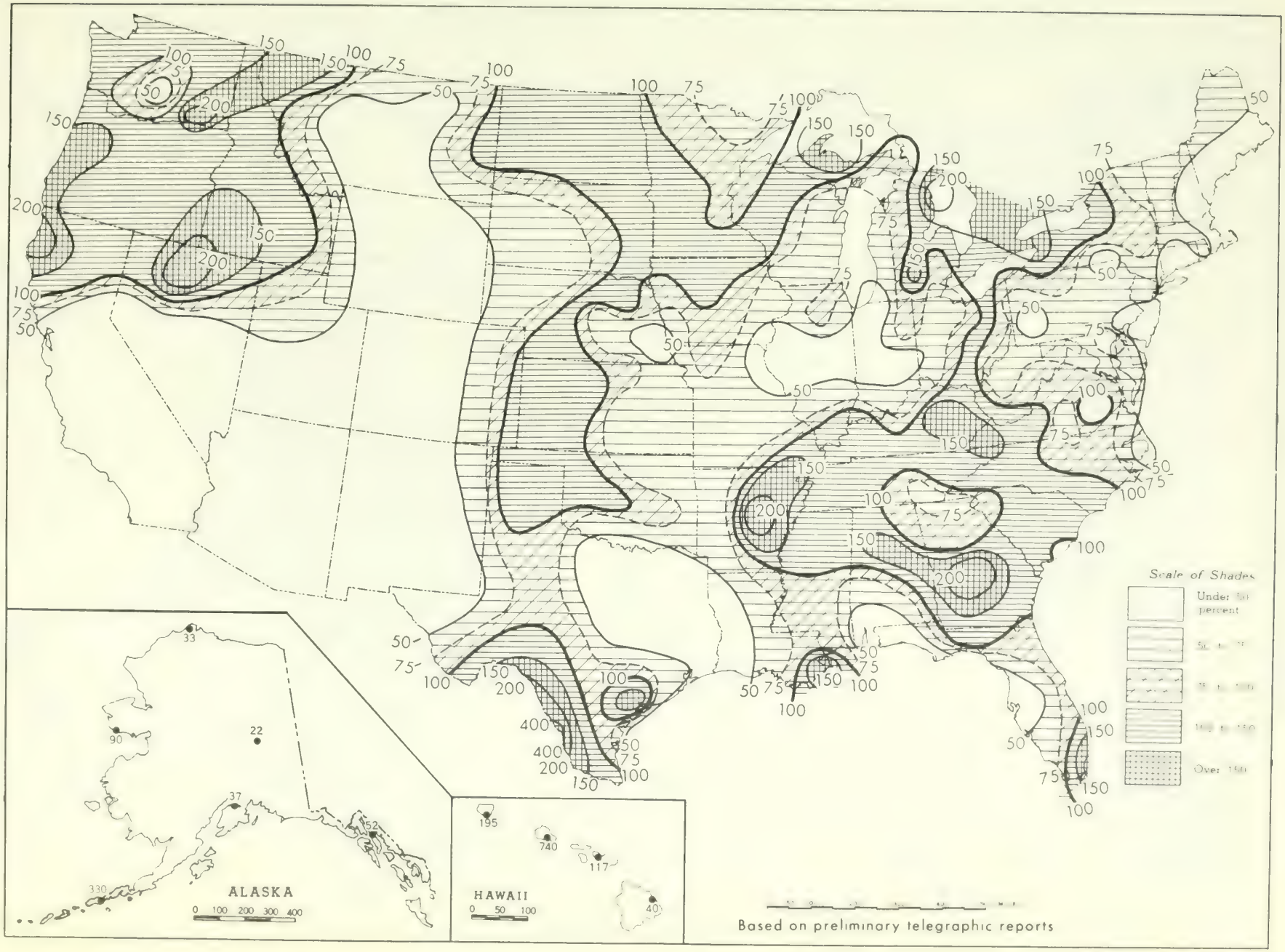
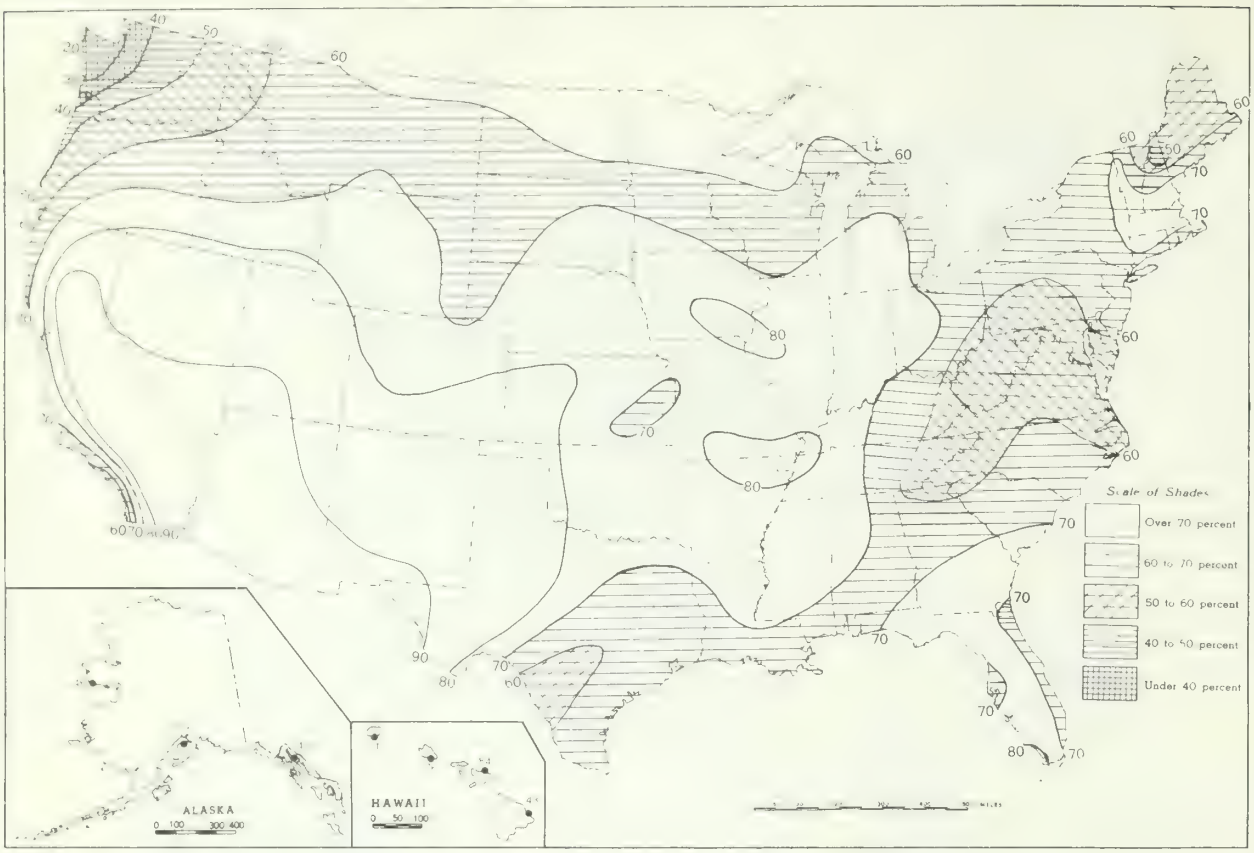
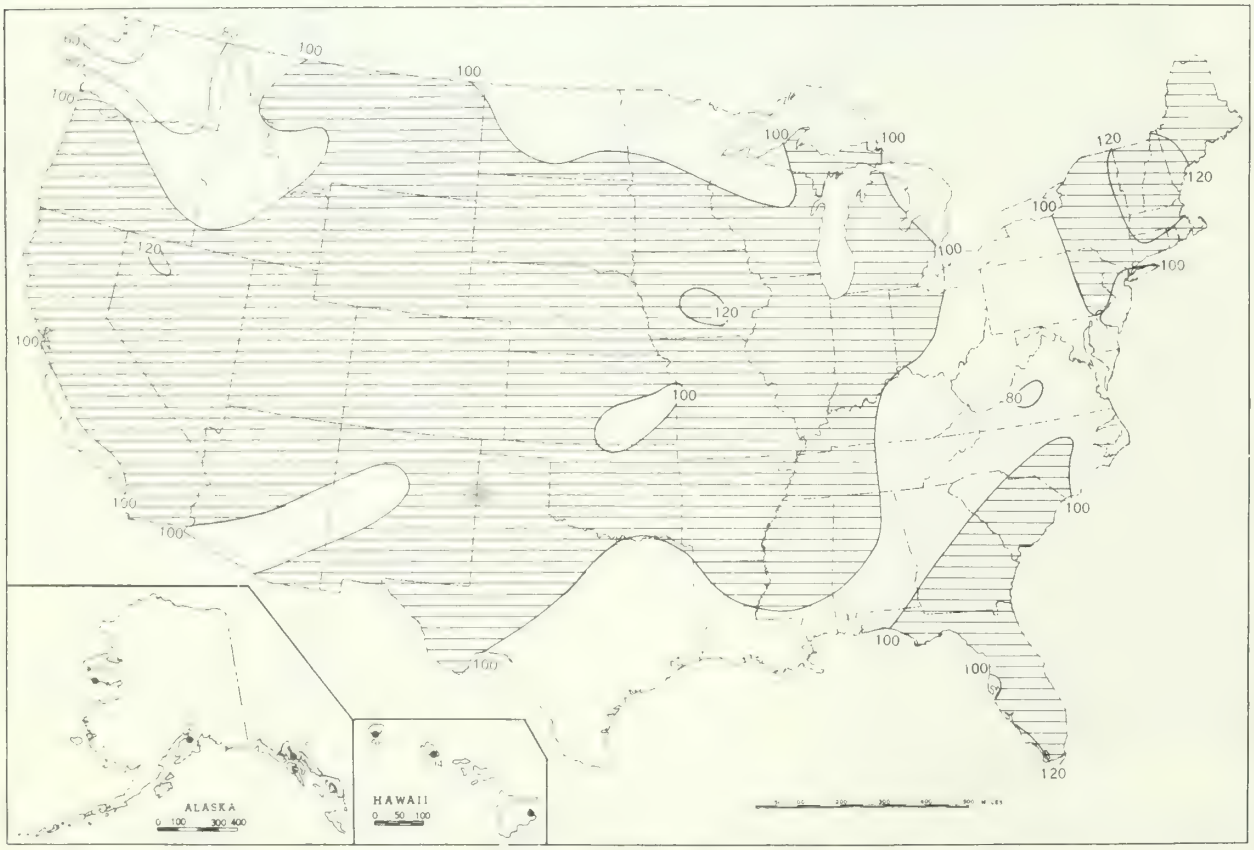


Chart VI. A. Percentage of Possible Sunshine, **June 1971.**

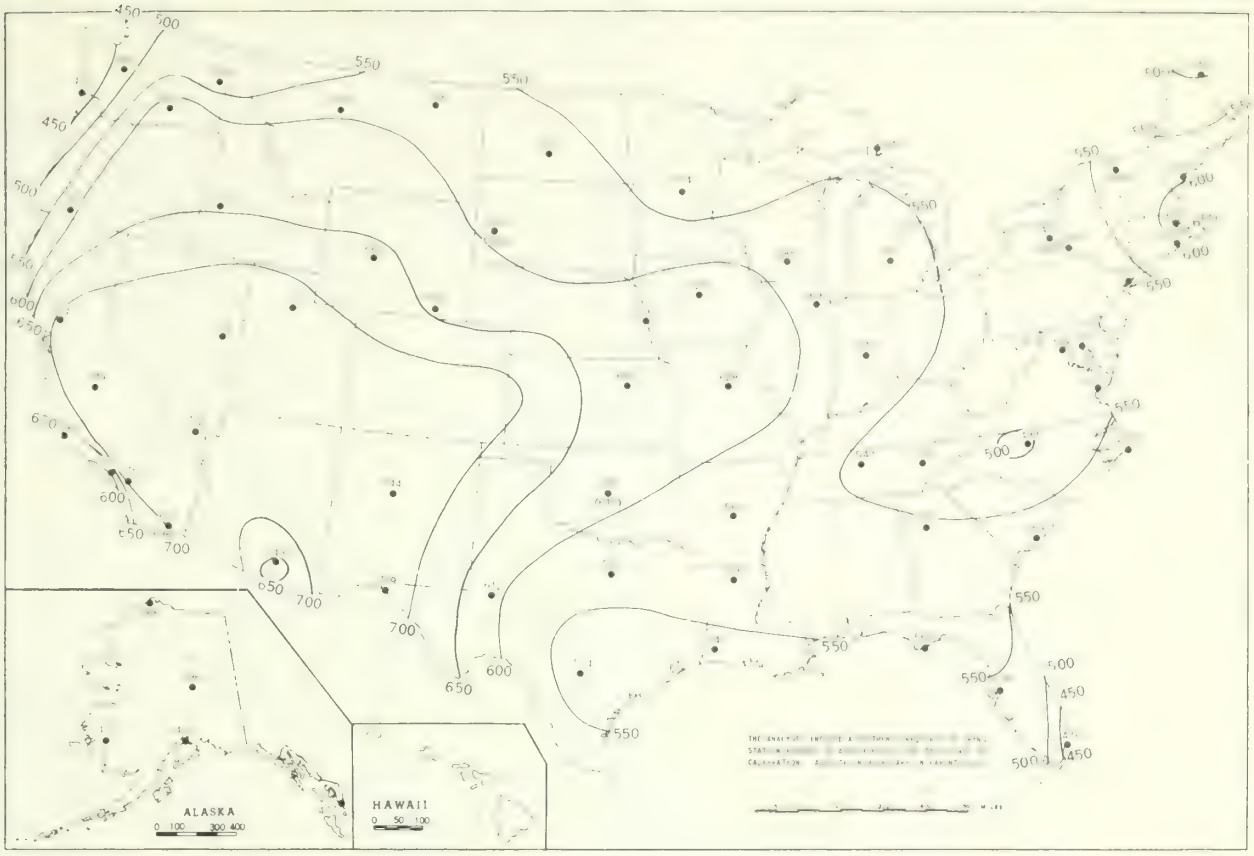


B. Percentage of Mean Monthly Sunshine, **June 1971.**

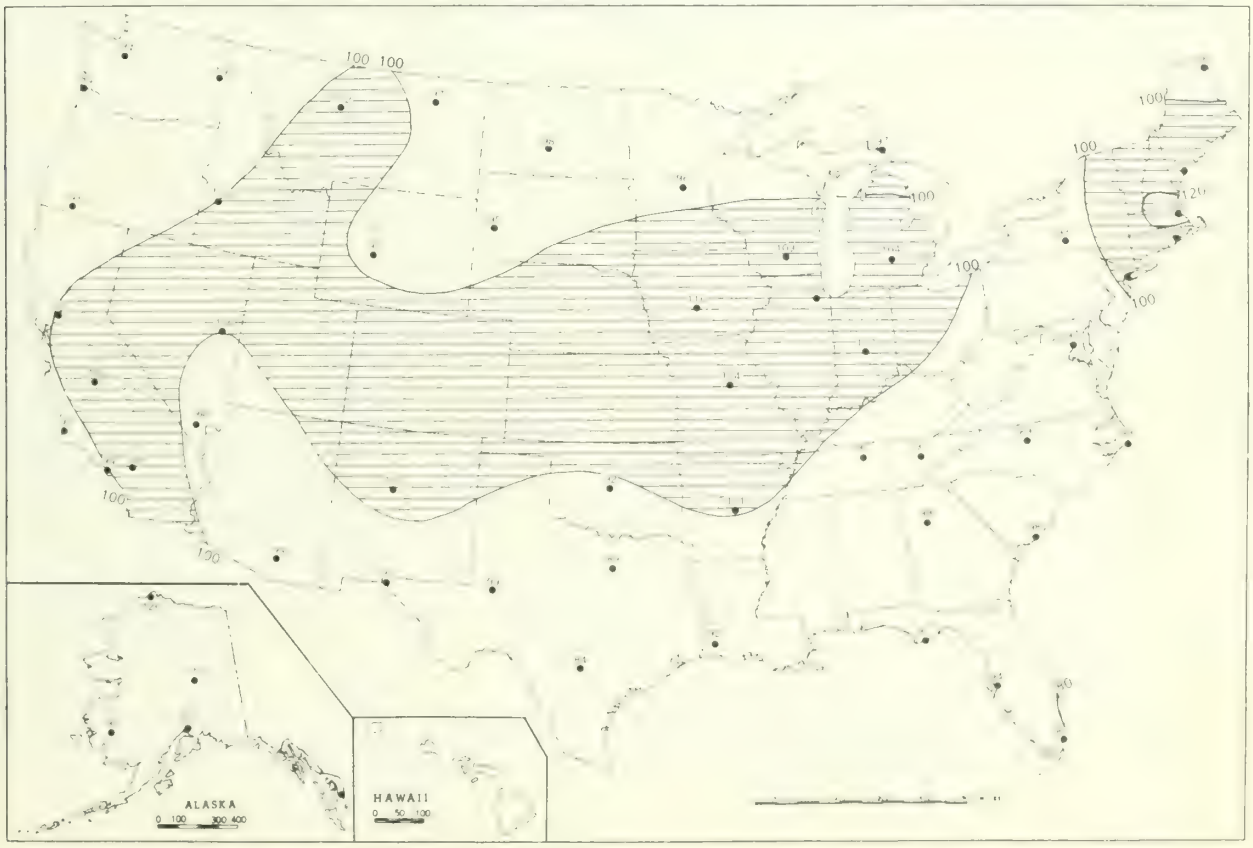


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, June 1971.

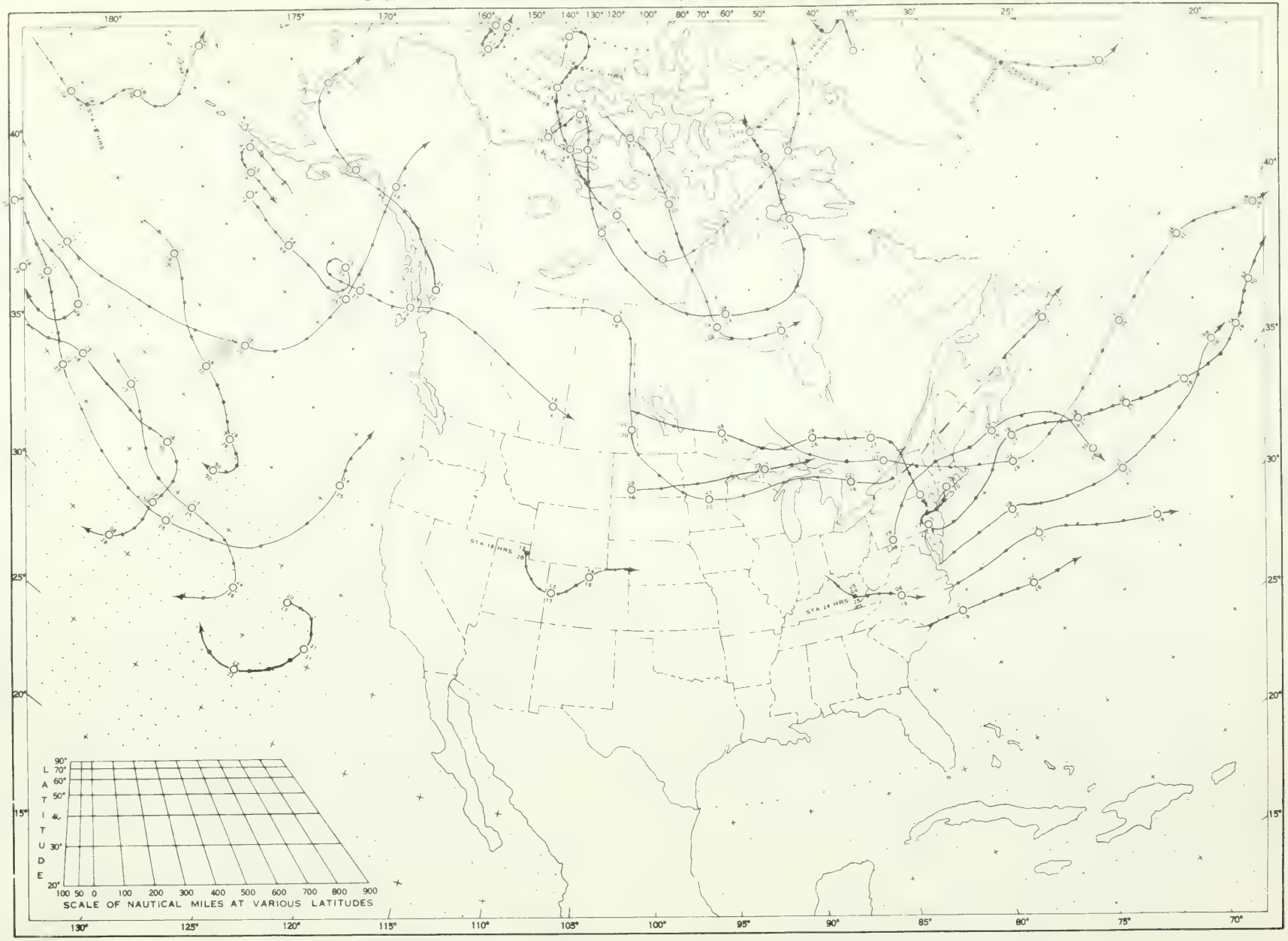


B. Percentage of Mean Daily Solar Radiation, June 1971.



A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level June 1971.



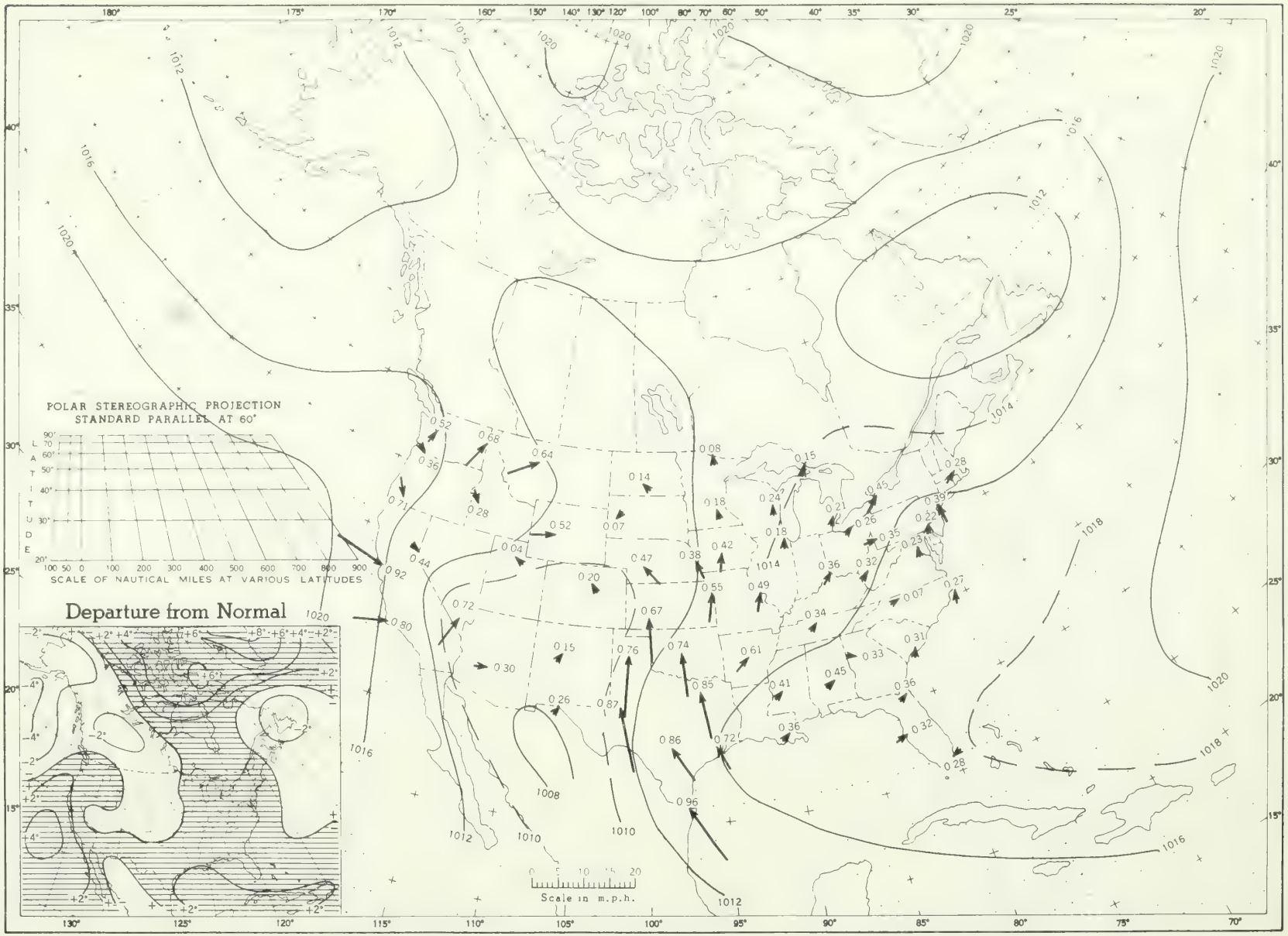
Circle indicates position of center at 7:00 a.m. e.s.t. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, June 1971.



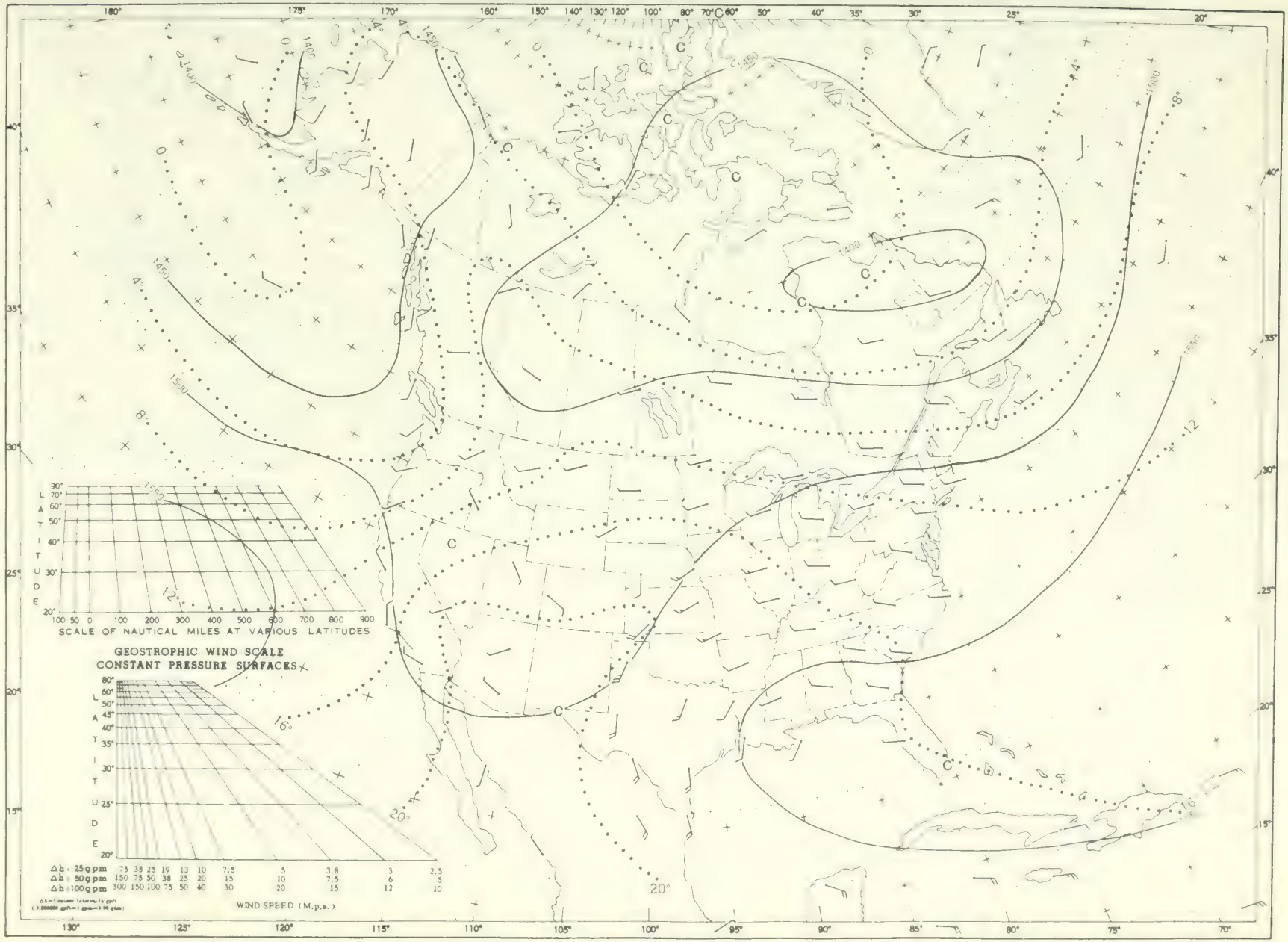
Circle indicates position of center at 7:00 a.m. e.s.t. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6 hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, **June 1971**. Inset Departure of Average Pressure (mb) from Normal, **June 1971**.



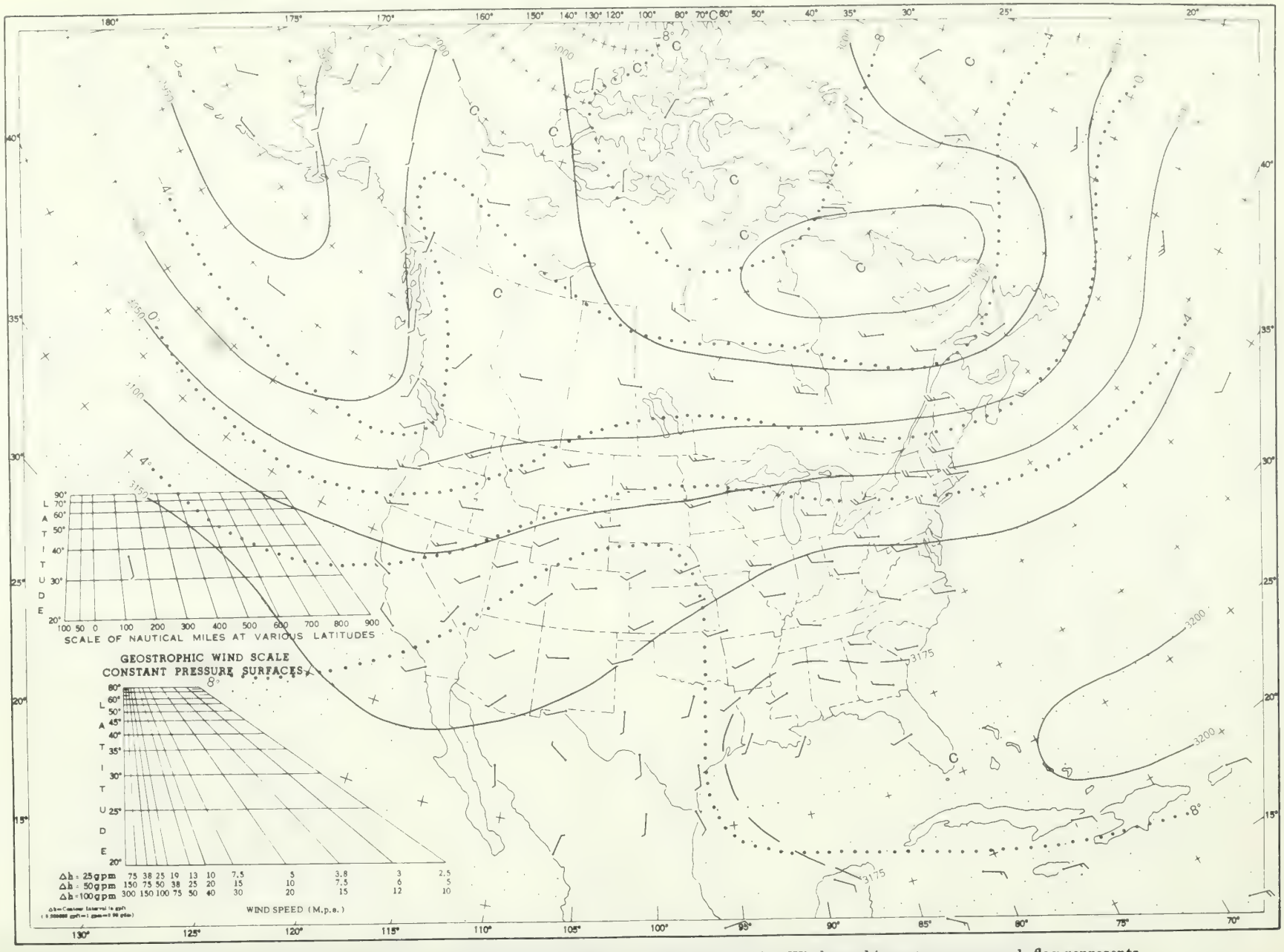
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI 350-mb Surface, 1200 G.m.t., **June 1971**. Average Height and Temperature, and Resultant Winds



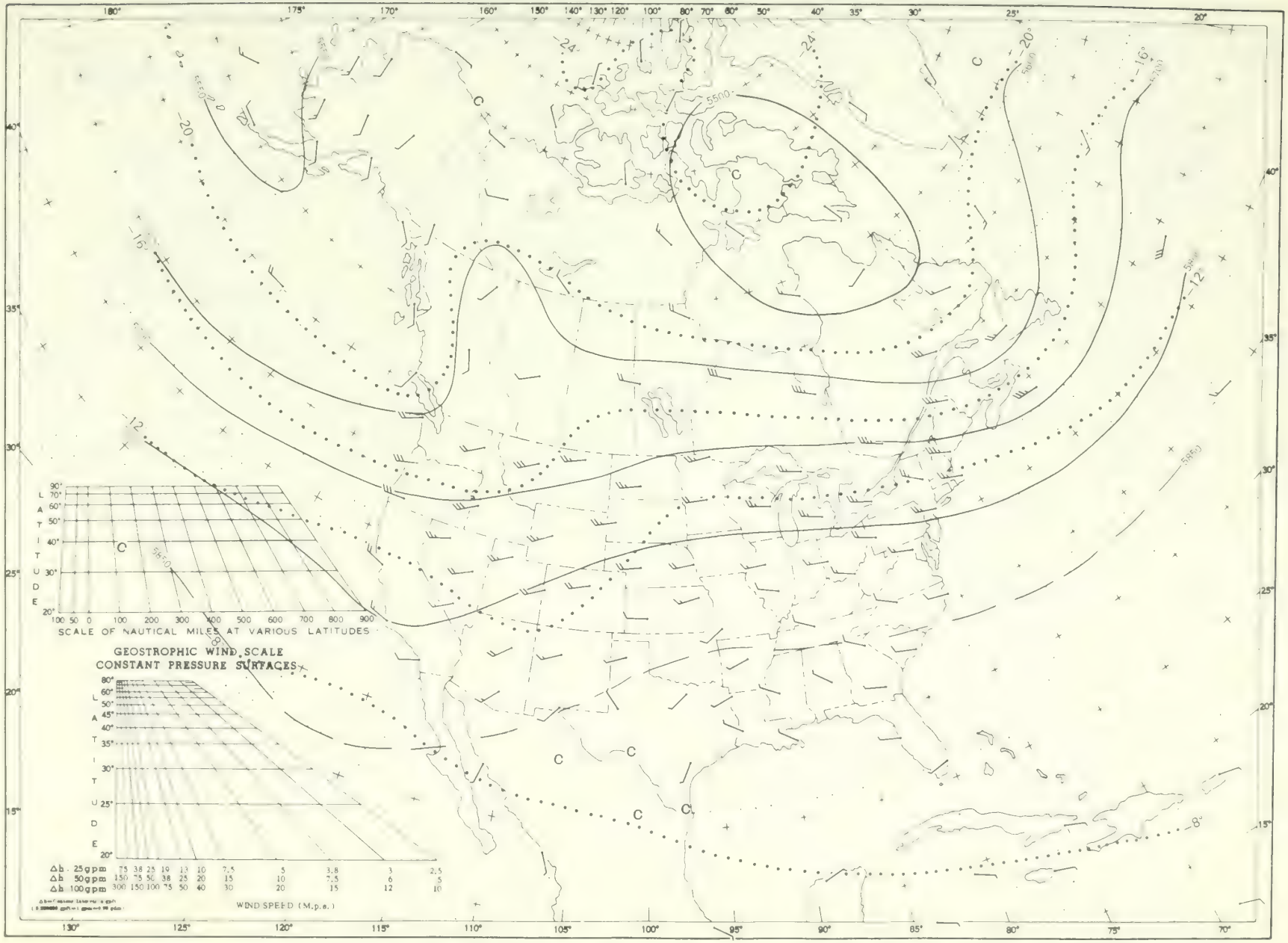
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII 700-mb Surface, 1200 G.m.t., June 1971. Average Height and Temperature, and Resultant Winds



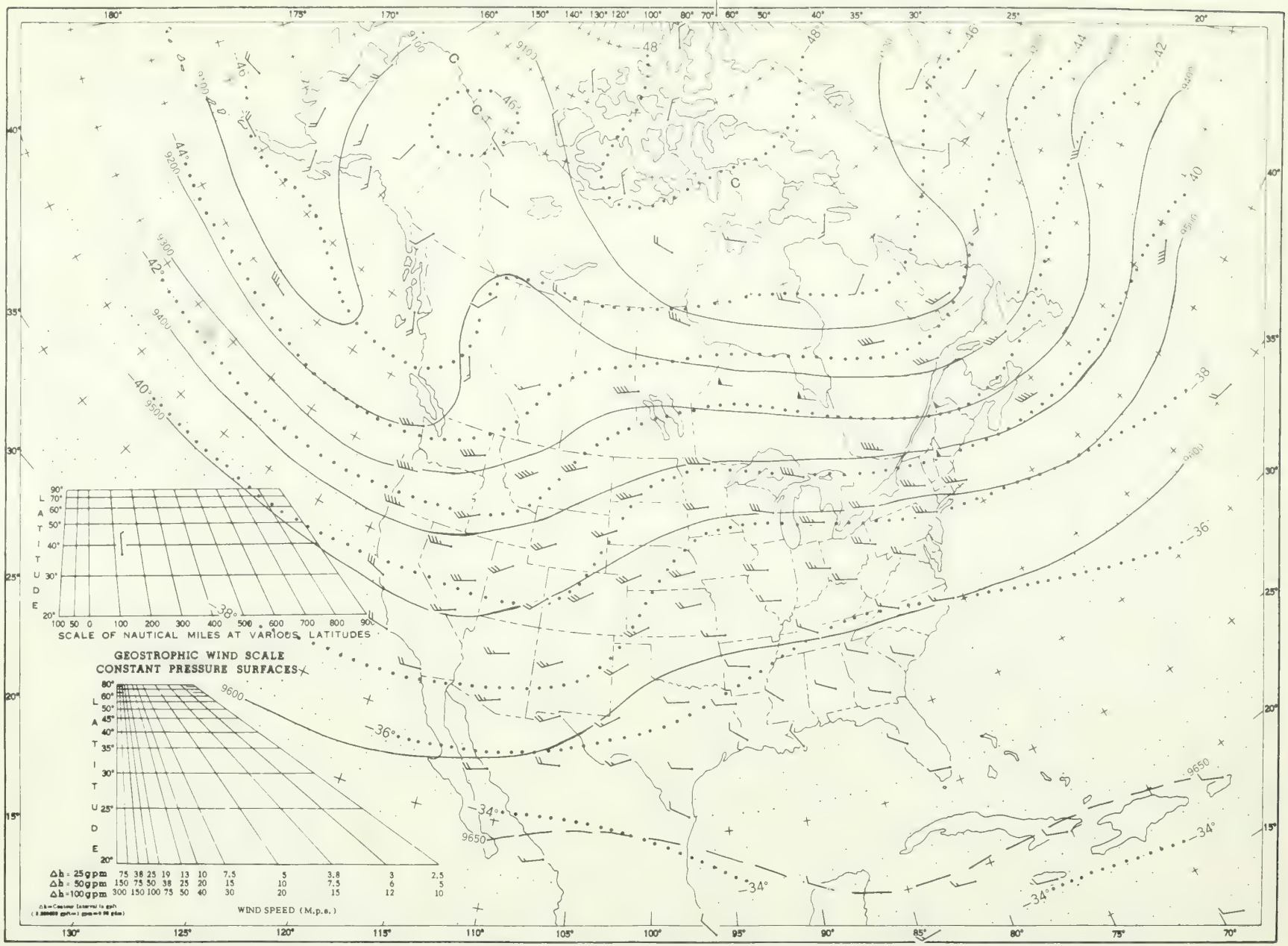
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII 500-mb Surface, 1200 G.m.t., **June 1971**. Average Height and Temperature, and Resultant Winds



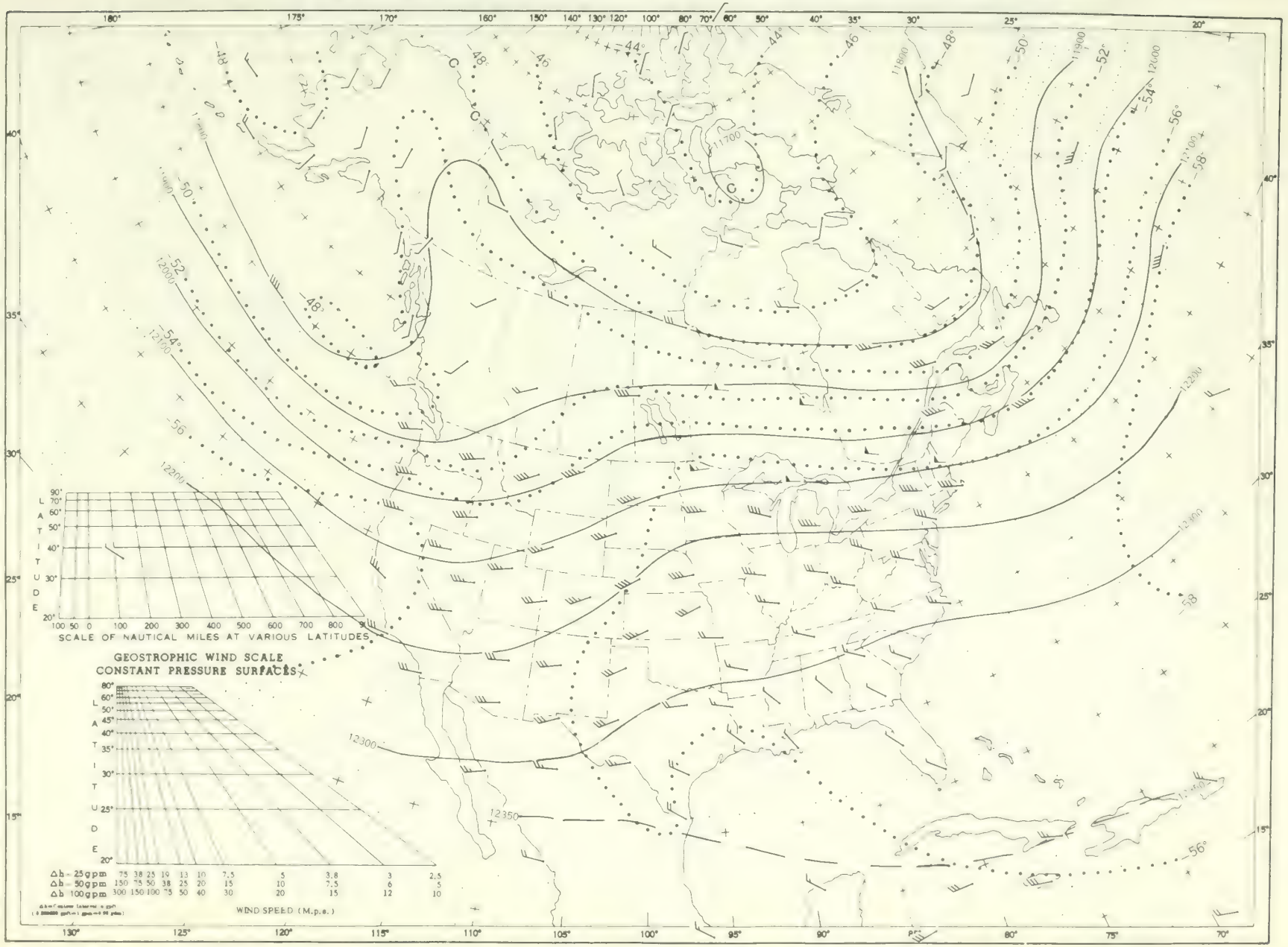
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300-mb Surface, 1200 G.m.t., **June 1971**. Average Height and Temperature, and Resultant Winds



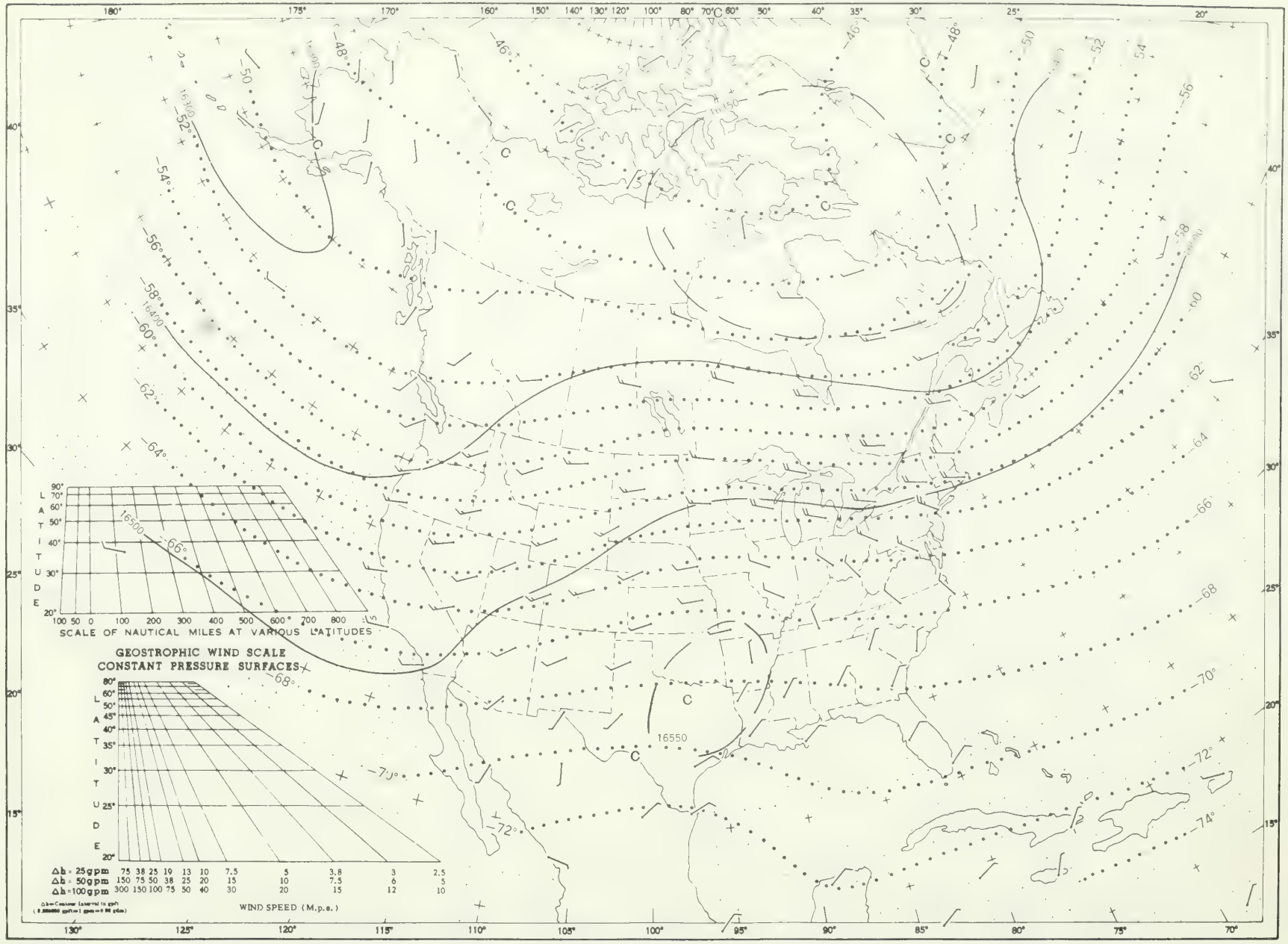
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb. Surface, 1200 G.m.t., June 1971. Average Height and Temperature, and Resultant Winds



Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100-mb Surface, 1200 G.m.t., June 1971. Average Height and Temperature, and Resultant Winds

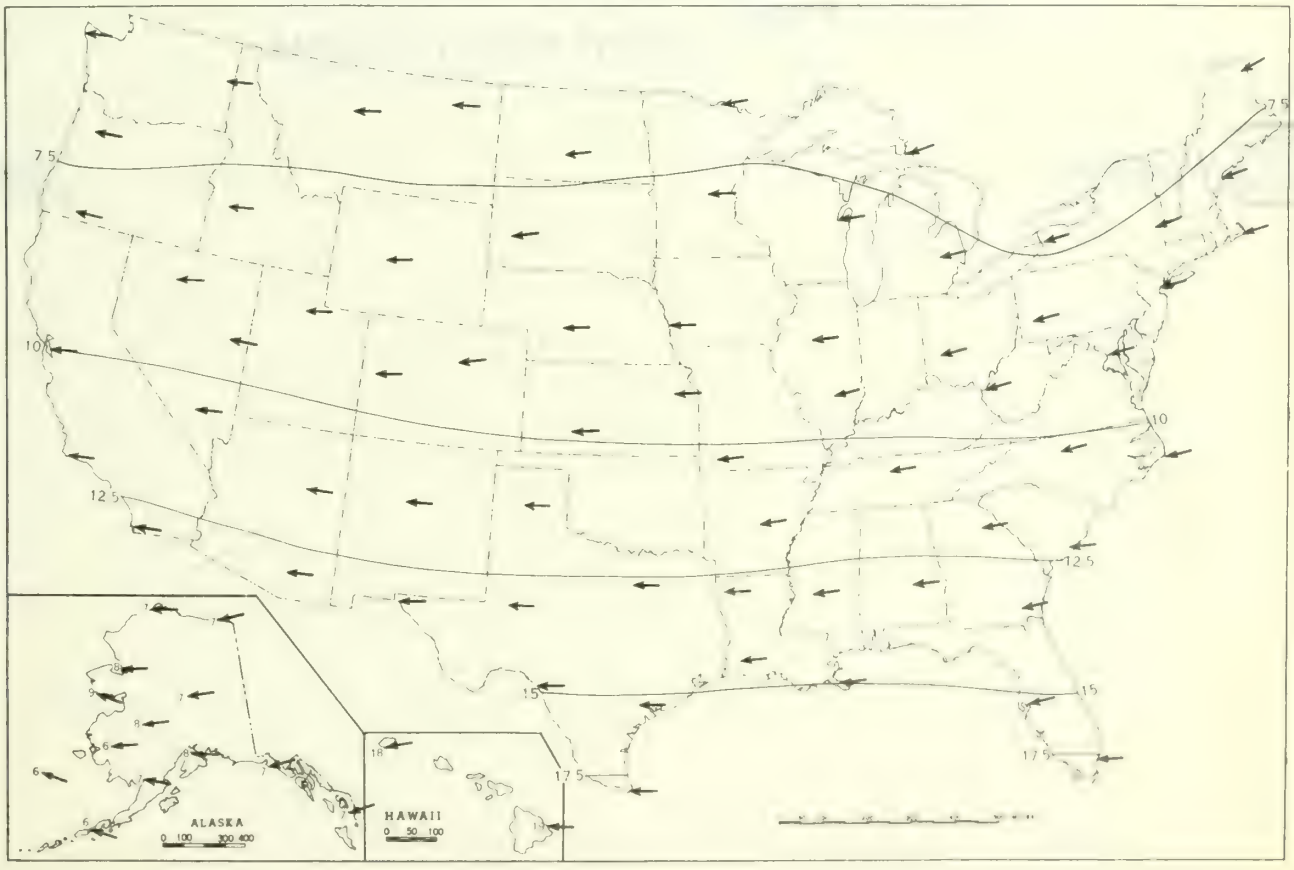


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., June 1971. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., June 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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...,N.C. 28801

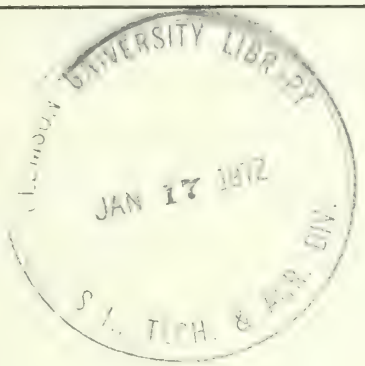
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NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service



JULY
1971
Vol. 22
No. 7
Asheville, N. C.
1971

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

SUBSCRIPTION PRICE: Monthly 20 cents and annual 40 cents per copy; yearly subscription, including monthly and annual issues, $2.50 domestic, $3.50 foreign. Checks and money orders should be made payable to the Superintendent of Documents. Remittance and correspondence regarding subscriptions should be sent to "Superintendent of Documents, Government Printing Office, Washington, D. C. 20402."

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William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 7 JULY 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. July was exceptionally cool over the Great Plains and the Great Lakes Region and hot over the Southwest.
2. Afternoon and evening thunderstorms brought most of the rain.

TEMPERATURE--July was a cool month over most of the Nation. At Dubuque, Iowa, the monthly average temperature was 68°. This was the coolest July at Dubuque in 120 years. At Erie, Pa., it was the coolest July in 80 years. In parts of North Dakota, July 1971 was the coolest July in more than half a century and at Nashville, Tenn., it was the coolest July in 20 years. In contrast, the temperatures at Providence, R. I., averaged 74°, the warmest July average in 16 years. Parts of Arizona also experienced the warmest July of record--Phoenix with an average temperature of 95° and Winslow where the temperatures averaged 83°. Record maximums and minimums also occurred in other parts of the Nation. At Spokane, Wash., the temperature on July 7 dropped to 38°, the lowest July minimum in 91 years. On the same date, Yakima, Wash., registered 34°, the lowest July minimum in the 62-year record. Oklahoma City, Okla., and Fort Smith, Ark., recorded 53° on the 31st. These are record lows for July at those stations. Among the other locations that experienced record low July temperatures near the end of the month were: Huron, S. Dak., 37°; Valentine, Nebr., 38°; Grand Island, Nebr., 42°; Norfolk, Nebr., 42°; Omaha, Nebr., 45°; Lincoln, Nebr., 46°; Burlington, Iowa, 46°; Des Moines, Iowa 47°; and Kansas City, Mo., 52°. At Agate, Nebr., the temperature fell to 29°, the coldest July temperature of record for the entire State.

Although the temperatures over the Great Plains in the last half of July resembled those generally experienced in early autumn, the Far Southwest found July heat especially oppressive because of the unusually high relative humidity which prevailed.

PRECIPITATION--Typical summer thunderstorms produced most of the rain that fell in July. Most of the thunderstorms brought beneficial showers. A few were accompanied by damaging hail, strong winds, or torrential flood-producing downpours. A station near Harlan, Nebr., received 6.75 inches of rain on July 3. An outbreak of severe thunderstorms occurred in the Upper Mississippi River Valley on July 12. Winds in the Rochester, Minn., vicinity gusted to 87 m.p.h., blew a bus off the road, and downed trees and powerlines. Tornadoes occurred at scattered locations in Iowa on the 12th. Light to heavy showers fell over portions of the Missouri and Ohio River Valleys, in the Northeast, and parts of the Southeast on July 16.

Afternoon and evening thunderstorms occurred in parts of the Corn Belt in the third week of July. The drought intensified in Texas. Duststorms occurred in some dry areas. More thundery weather occurred over the Southeast in the last week of the month. These storms occurred along the leading edge of an advancing mass of polar air and in the warm, humid air ahead of the front.

Monthly precipitation totals ranged widely from less than 1 inch over most of the West to over 8 inches in spots in the central Great Plains and the Southeast. Precipitation over the Corn Belt ranged from 1 inch to more than 5 inches.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

JULY 1971

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
[illegible]	5 Stations	100	15+	Fayette	52	22	Clanton	13.97	Claiborne	3.01
[illegible]	Susitna Meadows	91	11	Wonder Lake	22	23	Cordova-Klam	15.84	Linger Longer	.09
[illegible]	Harquahala Plains No. 1	124	10	Bright Angel RS	27	11	Stephens Ranch	6.70	3 Stations	.00
[illegible]	2 Stations	106	16	Huntsville	43	31	Camden 1	13.47	Gravette	1.37
[illegible]	Death Valley	124	29	Bodie	21	11+	Ellery Lake	2.40	286 Stations	.00
Colorado	2 Stations	108	13+	North Lake	22	31+	Victor	6.18	Hamilton	T
Connecticut	Hartford WSO	97	1	Coventry	40	4	Bridgeport WSO	12.84	Falls Village	3.12
[illegible]	Milford 2 WSW	97	8	Milford 2 WSW	49	5	Lewes 1 SW	4.69	Wilmington Porter Resvr	2.45
Florida	Avon Park	100	27	2 Stations	62	9+	Panama City 2	14.97	Dania 4 WNW	1.50
Georgia	Morgan 1 W	100	10	2 Stations	56	22+	Canton	14.64	Lexington	1.53
[illegible]	2 Stations	91	9+	Mauna Loa Slope Obs,Hawaii	31	1	Mount Waialeale 1047,Kauai	16.65	17 Stations	.00
Idaho	2 Stations	106	31+	Warren	22	7	Swan Valley	1.79	6 Stations	.00
Illinois	2 Stations	100	13+	Hennepin Power Plant	43	31	Monticello No. 2	12.24	Walnut	1.70
Indiana	2 Stations	99	9+	Wabash	41	31	Rockville	8.87	Cambridge City	2.40
Iowa	2 Stations	98	17+	Oakland 2 E	36	30	Cedar Rapids No. 1	11.60	Titonka 5 NE	1.03
[illegible]	Healy	113	12	Blaine	40	30	Diamond Springs	13.44	Lenora	1.07
[illegible]	Gilbertsville Ky Dam	99	13	3 Stations	47	31+	Glasgow	15.02	Elkton 2 S	2.19
Louisiana	2 Stations	104	17+	Homer Exp Station	55	31	Springhill	14.16	Winnsboro	2.22
Maine	Saco	98	1	3 Stations	35	13+	Waterville Pump Sta	5.71	Long Falls Dam	1.67
[illegible]	Vienna	98	10	Oakland 1 SE	41	3	Glenn Dale Bell Sta	6.84	Boonsboro	1.39
[illegible]	Chester 2	99	1	Chester 2	36	28+	Chester 2	5.95	Hatchville	1.12
Michigan	4 Stations	94	7+	2 Stations	31	31+	Bloomingdale	9.01	Hesperia 4 E	.83
Minnesota	Canby	96	21	Pipestone	32	30	Elgin	7.19	Vesta	.59
Mississippi	4 Stations	102	16+	2 Stations	52	31	Belzoni	14.64	Byhalia	1.73
Missouri	3 Stations	103	18+	2 Stations	41	31	Edgerton	10.33	Summersville	1.14
Montana	Havre WSO	104	16	Sula 1 NE	21	7	Raymond Border Station	2.78	2 Stations	.00
Nebraska	Red Cloud	104	7	Agate 3 E	29	30	Hickman	7.86	Kimball	.59
Nevada	Sunrise Manor Las Vegas	117	14	Sheldon	26	11+	Lahontan Dam	1.75	4 Stations	.00
New Hampshire	Portsmouth	99	1	Mount Washington	29	3	Mount Washington	9.25	Newport	2.03
New Jersey	3 Stations	98	9+	2 Stations	44	5	Midland Park	7.88	Glassboro	1.30
New Mexico	Tatum	110	5	Eagle Nest	31	5+	Ocate 1 N	8.45	Farmington 4 NE	.29
New York	Catskill 1 N	98	8	Old Forge	35	4+	Dolgeville	10.08	Hornell-Almond Dam	1.74
North Carolina	4 Stations	98	19+	Transou	45	5+	Tapoco	12.89	Weldon	1.21
North Dakota	3 Stations	98	17+	Wishek	30	30	Wahpeton	6.90	Garrison	.10
Ohio	Toledo Blade	97	8	3 Stations	40	21+	Ironton	9.26	Middlebourne	.92
Oklahoma	Clinton	113	18	Jay	44	31	Carter Tower	10.95	Laverne	.51
Oregon	Spray	110	31+	4 Stations	24	7+	Tillamook 1 W	2.90	7 Stations	.00
Pennsylvania	2 Stations	98	8	Clermont 4 NW	32	18	Hunlock Creek 4 N	8.84	Greenville	1.42
Puerto Rico	Alex Hamilton Fld FAA,V.I.	98	16	Adjuntas Substation, P.R.	56	29+	Mayaguez Nuclear Ctr, P.R.	15.81	2 Stations	.20
Rhode Island	Providence WSO	92	9	Kingston	46	13	Kingston	3.78	Newport	1.51
South Carolina	2 Stations	98	17+	Caesars Head 1 NE	56	5	Walterboro 2 SW	13.45	Wateree Dam	3.40
South Dakota	Kennebec	104	21	Pactola Dam	29	26	Canton	5.61	Hilland 4 NNW	.08
Tennessee	Memphis WSO	100	15	Mountain City No. 2	45	5	Gatlinburg 2 SW	14.74	Newbern	2.58
Texas	Matador	111	5	Perryton 5 NNE	50	30	Killeen	16.16	14 Stations	.00
Utah	Dewey	111	13	Soldier Creek	19	5	Ferron	1.68	15 Stations	.00
Vermont	Vernon	96	1	Northfield	35	13	Searsburg Station	7.16	South Londonderry	2.63
Virginia	Grundy	98	1	2 Stations	42	13+	Peaks of Otter	10.03	Manassas	1.55
Washington	Walla Walla FAA AP	111	31	Mazama	27	8	Tolt South Fork Resvr	3.10	5 Stations	.00
West Virginia	Williamson	98	10	Canaan Valley	38	5	Hogsett Gallipolis Dam	10.12	Berkeley Springs	1.21
Wisconsin	2 Stations	93	22+	Drummond 6 W	33	31+	Wisconsin Rapids	9.52	West Bend	1.07
Wyoming	Basin	101	16	2 Stations	21	30+	Hecla	1.91	2 Stations	.00

\+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb	Mb	F.	F.	F.	F.	F.		F.				F.	%	In	In	In			In	In	M p.h		M p.h							%
ALABAMA																																	
BIRMINGHAM	620	994.9	1017.0	86	69	77.5	- 4.1	97	14	60	22	9	0	66	73	8.90	3.74	2.65	16	15	0.0	0	1.1	22	29	W	25	3	14	14	7.1	53
HUNTSVILLE	624	993.9	1016.7	86	68	77.2	- 3.9	95	11	60	22	10	0	68	77	4.70	0.45	2.19	13	6	0.0	0	1.7	18	26	10	15	5	9	17	6.9	
MOBILE	211	1009.5	1017.1	90	74	82.3	- 0.3	97	15	72	23+	20	0	74	83	7.75	- 1.92	1.62	18	22	0.0	0	1.7	19	23	1	18	1	13	17	7.3	
MONTGOMERY	183	1010.2	1017.2	89	70	79.7	- 2.1	97	14	62	23	19	0	71	81	4.94	- 0.46	1.32	18	11	0.0	0	1.7	21	24	N	12	2	12	17	7.2	48
ALASKA																																	
ANCHORAGE	114	1012.5	1017.6	62	49	55.4	- 2.8	75	10	40	21	4	0	47	74	2.86	1.00	0.84	15	0	0.0	0	2.5	19	23	17	13	3	4	24	8.4	42
ANNETTE	110	1016.3	1020.2	70	54	61.7	4.4	86	27	47	1	14	0	52	76	0.56	- 5.46	0.42	5	2	0.0	0	0.6	20	20	32	27+	8	8	15	6.3	
BARROW	31	1014.2	1014.9	46	35	40.4	1.3	63	19	30	17	0	4	37	91	0.98	0.21	0.37	8	0	T	T	2.5	9	30	21	30	6	7	18	7.2	
BARTER ISLAND	39	1013.2	1015.3	49	37	43.0	1.7	65	27	29	2	0	4	40	89	3.01	2.13	1.64	9	0	T	0	4.9	8	33	9	20	4	9	18	7.6	
BETHEL	125	1009.1	1014.8	60	46	52.8	- 1.9	78	5	39	29	5	0	47	82	2.67	0.64	0.55	23	1	0.0	0	5.0	19	29	24	13	3	2	26	8.8	
BETTLES	644	990.2	1015.1	69	47	57.9		80	3	35	16	14	0	49	72	2.14		0.79	12	4	0.0	0	1.8	21	24	22	26	1	16	14	7.4	
BIG DELTA	1268			69	49	58.7		80	10	32	1	15	1			1.71		0.49	12	1	0.0	0			30	21	19	0	12	19	7.7	
COLD BAY	96	1010.5	1014.1	53	42	47.8	- 1.9	71	8	36	3+	1	0	44	89	2.27	0.45	0.72	13	0	0.0	0	8.4	16	44	16	11	1	3	27	9.2	
FAIRBANKS	436	999.0	1015.7	71	51	61.0	1.3	79	18+	41	22+	18	0	47	62	2.08	0.24	0.82	13	0	0.0	0	1.8	25	24	21	26	0	11	20	8.1	
GULKANA	1572	960.4	1017.3	68	46	56.8		83	10	35	18	10	0	44	64	1.85		0.34	16	2	0.0	0	5.6	19	40	15	3	3	10	18	7.4	
HOMER	67	1014.9	1017.5	59	44	51.6		74	11	35	4	2	0	46	79	1.95	0.19	0.83	15	0	0.0	0	2.5	20	20	4	19+	3	8	20	7.6	
JUNEAU	12	1019.3	1020.0	68	47	57.5	2.2	81	9	39	4	13	0	51	82	1.67	- 2.82	0.69	6	0	0.0	0	1.0	6	26	12	15	6	10	15	7.0	46
KING SALMON	49	1013.2	1015.1	63	46	54.5	- 0.4	85	11	37	28	7	0	46	74	3.25	1.19	0.74	18	1	0.0	0	4.3	17	31	8	18	2	3	26	8.5	
KOTZEBUE	10	1012.9	1013.4	62	50	56.0	3.3	76	19	41	31	4	0	48	76	2.98	1.52	1.12	11	0	0.0	0	3.9	24	35	22	29	2	6	23	8.1	
MC GRATH	344	1003.1	1015.5	66	48	56.8	- 1.9	79	10	36	29	10	0	48	75	1.31	- 1.12	0.34	17	1	0.0	0	1.3	21	20	2	4	0	3	28	9.0	
NOME	13	1012.5	1013.5	57	45	51.0	1.5	76	20	38	29	2	0	44	77	1.54	- 0.75	0.45	15	0	0.0	0	3.3	18	24	12	23	2	6	23	8.3	39
ST. PAUL ISLAND	22	1010.8	1011.7	46	38	41.9	- 3.6	52	31	31	2	0	1	40	96	2.77	0.52	0.97	18	0	0.0	0	3.3	16	32	20	12	0	0	31	9.8	
SHEMYA	122	1006.8	1010.6	46	42	44.4	- 2.0	50	25+	40	23+	0	0	41	90	3.62	1.47	1.15	14	0	0.0	0	2.0	26	39	22	7	0	0	31	9.9	
SUMMIT	2401	931.9	1017.3	59	42	50.3		76	10	35	1	2	0	43	76	2.64		0.54	21	3	0.0	0	4.4	24	30	12	19	0	7	24	8.6	
TALKEETNA	345			66	47	56.5	- 1.4	84	10+	37	2	9	0			4.23	1.04	0.98	18	0	0.0	0			16	18	13					
UNALAKLEET	15	1013.2	1014.0	61	47	54.0		72	19	39	29	2	0	47	77	2.89		0.66	18	0	0.0	0	2.3	17	35	24	13	1	6	24	8.7	
YAKUTAT	28	1019.3	1020.4	59	46	52.6	- 1.5	83	9	38	22+	3	0	49	92	10.76	2.33	3.30	17	0	0.0	0	3.1	15	29	14	15	1	3	27	9.0	
ARIZONA																																	
FLAGSTAFF	7006	791.7	1015.3	84	51	67.5	2.0	91	14+	39	2+	4	0	42	44	1.97	- 0.31	0.86	12	19	0.0	0	3.2	23	23	21	22+	8	19	4	4.7	
PHOENIX	1117	970.5	1008.1	107	83	94.9	5.1	114	11	72	1	31	0	54	26	0.24	- 0.53	0.14	2	4	0.0	0	3.6	27	51Y	SE	31	19	9	3	3.0	89
TUCSON	2584	924.1	1009.3	100	75	87.5	1.2	108	11	68	16	31	0	57	40	2.18	0.12	0.75	8	14	0.0	0	2.8	21	71	SE	16	17	10	4	4.1	85
WINSLOW	4895	852.4	1011.1	99	66	82.5	2.3	109	13	57	8	29	0	45	31	0.20	- 0.82	0.15	6	12	0.0	0	5.2	23	32	23	30	12	16	3	4.3	
YUMA	194	1001.0	1008.0	106	80	92.9	0.1	113	11	70	1	31	0	60	37	T	- 0.23	T	0	1	0.0	0	7.9	17	33	SE	28	18	10	3	2.9	93
ARKANSAS																																	
FORT SMITH	447	999.0	1015.2	92	69	80.3	- 2.7	103	14	53	31	19	0	67	67	2.77	- 0.03	1.69	5	7	0.0	0	1.9	9	26	N	28	9	9	13	6.0	69
LITTLE ROCK	257	1006.1	1015.3	90	70	80.0	- 1.9	100	15	59	31	16	0	70	74	4.01	0.67	1.56	10	8	0.0	0	2.9	21	27	SW	4	7	13	11	5.9	79
CALIFORNIA																																	
BAKERSFIELD	475	993.9	1011.1	101	73	87.0	2.7	107	28+	65	11	31	0	53	34	0.00	- 0.01	0.00	0	0	0.0	0	4.9	33	21	32	16	29	2	0	1.0	
BISHOP	4108	873.0		99	58	78.4	1.8	106	27	50	9	30	0			0.14	0.02	0.10	2		0.0	0						17	13	1	2.5	
BLUE CANYON	5280			78	61	69.5	1.6	85	16	50	10+	0	0			0.03	- 0.06	0.03	2		0.0	0			15	19	10+	27	3	1	1.0	
EUREKA U	43			60	51	55.2	- 1.1	67	8	48	8+	0	0			0.16	0.05	0.16	2		0.0	0			25	NW	6	9	7	15	8.4	63
FRESNO	328	1000.0	1011.3	100	64	81.9	0.6	105	21+	54	11	31	0	53	40	T	0.00	T	0	1	0.0	0	6.9	29	21	NW	20+	30	0	1	0.8	97
LONG BEACH	25	1011.8	1013.2	84	64	74.0	2.4	98	11	58	1	7	0	59	66	T	0.00	T	0	0	0.0	0	3.1	21	18	32	10	17	13	1	3.5	
LOS ANGELES	97	1009.1	1012.9	75	64	69.5	0.4	82	11	60	8	0	0	62	79	T	- 0.01	T	0	0	0.0	0	6.2	24	25Y	SW	10	11	19	1	4.2	
LOS ANGELES U	270			83	65	74.2	1.2	94	11	60	8+	5	0			T	0.00	T	0	0	0.0	0			16	SW	31	23	8	0	2.4	78
MT SHASTA R	3544			86	53	69.2	1.2	95	27+	39	10	16	0			0.16	- 0.14	0.13	3		0.0	0										
OAKLAND	6	1014.9	1015.1	68	56	62.0	- 2.6	77	19+	53	10	0	0	53	77	0.00	T	0.00	0	0	0.0	0	8.3	28	24	32	14	17	10	4	3.3	
RED BLUFF	342	998.6	1011.1	100	67	83.1	- 0.7	108	20	56	10	29	0	50	35	T	- 0.04	T	0	1	0.0	0	1.6	14	32	SE	9	29	1	1	0.8	97
SACRAMENTO	17	1011.2	1011.9	95	58	76.2	0.8	103	19+	52	10	25	0	52	50	0.00	T	0.00	0	0	0.0	0	6.8	20	24	SW	9	29	1	1	0.7	97
SANDBERG R	4517	860.8		85	64	74.1	- 0.3	93	14	53	11	5	0	43	36	T	- 0.02	T	0		0.0	0	3.8	32	30	35	9	26	5	0	1.2	
SAN DIEGO	13	1012.2	1013.2	75	64	69.4	- 0.7	83	10	60	3+	0	0	61	76	T	- 0.01	T	0	0	0.0	0	4.5	26	18	NW	10	9	13	9	5.6	68
SAN FRANCISCO	8	1014.6	1015.3	69	53	60.7	- 2.0	79	19	49	2	0	0	51	76	T	- 0.01	T	0	0	0.0	0	11.9	29	29	28	10	20	7	4	2.8	
SAN FRANCISCO U	52			63	52	57.5	- 1.3	72	12	50	27+	0	0			0.01	0.00	0.01	1		0.0	0			28	W	10					67
SANTA MARIA	236			71	52	61.5	- 0.7	82	31	45	12	0	0			T	- 0.03	T	0		0.0	0						20	11	0	2.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JULY 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CALIFORNIA																																
STOCKTON	22	1011.9	1012.8	96	62	79.2	1.0	105	22	57	25+	28	0	53	45	0.00	- 0.01	0.00	0	0	0.0	0	7.7	30	23	26	9	29	1	1	0.7	
COLORADO																																
ALAMOSA	7536	777.2		81	47	63.8	- 1.1	93	13	38	5	3	0			2.59	1.52	1.57	13		0.0	0						7	12	12	5.7	
COLORADO SPRINGS	6145	815.4	1015.6	81	57	68.8	- 1.7	98	12	49	30	7	0	49	58	2.82	0.45	0.87	16	18	0.0	0	1.8	5	32	36	18+	8	12	11	5.7	
DENVER	5283	839.5	1013.8	86	55	70.6	- 2.3	101	17+	43	30	13	0	48	53	1.20	- 0.33	0.77	9	7	0.0	0	1.8	11	41	N	27	5	17	9	5.6	63
GRAND JUNCTION	4843	852.4	1010.9	96	65	80.2	2.0	105	13	58	11+	29	0	41	29	0.15	- 0.42	0.12	3	6	0.0	0	3.2	13	38	N	19	13	13	5	4.3	76
PUEBLO	4684	857.8	1013.5	90	61	75.4	- 1.1	105	12+	55	31+	18	0	51	50	1.93	0.11	0.67	13	10	0.0	0	1.4	6	53	N	14	7	11	13	6.2	74
CONNECTICUT																																
BRIDGEPORT	7	1015.2	1016.0	81	66	73.5	- 2.2	90	9+	57	18	3	0	62	71	12.84	9.07	5.95	10	7	0.0	0	3.7	21	32	30	17	8	12	11	5.6	
HARTFORD	169	1008.8	1015.1	87	61	73.7	0.3	97	1	50	4	9	0	59	63	3.23	- 0.38	0.95	10	4	0.0	0	3.1	22	26	NW	17	8	9	14	6.3	63
DELAWARE																																
WILMINGTON	74	1013.2	1016.1	86	66	75.9	- 0.1	95	8	53	5	9	0	63	66	3.65	- 0.60	2.56	7	5	0.0	0	2.3	24	21	17	13	8	14	9	5.6	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	290	1004.7	1016.4	88	62	74.9		94	8	50	5	11	0	64	72	2.15		0.83	9	6	0.0	0	1.4	22	22	20	29	10	8	13	5.9	
WASHINGTON NATIONAL	10	1013.9	1016.2	87	69	78.3	0.1	93	8	61	12	9	0	64	64	4.97	0.82	1.29	10	10	0.0	0	2.4	20	34	NW	17	9	11	11	5.9	58
FLORIDA																																
APALACHICOLA U	13			88	75	81.5	0.0	90	29+	72	21+	5	0			5.26	- 2.67	1.04	16	12	0.0	0			22	S	5	1	17	13	6.7	39
DAYTONA BEACH	31	1017.3	1018.7	89	72	80.5	0.4	94	20	68	5	13	0	70	76	3.20	- 3.54	1.02	12	21	0.0	0	2.7	15	28	13	2	2	16	13	6.6	
FORT MYERS	15	1018.0	1018.3	90	74	82.0	- 0.2	93	18+	70	24	19	0	72	79	9.50	0.42	2.91	20	25	0.0	0	2.6	12	32	1	5	4	20	7	5.9	
JACKSONVILLE	26	1017.3	1018.2	91	72	81.5	- 1.1	96	15	69	9	22	0	72	80	5.07	- 2.61	2.08	18	26	0.0	0	2.7	20	47	NW	1	1	16	14	6.8	62
KEY WEST	4	1016.6	1017.3	88	80	84.1	0.8	90	21+	74	21	2	0	73	70	4.80	0.64	1.48	11	15	0.0	0	9.6	12	39	E	21	1	20	10	6.4	83
LAKELAND U	214			91	72	81.2	- 0.4	94	27+	67	2	22	0			7.69	- 0.61	1.74	23		0.0	0						1	24	6	6.0	64
MIAMI	7	1018.0	1018.1	88	77	82.7	0.9	91	13	72	13	7	0	73	74	4.72	- 2.03	1.65	13	13	0.0	0	5.9	9	23	34	22+	5	19	7	5.9	
ORLANDO	108	1014.2	1018.5	92	74	83.1	0.6	95	19	69	23	30	0	72	74	8.29	0.29	1.55	18	26	0.0	0	3.0	16	25	26	13	4	16	11	6.5	
PENSACOLA	112	1013.2	1017.4	89	74	81.6	- 0.1	96	14	70	31	14	0	73	79	6.53	- 1.49	1.59	19	20	0.0	0	1.8	22	20	19	25	1	15	15	7.3	
TALLAHASSEE	55	1015.2	1017.6	89	69	79.1	- 2.2	95	15+	67	28+	15	0	70	80	10.80	2.75	3.58	22	24	0.0	0	1.8	16	28	11	8	0	18	13	6.9	
TAMPA	19	1018.0	1018.1	91	74	82.3	0.7	95	6	69	10	23	0	71	74	7.74	- 0.88	1.25	17	24	0.0	0	1.9	16	28	18	6	1	16	14	6.9	53
WEST PALM BEACH	15	1017.6	1018.4	90	74	82.3	0.3	93	30	72	21+	20	0	74	76	5.13	- 1.53	1.31	16	17	0.0	0	4.7	12	23	24	22+	10	11	10	5.7	
GEORGIA																																
ATHENS	802	988.5	1017.1	86	69	77.3	- 2.4	92	12	66	21+	6	0	70	83	3.27	- 1.72	0.71	17	14	0.0	0	2.1	23	21	30	15	3	10	18	7.4	
ATLANTA	1010	980.7	1016.9	84	68	76.3	- 2.6	91	14	65	17+	1	0	68	81	8.22	3.50	1.96	18	8	0.0	0	2.5	23	34	NE	14	2	14	15	7.5	40
AUGUSTA	136	1011.9	1017.0	89	69	79.3	- 1.4	93	14+	64	4	14	0	70	82	5.11	0.61	1.34	14	17	0.0	0	2.0	19	32	24	11	2	12	17	7.4	
COLUMBUS	385	1003.4		88	71	79.2	- 1.9	92	19+	65	22	11	0	71	82	13.24	7.37	2.60	17	15	0.0	0	0.6	17	32	1	14	4	6	21	7.7	
MACON	354	1004.7	1017.7	90	72	81.2	- 0.7	96	14	69	16+	17	0	71	78	6.62	0.98	1.73	18	17	0.0	0	1.6	20	34	NW	20	1	8	22	7.9	52
ROME	637			87	68	77.3	- 1.7	94	14+	60	22	9	0			5.31	0.42	1.48	16		0.0	0										
SAVANNAH	46	1015.9	1017.7	90	72	80.9	- 0.4	94	26+	70	22+	18	0	71	79	9.07	2.46	2.54	21	18	0.0	0	3.3	22	32	NE	12	2	9	20	8.0	62
HAWAII																																
HILO	27	1015.9	1016.9	84	69	76.6	1.7	87	4+	64	26	0	0	68	78	4.13	- 5.69	0.94	23	0	0.0	0	1.0	8	18	NE	22	2	12	17	7.5	34
HONOLULU	7	1015.9	1016.3	85	73	78.9	0.1	87	26+	70	17+	0	0	64	62	0.04	- 0.40	0.03	2	0	0.0	0	14.1	6	28	NE	13+	10	16	5	5.0	79
KAHULUI	48	1013.5	1015.8	87	69	78.0	- 0.3	91	3	59	27	2	0	65	69	0.09	- 0.34	0.05	3	0	0.0	0	14.1	5	30	E	30	18	9	4	3.9	80
LIHUE	103	1012.9	1017.8	85	74	79.4	1.8	86	31+	70	17+	0	0	69	72	0.84	- 1.10	0.26	11	0	0.0	0	11.3	6	24	NE	9	8	12	11	5.9	66
IDAHO																																
BOISE	2838	915.3	1013.1	90	59	74.7	- 0.5	100	31+	44	7	20	0	44	36	0.12	- 0.09	0.12	1	2	0.0	0	2.2	32	34	SW	21	24	4	3	2.1	89
LEWISTON	1413			91	59	74.6	0.8	103	31	43	7	18	0			0.70	0.27	0.55	5		0.0	0						20	9	2	2.5	
POCATELLO	4454	863.9	1013.5	87	51	68.9	- 3.5	98	16	40	4+	12	0	42	41	0.32	- 0.19	0.25	3	4	0.0	0	2.9	24	45	W	30	21	7	3	2.8	86
ILLINOIS																																
CAIRO U	314			86	70	77.6	- 3.5	98	13	57	31	7	0			7.99	4.80	2.67	12		0.0	0			27	N	14	11	10	10	5.2	63
CHICAGO O HARE	658	991.2	1014.9	82	61	71.5	- 1.2	90	4	49	31	1	0	58	64	3.57	0.18	1.60	10	4	0.0	0	3.0	25	34	36	8	6	14	11	6.0	
CHICAGO MIDWAY	607	993.2	1015.5	82	63	72.7	- 2.9	94	4	53	31+	4	0	58	62	5.00	1.63	1.88	12	9	0.0	0	2.6	23	28	SW	13	8	14	9	5.6	62

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JULY 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90 F. or above	Temperature: No. of days Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 01 inch or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, ice pellets Total	Precipitation: Snow, ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days (sunrise to sunset) Clear 0.3	No. of days (sunrise to sunset) Partly cloudy 4.7	No. of days (sunrise to sunset) Cloudy 8.10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb	Mb.	F.	F.	F	F	F		F.				F.	%	In	In	In.			In	In	M.p.h.		M.p.h.							
ILLINOIS																																
MOLINE	582	994.2	1015.6	82	60	70.7	- 4.9	93	8	46	31+	2	0	60	72	11.22	7.96	5.08	11	9	0.0	0	2.2	23	40	NW	12	8	12	11	5.8	70
PEORIA	652	992.2	1015.8	82	60	71.2	- 4.8	97	8	47	31	4	0	60	69	5.21	1.67	2.82	9	7	0.0	0	1.3	24	22	NW	26	8	12	11	5.8	75
ROCKFORD	724	988.8	1015.2	82	60	70.7	- 3.5	92	7	47	30	1	0	58	67	2.81	- 1.33	1.04	9	6	0.0	0	2.3	24	43	28	8	7	13	11	6.0	
SPRINGFIELD	588	993.6	1015.4	83	62	72.4	- 3.6	97	8	48	31	4	0	61	69	5.96	2.47	2.62	9	9	0.0	0	1.9	23	35	NW	18	8	12	11	5.9	70
INDIANA																																
EVANSVILLE	381	1002.4	1016.0	88	67	77.1	- 1.7	99	9+	52	31	9	0	66	70	3.38	0.06	1.33	11	6	0.0	0	0.8	25	25	W	10	10	11	10	5.3	79
FORT WAYNE	791	986.8	1016.6	82	59	70.7	- 3.5	92	7	48	31	3	0	60	71	2.73	- 0.64	0.89	11	4	0.0	0	3.0	25	27	W	9	9	9	13	5.9	73
INDIANAPOLIS	792	987.5	1016.4	82	62	72.3	- 2.9	91	8	50	31	2	0	62	71	5.68	2.18	1.73	12	11	0.0	0	2.3	25	30	NW	8	8	13	10	6.0	70
SOUTH BEND	773	987.8	1015.5	79	60	69.5	- 4.1	88	4	51	31+	0	0	59	71	4.16	0.69	1.78	14	8	0.0	0	3.1	25	32	22	4	7	12	12	6.2	
IOWA																																
BURLINGTON	692			82	61	71.3	- 5.3	91	8	46	30	1	0	63	74	3.77	0.37	1.26	10	10	0.0	0	1.7	24	32	33	18	7	16	8	5.9	
DES MOINES	938	981.4	1015.6	82	62	72.1	- 4.2	92	21+	47	30	3	0	60	68	2.16	- 0.90	0.66	9	9	0.0	0	1.7	22	45	NW	8	6	17	8	5.5	64
DUBUQUE	1056	977.3		78	58	68.0	- 4.6	86	16+	44	30	0	0			3.66	0.15	1.02	9		0.0	0						6	11	14	6.5	
SIOUX CITY	1095	976.0	1015.1	84	61	72.5	- 4.9	94	7	42	30	5	0	61	69	1.57	- 1.54	0.57	14	9	0.0	0	0.8	17	33	NW	22	13	8	10	4.8	76
WATERLOO	868	984.1	1015.7	77	56	66.4	- 7.4	85	21+	43	31	0	0	58	76	3.14	- 0.65	1.06	11	7	0.0	0	1.9	25	32	18	12	7	11	13	6.0	
KANSAS																																
CONCORDIA	1470	962.8	1014.5	86	63	74.4	- 5.9	99	12+	48	30	6	0	62	68	10.17	7.34	3.94	13	14	0.0	0	4.6	14	56	NW	3	13	13	5	4.4	84
DODGE CITY	2582	925.2	1013.7	91	65	77.7	- 2.5	106	13	53	30	18	0	57	55	4.49	2.18	1.64	8	10	0.0	0	5.0	16	55	N	22	11	10	10	5.1	80
GOODLAND	3654	889.9	1013.9	87	59	73.1	- 3.5	102	17	43	30	11	0	55	59	1.62	- 1.05	0.87	10	10	0.0	0	4.0	14	29	20	15+	12	10	9	5.0	
TOPEKA	877	984.1	1015.3	85	64	74.5	- 5.4	95	17	50	30	8	0	64	72	4.07	0.47	1.34	14	14	0.0	0	1.5	14	26	NW	18	10	10	11	5.6	63
WICHITA	1321	967.5	1014.1	89	67	78.0	- 2.9	102	17+	53	31	18	0	61	60	6.65	3.01	1.48	8	9	0.0	0	4.9	15	42	S	4	11	11	9	5.0	68
KENTUCKY																																
COVINGTON	869	985.4	1016.3	84	65	74.8	- 0.6	92	9	55	28	5	0	62	68	3.70	0.09	1.10	12	7	0.0	0	2.7	23	28	35	10	4	14	13	6.5	
LEXINGTON	966	982.1	1016.8	83	65	73.9	- 3.5	91	9	56	28+	2	0	64	74	7.64	3.66	2.38	17	12	0.0	0	2.1	21	24	2	18	6	14	11	6.3	
LOUISVILLE	477	998.6	1015.9	84	65	74.8	- 2.8	91	13+	53	31	4	0	64	71	6.74	3.38	3.39	14	8	0.0	0	1.7	23	55	W	13	7	16	8	6.0	62
LOUISIANA																																
ALEXANDRIA	92	1012.2	1016.7	92	70	81.2	- 1.0	98	19+	65	31	23	0			4.70	- 0.55	2.94	11	14	0.0	0	1.8	22	23	30	29+	8	12	11	6.1	
BATON ROUGE	64	1013.9	1016.6	91	73	81.9	- 0.8	94	20+	70	11	22	0	72	77	9.59	3.32	2.55	14	13	0.0	0	1.0	24	29	3	20	3	15	13	6.7	
LAKE CHARLES	9	1015.2	1016.2	92	74	83.0	0.7	95	15+	70	31+	26	0	74	82	4.45	- 2.84	2.28	11	14	0.0	0	2.6	19	23	33	30	4	12	15	6.9	
NEW ORLEANS	4	1016.3	1017.0	90	73	81.4	- 0.2	94	14+	68	1	19	0	73	79	4.55	- 2.17	0.87	20	17	0.0	0	1.8	[illegible]	23	25	24	4	14	13	6.6	
SHREVEPORT	254	1006.4	1015.4	93	74	83.3	- 0.4	104	16	63	31	22	0	70	70	6.15	2.40	2.60	12	7	0.0	0	3.0	17	23	26	24+	9	8	14	6.1	60
MAINE																																
CARIBOU	624	990.2		75	53	64.0	- 0.5	82	17+	40	13	0	0			2.79	- 1.25	0.57	13		0.0	0						4	11	16	6.8	
PORTLAND	43	1011.9	1014.4	81	58	69.0	0.9	93	1	48	13+	1	0	58	73	3.14	0.28	1.13	9	5	0.0	0	3.9	22	30	W	1	5	12	14	6.2	68
MARYLAND																																
BALTIMORE	148	1011.2	1016.7	87	66	76.5	- 0.3	96	8	56	5	10	0	63	66	4.03	- 0.19	1.64	9	4	0.0	0	2.1	24	33	SW	26	10	10	11	5.7	68
MASSACHUSETTS																																
BLUE HILL OBS R	629			82	62	71.8	0.9	92	9	54	28	2	0			3.41	0.14	1.08	9		0.0	0			42	SW	13					69
BOSTON	15	1013.9	1015.0	82	64	73.4	- 0.3	94	9	58	4	5	0	59	65	2.84	- 0.04	0.88	9	4	0.0	0	4.4	23	30	W	17+	10	10	11	5.8	71
WORCESTER	986	980.6	1016.5	81	61	70.6	0.8	90	1	52	18	1	0	55	69	5.27	1.64	1.39	8	6	0.0	0	5.4	25	22	31	7+	8	13	10	5.9	
MICHIGAN																																
ALPENA	689	989.9	1014.4	75	51	62.8	- 3.1	85	7	40	3	0	0	52	69	4.00	1.14	1.80	10	5	0.0	0	2.0	24	21	SE	22	10	11	10	5.6	61
DETROIT	619			82	63	72.4	- 2.0	92	7	50	3	2	0	56	57	1.73	- 1.09	0.63	8	2	0.0		2.9	24	25	22	13					
DETROIT METRO	633	991.2	1014.9	82	57	69.6	- 2.8	91	13	48	27+	2	0	56	64	1.95	- 0.74	0.81	8	5	0.0	0	2.8	25	33	W	13	7	11	13	6.2	65
FLINT	771	987.5	1014.9	78	57	67.5	- 3.7	87	7	46	18	0	0	56	67	3.90	0.99	1.34	10	6	0.0	0	3.9	25	37	29	25	8	13	10	5.7	
GRAND RAPIDS	784	986.5	1015.2	81	56	69.2	- 3.1	89	7+	46	31	0	0	56	65	2.46	- 0.27	0.92	8	3	0.0	0	4.4	24	35	W	13	7	13	9	5.7	71
HOUGHTON LAKE	1149	973.6	1013.1	77	53	64.7	- 2.3	87	7	40	30+	0	0	55	70	3.14	0.26	1.26	11	7	0.0	0	3.4	26	28	29	22+	7	15	9	5.8	
LANSING	841	984.1		79	55	67.2	- 4.5	87	7	42	18	0	0	58	73	4.82	2.24	1.70	10	8	0.0	0	4.1	25	35	W	13	9	14	8	5.5	77
MARQUETTE C	677			73	56	64.2	- 2.5	84	25+	46	30+	0	0			2.22	- 0.98	1.34	8		0.0	0			26	NW	5	9	10	12	5.6	70

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JULY 1971

State and Station	Elevation (ground)	Pressure: Station ⊙	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 90 F. or above	Temperature: No of days: Min. 32 F or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 01 inch or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No of days (sunrise to sunset): Clear 0-3	No of days (sunrise to sunset): Partly cloudy 4-7	No of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb	Mb.	F.	F.	F.	F.	F.		F				F.	%	In	In	In			In	In	M p.h.		M.p.h							
MICHIGAN																																
MUSKEGON	625	992.6	1015.2	79	57	67.9	- 3.4	86	7	46	31	0	0	57	69	1.74	- 0.67	0.92	11	4	0.0	0	4.0	23	28	19	28	11	12	8	4.9	
SAULT STE MARIE	721	987.1	1013.5	73	48	60.4	- 4.2	82	4	39	27	0	0	50	69	3.42	0.94	1.20	12	5	0.0	0	3.1	29	26	NW	13	9	8	14	6.0	68
MINNESOTA																																
DULUTH	1428	963.4	1014.3	74	50	62.0	- 3.5	84	6	40	17	0	0	51	68	3.91	0.37	2.07	13	9	0.0	0	3.1	27	41	NW	5	5	16	10	6.0	63
INTERNATIONAL FALLS	1179	969.9	1012.7	75	49	62.1	- 3.5	84	3	36	27	0	0	53	75	3.40	- 0.09	1.46	12	4	0.0	0	4.2	27	32	18	24	5	12	14	6.6	
MINNEAPOLIS	834	984.8	1014.7	80	58	68.8	- 3.5	90	21	47	29	1	0	55	62	3.94	0.67	2.39	8	5	0.0	0	2.7	26	33	NE	7	9	13	9	5.5	80
ROCHESTER	1297	967.8	1015.1	78	56	67.0	- 5.3	88	21	46	31	0	0	57	72	3.15	- 0.53	1.03	10	8	0.0	0	4.5	25	51	17	12	11	9	11	5.6	
ST CLOUD	1034	977.3	1014.8	78	56	66.6	- 4.4	91	21	44	30	1	0			2.28	- 0.98	1.05	11		0.0	0						8	17	6	5.3	
MISSISSIPPI																																
JACKSON	310	1005.1	1016.7	91	71	81.0	- 1.3	98	14	62	22	20	0	72	80	6.28	1.52	1.52	12	13	0.0	0	1.5	18	28	N	16	6	11	14	6.5	70
MERIDIAN	290	1006.1	1016.9	90	70	79.6	- 1.9	99	15	64	22+	15	0	70	77	11.65	5.43	4.88	12	10	0.0	0	1.5	21	28	4	12	0	13	18	7.8	
MISSOURI																																
COLUMBIA REGIONAL	887	984.4	1016.1	85	64	74.4	- 4.3	99	8	50	31	9	0	61	68	3.30	- 0.11	1.25	12	8	0.0	0	1.1	10	33	N	8	9	10	12	5.9	68
KANSAS CITY	742	988.5	1015.0	86	67	76.4	- 5.1	98	17	52	30	11	0	63	66	3.13	- 0.06	1.09	11	10	0.0	0	1.0	14	27	N	18	9	12	10	5.6	64
ST JOSEPH	811			84	60	71.9	- 7.5	91	12	43	30	2	0	62	75	6.07	2.85		11				1.2	17	21	34	18	12	12	7	5.0	
ST LOUIS	535	995.9	1015.8	86	65	75.4	- 2.7	97	8	53	31	6	0	65	74	4.70	1.40	1.02	8	7	0.0	0	1.2	25	26	NE	8+	10	7	14	6.0	62
SPRINGFIELD	1268	971.6	1016.0	89	63	76.0	- 2.8	102	17	46	31	14	0	61	63	2.54	- 1.35	0.99	10	8	0.0	0	2.3	17	26	NW	10	12	10	9	5.2	80
MONTANA																																
BILLINGS	3567	893.3	1015.3	85	54	69.2	- 5.5	97	16	43	29	9	0	42	42	0.40	- 0.50	0.21	4	1	0.0	0	2.5	27	33	NW	2	18	11	2	3.2	80
GLASGOW	2284	934.0	1014.4	84	53	68.8	- 1.9	101	16	43	8	8	0	42	40	0.20	- 1.13	0.19	2	3	0.0	0	4.0	33	37	31	6	13	16	2	3.7	
GREAT FALLS	3662	891.0	1015.9	84	51	67.5	- 1.9	100	16	41	3	9	0	37	36	0.27	- 1.01	0.14	6	4	0.0	0	4.7	27	34	W	6	16	9	6	3.8	85
HAVRE	2584	924.5	1015.1	85	51	68.0	- 2.0	104	16	39	8	9	0	40	39	0.37	- 0.90	0.24	4	3	0.0	0	3.6	29	40	N	21	15	11	5	3.8	88
HELENA	3828	883.5	1017.0	79	47	63.2	- 5.2	91	15	36	4	3	0	37	41	0.56	- 0.47	0.39	4	6	0.0	0	3.6	29	37	NW	6	18	9	4	3.4	83
KALISPELL	2965	913.6	1017.0	80	46	63.1	- 2.6	94	31	31	7	8	1	46	58	0.93	- 0.11	0.64	5	6	0.0	0	0.6	36	23	3	27	17	7	7	3.5	
MILES CITY	2629	922.8	1014.0	87	57	72.1	- 3.2	103	10	47	26	12	0	43	38	0.10	- 1.24		1	2	0.0		3.2	32								
MISSOULA	3190	906.5	1016.9	86	48	67.1	0.1	99	16	31	7	12	1	44	49	0.53	- 0.32	0.16	7	4	0.0	0	2.7	36	34	NW	6	20	7	4	2.8	87
NEBRASKA																																
GRAND ISLAND	1841	950.2	1015.0	85	61	72.8	- 4.4	94	21+	42	30	6	0	56	60	2.27	- 0.24	0.50	12	9	0.0	0	2.1	17	29	3	27	14	14	3	3.9	
LINCOLN U	1150			85	64	74.6	- 5.5	102	7	46	30	6	0			3.71	0.44	1.47	12		0.0	0			48	SE	3	12	12	7	4.5	75
NORFOLK	1544			83	59	71.3	- 5.7	93	21+	42	30	3	0			4.12	1.10	1.34	11		0.0	0						14	12	5	4.5	
NORTH PLATTE	2775	919.4	1015.4	83	57	69.8	- 6.3	94	17	41	30	3	0	57	68	3.48	0.96	1.58	15	15	0.0	0	2.5	11	44	NE	4	15	14	2	4.2	81
OMAHA	977	980.4	1015.0	86	63	74.2	- 4.3	99	7	45	30	7	0	60	65	1.77	- 1.60	0.80	10	6	0.0	0	0.5	14	28	NW	7	11	15	5	4.7	82
SCOTTSBLUFF	3957	881.5	1014.8	85	56	70.2	- 4.5	96	17	45	30	6	0	52	59	1.46	- 0.01	0.66	8	12	0.0	0	2.6	9	40	35	8	17	7	7	4.2	
VALENTINE	2587			86	55	70.9	- 4.5	98	24	38	30	11	0			1.60	- 0.72	0.93	8		0.0	0			48	NW	4	15	11	5	4.1	71
NEVADA																																
ELKO	5050	845.9	1013.7	89	49	68.7	- 0.9	97	29	40	11	14	0	39	38	0.21	- 0.19	0.11	5	4	0.0	0	0.6	26	27	29	20	18	10	3	3.5	
ELY	6253	811.0	1011.8	89	48	68.2	0.7	96	14	39	11+	12	0	35	34	0.17	- 0.48	0.08	5	9	0.0	0	3.1	22	32	SE	1	15	11	5	4.1	81
LAS VEGAS	2162	934.6	1008.6	107	79	92.8	3.1	113	28+	66	1	31	0	38	16	0.08	- 0.42	0.05	2	5	0.0	0	6.5	20	64	SW	14	17	13	1	2.9	95
RENO	4404	866.9	1013.4	93	51	71.5	3.8	102	28	39	11	20	0	45	43	1.06	0.79	0.64	6	8	0.0	0	2.6	29	36	E	16	24	5	2	2.1	93
WINNEMUCCA	4301	868.9	1012.6	96	52	74.3	3.3	106	28	36	11	24	0	40	33	0.03	- 0.24	0.02	2	4	0.0	0	2.5	33	31	NW	2	21	7	3	2.9	92
NEW HAMPSHIRE																																
CONCORD	342	1002.7	1015.1	83	54	68.3	- 1.3	92	9	40	13+	3	0	58	72	5.14	1.73	2.54	9	6	0.0	0	2.5	25	45	SW	1	6	15	10	5.9	71
MT WASHINGTON OBS	6262			54	41	47.9	- 1.2	65	6	29	3	0	1			9.25	2.54	2.67	15	5	0.0	0			76Y	W	14	0	9	22	8.4	36
NEW JERSEY																																
ATLANTIC CITY	64	1013.9	1016.4	82	62	72.0	- 3.1	91	8	49	13+	1	0	64	78	3.65	- 0.07	1.32	11	4	0.0	0	3.7	21	25	19	29	10	6	15	6.0	64
ATLANTIC CITY U	11			78	66	71.9	- 2.3	89	8	58	12+	0	0			4.20	0.34	1.75	14						25	S	1					
NEWARK	7	1014.6	1015.7	86	69	77.8	1.5	96	9+	63	21+	7	0	61	60	6.98	3.31	3.40	10	6	0.0	0	3.3	23	32	24	1	9	9	13	5.9	
TRENTON U	56			84	67	75.3	- 0.7	94	8	56	5	4	0			4.90	0.72	2.52	11		0.0	0			30	NW	9	10	12	9	5.4	68

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 90 F. or above	Temperature: No of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 01 inch or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No of days (sunrise to sunset): Clear, 0-3	No of days (sunrise to sunset): Partly cloudy, 4-7	No of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths sunrise to sunset	Possible sunshine
NEW MEXICO	Ft.	Mb	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In			In	In.	M.p.h		M.p.h.							°°
ALBUQUERQUE	5311	839.8	1011.9	93	64	78.1	- 0.4	104	13	57	31+	21	0	47	41	1.05	- 0.15	0.41	10	11	0.0	0	3.3	13	47	E	29	13	14	4	4.3	79
CLAYTON	4969			84	60	71.7	- 2.8	98	12	51	31	12	0			3.31	0.98	1.39	15		0.0	0						8	11	12	5.8	
ROSWELL	3612			95	65	79.7	1.1	106	5	60	31+	25	0			1.88	0.11	0.83	9		0.0	0			35	N	28					76
NEW YORK																																
ALBANY	275	1004.7	1015.3	81	56	68.4	- 3.7	88	1	44	28+	0	0	57	68	3.89	0.40	0.96	12	6	0.0	0	3.1	22	30	W	17+	8	10	13	6.1	64
BINGHAMTON	1590	958.7	1016.6	76	56	65.9	- 2.5	86	8	47	18	0	0	56	74	4.66	0.89	2.16	10	8	0.0	0	3.6	25	28	S	13	5	15	11	6.0	65
BUFFALO	705	990.2	1015.5	78	60	68.7	- 1.1	86	8	51	18	0	0	55	63	4.50	1.93	2.33	9	6	0.0	0	5.6	24	32	SW	13	7	12	12	6.1	72
NEW YORK U	132	1013.9	1015.8	86	70	77.8	1.0	96	8	64	21+	6	0	61	62	7.20	3.50	3.60	9	5	0.0	0	2.9	23	30	W	17					62
NEW YORK KENNEDY	13	1015.2	1016.0	85	70	77.2	1.3	97	8	64	28+	5	0	63	64	3.19	- 0.85	1.13	10	7	0.0	0	4.5	20	26	19	29	10	12	9	5.6	
NEW YORK LA GUARDIA	11	1014.9	1016.1	84	69	76.1	- 0.7	93	8	62	5	3	0	61	63	6.32	2.61	3.82	8	8	0.0	0	2.8	22	32	NW	17	10	9	12	5.6	
ROCHESTER	547	994.9	1015.0	80	57	68.8	- 2.8	92	8	47	18	1	0	58	71	5.59	2.75	2.25	9	6	0.0	0	3.6	25	34	W	13	8	16	7	5.5	69
SYRACUSE	410	1000.3	1015.0	81	57	69.0	- 3.2	93	8	47	28	1	0	58	70	6.49	3.40	2.11	10	7	0.0	0	3.1	24	31	SW	1	7	13	11	5.8	69
NORTH CAROLINA																																
ASHEVILLE	2140	943.1	1017.8	82	63	72.5	0.1	90	18+	55	5	3	0	65	83	5.47	- 0.38	1.65	18	8	0.0	0	0.5	2	23	34	29	2	13	16	7.5	63
CAPE HATTERAS R	7	1016.9	1017.4	84	73	78.3	0.3	87	31+	65	9	0	0	73	85	6.48	0.33	2.44	16	8	0.0	0	5.8	22	26	22	19	3	11	17	7.6	50
CHARLOTTE	736	990.2	1017.1	85	68	76.2	- 3.0	91	18	61	5+	2	0	68	81	4.99	0.11	0.98	16	11	0.0	0	2.2	21	35	SW	14	4	9	18	7.3	67
GREENSBORO	897	986.1	1017.2	84	66	75.1	- 2.2	91	18	55	5	2	0	68	82	3.88	- 0.91	1.35	13	9	0.0	0	2.5	21	34	NW	11	3	10	18	7.5	54
RALEIGH	434	1001.7	1017.4	86	67	76.6	- 1.3	94	18	57	5	7	0	69	82	4.56	- 0.93	1.45	12	15	0.0	0	3.3	20	29	22	29	5	9	17	7.2	52
WILMINGTON	28	1016.3	1017.7	88	71	79.8	- 0.2	94	18	64	5	13	0	73	84	8.08	0.40	2.04	17	11	0.0	0	3.6	22	25	NE	3	4	9	18	7.4	56
NORTH DAKOTA																																
BISMARCK	1647	955.3	1014.2	82	51	66.2	- 5.5	93	24	35	30	2	0	52	62	1.04	- 1.15	0.87	5	10	0.0	0	2.6	32	40	SE	11	12	16	3	4.8	84
FARGO	896	981.4	1013.7	78	52	65.1	- 6.3	87	24	39	30	0	0	57	76	2.80	- 0.11	0.76	11	5	0.0	0	2.3	26	38	NW	19	7	16	8	5.4	77
WILLISTON	1899	946.5	1014.2	81	52	66.3	- 5.0	94	16	43	28+	4	0	49	58	1.92	0.05	1.34	6	7	0.0	0	3.5	31	50	SE	10	12	14	5	4.7	75
OHIO																																
AKRON	1208	972.2	1016.0	82	60	71.0	- 1.6	91	8	51	27	2	0	59	66	2.65	- 1.12	1.36	10	6	0.0	0	2.2	23	25	22	15	4	15	12	6.4	
CINCINNATI ABBE OB	761			84	64	74.3	- 2.6	94	9	56	31+	5	0			2.85	- 0.74	1.15	11		0.0	0			17	W	19					36
CLEVELAND	777	987.5	1016.3	80	59	69.5	- 2.4	90	8	51	18	1	0	58	68	3.72	0.41	1.42	9	6	0.0	0	2.9	22	31	W	15	9	11	11	5.8	66
COLUMBUS	812	986.5	1016.2	81	60	70.5	- 4.3	89	8	52	28+	0	0	60	70	4.22	0.29	2.29	12	4	0.0	0	1.5	22	33	SW	15	8	11	12	6.0	63
DAYTON	1002	980.7	1016.0	82	64	72.7	- 2.5	90	8	55	27	1	0	61	68	4.09	0.56	1.52	11	6	0.0	0	3.1	26	24	W	19	8	10	13	5.9	70
MANSFIELD	1295			81	59	70.3	- 1.4	90	8+	50	20	2	0	59	70	3.79	0.31	1.55	11	4	0.0	0	3.5	23	22	27	14+	7	13	11	6.0	
TOLEDO	669	990.5	1015.3	81	57	69.0	- 3.7	91	7	46	27	3	0	57	68	2.77	0.18	1.39	10	6	0.0	0	2.9	24	26	SW	13	8	12	11	5.8	69
YOUNGSTOWN	1178	974.3	1016.4	80	56	68.1	- 2.4	90	7	44	18	1	0	57	69	2.19	- 2.13	0.93	10	4	0.0	0	2.3	23	32	33	19	5	15	11	6.1	
OKLAHOMA																																
OKLAHOMA CITY	1285	969.2	1014.4	92	69	80.7	- 1.8	105	18	53	31	19	0	63	60	4.13	1.76	2.01	8	9	0.0	0	5.1	15	27	SE	22+	12	13	6	4.7	75
TULSA	650	990.9	1014.7	91	69	80.0	- 2.2	102	14	51	31	17	0	67	68	3.34	0.40	1.04	8	7	0.0	0	3.9	16	34	N	5	11	8	12	5.4	70
OREGON																																
ASTORIA	8	1018.0	1018.9	66	53	59.4	- 1.2	75	19+	39	7	0	0	53	83	1.55	0.28	0.66	9	4	0.0	0	5.1	27	21	29	15+	6	7	18	7.3	
BURNS U	4151	874.7	1015.3	85	53	68.6	- 0.9	96	15	35	10	13	0	45	45	1.14	0.80	1.00	4		0.0	0	2.9	31				19	9	3	3.2	
EUGENE	359	1004.1	1017.3	83	51	66.7	0.1	98	19	43	12+	8	0	52	65	T	- 0.27	T	0	0	0.0	0	2.2	31	17	26	14+	14	12	5	4.0	
MEACHAM	4050	879.4	1015.8	78	53	65.4	2.0	95	31	37	7	3	0			0.40	- 0.10	0.40	1		0.0	0			16	32	9+	22	7	2	2.2	
MEDFORD	1298	968.2	1015.1	91	55	73.1	1.1	103	29	42	5	17	0	50	48	0.07	- 0.14	0.06	2	1	0.0	0	3.7	31	29	15	21	24	5	2	2.0	
PENDLETON	1482	962.8	1015.2	92	60	76.1	2.5	108	31	42	7	18	0	46	37	0.32	0.10	0.32	1	1	0.0	0	2.3	26	25	27	4	21	7	3	2.6	
PORTLAND	21	1015.9	1017.0	81	57	69.2	2.0	97	26	46	7	8	0	53	61	0.26	- 0.15	0.14	5	2	0.0	0	4.0	33	26	NW	15	13	11	7	4.5	72
SALEM	196	1009.8	1017.2	83	52	67.3	1.3	97	20	40	3	8	0	53	64	0.01	- 0.34	0.01	1	1	0.0	0	2.0	32	20	36	14	15	9	7	4.1	
SEXTON SUMMIT R	3836	886.2	1015.7	77	54	65.5	1.9	90	17	38	6	1	0			0.15	- 0.17	0.15	1		0.0	0			28	34	14	26	3	2	1.5	
PACIFIC AREA																																
GUAM TAGUAC R	361	996.6	1009.2	85	72	78.6	- 0.9	88	31+	69	23+	0	0	75	89	16.06	7.08	4.80	30	5	0.0	0	5.2	11	23	SE	14					36
JOHNSTON	7	1013.2	1013.7	83	77	79.9	- 1.2	85	27+	74	30+	0	0	72	76	0.73	- 0.57	0.18	1	1	0.0	0	15.3	9	29	E	15	5	19	7	6.0	82
KOROR R	94	1005.1	1008.7	86	75	80.7	- 0.2	89	31+	71	30	0	0	75	85	14.49	- 0.68	3.71	20	2	0.0	0	4.5	20	29	S	30	0	3	28	9.5	61
KWAJALEIN	8	1008.8	1009.7	86	76	80.8	- 0.8	87	29+	73	23+	0	0	75	83	16.43	7.52	4.22	23	0	0.0	0	9.5	9	29	9	14+	0	7	24	8.8	
MAJURO	10	1010.2	1010.3	85	76	80.5	0.3	87	2	73	22	0	0	74	81	15.49	2.96	5.39	26	0	0.0	0	8.8	8	28	E	6	1	8	22	8.3	62

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JULY 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 90 F or above	Temperature: No of days: Min. 32 F or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 01 inch or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No of days (sunrise to sunset): Clear, 0.3	No of days (sunrise to sunset): Partly cloudy, 4.7	No of days (sunrise to sunset): Cloudy, 8.10	Sky cover tenths (sunrise to sunset)	Possible sunshine
PACIFIC AREA	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In.	In			In	In	M.p.h.		M p h							%
PAGO PAGO	12	1012.2	1012.5	84	73	78.1		86	18	64	23+	0	0	71	80	3.16		0.80	20	0	0.0	0	6.9	10	25	SE	28	4	22	5	5.7	62
PONAPE R	123	1003.7	1009.1	87	72	79.5	- 0.2	89	29+	69	18	0	0	74	87	22.69	6.47	5.81	23	1	0.0	0	3.0	10	18	E	6	0	5	26	8.8	38
TRUK MOEN ISLAND	5	1008.8	1009.1	86	75	80.4	- 0.1	89	26	73	29+	0	0	75	84	13.18	0.85	2.21	27	1	0.0	0	3.5	10	28	SE	7	0	1	30	9.6	66
WAKE	11	1012.9	1013.0	84	77	83.1	1.1	90	23+	71	26	9	0	72	71	2.40	- 2.20	0.91	17	1	0.0	0	11.3	9	33	NE	26	5	13	13	6.4	74
YAP R	44			85	74	79.9	- 1.5	89	25	70	22	0	0			14.12	0.34	2.79	20	2	0.0	0			28	W	10	0	4	27	9.0	56
PENNSYLVANIA																																
ALLENTOWN	387	1002.4	1016.2	84	61	72.6	- 1.5	95	8	52	21+	5	0	61	69	3.04	- 1.78	0.63	12	7	0.0	0	2.7	24	36	27	17	9	15	7	5.5	
ERIE	731	989.5	1016.0	77	57	66.9	- 4.2	87	8	47	18	0	0	52	60	2.67	- 1.00	2.15	11	5	0.0	0	3.6	23	23	20	13	7	14	10	5.5	
HARRISBURG	338	1003.4	1015.8	87	65	75.5	- 0.7	96	8	54	3	7	0	61	64	2.84	- 0.67	0.53	14	7	0.0	0	1.8	25	27	W	9	9	14	8	5.4	61
PHILADELPHIA	5	1015.2	1016.1	87	68	77.4	1.8	96	8	58	5	9	0	64	68	4.84	0.68	3.38	10	3	0.0	0	3.0	24	23	NW	17	7	13	11	6.0	72
PITTSBURGH	1137	973.2	1016.4	80	60	70.2	- 1.9	89	8	49	18	0	0	57	65	6.82	2.94	2.97	11	6	0.0	0	2.1	25	35	36	6	5	13	13	6.3	63
SCRANTON	930	982.4	1016.3	81	59	69.9	- 2.5	91	8	49	21+	2	0	59	72	5.73	0.94	1.38	14	9	0.0	0	2.3	22	25	S	13	11	8	12	5.6	68
WILLIAMSPORT	524	997.3	1016.2	83	60	71.8	- 1.8	94	8	50	4	3	0	61	71	5.68	1.50	1.97	10	7	0.0	0	2.5	24	23	21	13	10	13	8	5.3	
RHODE ISLAND																																
BLOCK ISLAND	110			77	64	70.8	1.2	87	8	56	23	0	0			3.11	0.42	1.35	9		0.0	0										
PROVIDENCE	51	1013.2	1015.7	83	65	74.3	2.2	92	9	55	4	3	0	62	69	3.48	0.57	2.45	7	6	0.0	0	4.3	23	23	22	17	8	10	13	6.1	68
SOUTH CAROLINA																																
CHARLESTON	40	1015.9	1017.8	89	72	80.3	- 0.3	94	19+	64	4	13	0	72	80	6.04	- 1.67	1.65	17	14	0.0	0	3.4	22	58Y	N	12	2	9	20	7.8	65
CHARLESTON U	9			87	74	80.7	- 0.8	92	19+	67	4	8	0			9.20	1.42	1.72	17		0.0	0			35	E	29					
COLUMBIA	213	1009.5	1017.4	89	71	80.0	- 1.6	96	18	64	4	15	0	70	78	11.13	5.04	2.20	16	20	0.0	0	2.0	20	29	27	15+	2	10	19	7.4	59
GRNVLLE-SPRTNBRG	957	983.1	1017.0	86	68	76.7	- 2.3	94	18	63	23+	7	0	68	79	5.64	0.99	1.35	13	11	0.0	0	1.9	24	29	N	14	1	13	17	7.6	42
SOUTH DAKOTA																																
ABERDEEN	1296	968.2	1014.3	82	54	68.2	- 5.3	96	21	39	30	5	0	57	72	3.75	1.25	1.39	10	11	0.0	0	1.0	30	25	33	18+	14	13	4	4.2	
HURON	1281	968.5	1014.2	85	54	69.4	- 5.6	101	21	37	30	6	0	54	60	0.91	- 0.90	0.65	6	9	0.0	0	1.0	18	34	SE	9	10	17	4	4.5	81
RAPID CITY	3162	906.2	1015.1	83	53	68.0	- 5.8	96	16	41	29+	5	0	48	52	1.46	- 0.32	0.77	8	6	0.0	0	3.5	33	47	W	3	14	10	7	4.4	76
SIOUX FALLS	1418	965.1	1015.7	82	57	69.3	- 5.0	94	21	38	30	2	0	56	66	2.92	0.08	2.23	8	8	0.0	0	1.2	30	21	23	27+	13	11	7	4.7	
TENNESSEE																																
BRISTOL	1507	964.4	1017.5	83	65	74.0	- 1.9	90	9	59	5	1	0	65	77	5.94	0.39	1.47	16	10	0.0	0	0.7	25	23	32	9	3	12	16	7.1	
CHATTANOOGA	665	992.2	1016.3	85	69	77.1	- 3.6	94	11	60	22	5	0	68	75	7.28	2.17	2.46	14	11	0.0	0	2.4	19	30	NE	14	4	9	18	7.3	39
KNOXVILLE	980	982.4	1016.8	83	68	75.4	- 3.0	92	10	62	21	3	0	68	81	8.76	3.94	2.73	16	9	0.0	0	2.6	25	26	N	14+	4	9	18	7.6	44
MEMPHIS	258	1005.8	1015.7	89	72	80.6	- 0.7	100	15	57	31	18	0	66	65	2.90	- 0.64	1.05	12	9	0.0	0	1.7	20	34	NW	11	5	16	10	6.3	68
NASHVILLE	590	994.6	1016.0	87	67	76.8	- 3.4	93	13+	58	22	8	0	68	78	5.00	1.28	1.20	14	8	0.0	0	2.2	22	31	NW	11	4	16	11	6.3	63
OAK RIDGE R	905			84	66	75.0	- 2.2	92	18	59	21	4	0			8.22	2.27	1.97	16		0.0	0			32		13	1	10	20	8.1	
TEXAS																																
ABILENE	1762	953.6	1013.6	96	73	84.4	1.2	103	5+	62	31	25	0	60	47	1.85	- 0.43	1.14	6	5	0.0	0	6.6	18	26	N	29+	14	10	7	4.5	80
AMARILLO	3604	892.7	1013.0	89	65	76.9	- 3.7	100	6	54	31	18	0	53	48	1.75	- 0.59	1.35	9	9	0.0	0	5.9	19	34	SE	27	12	10	9	4.9	85
AUSTIN	597	992.9	1014.4	97	75	85.9	1.4	101	20+	67	31	29	0	67	58	1.23	- 0.95	0.96	4	4	0.0	0	6.9	18	30	N	28	12	14	5	4.3	76
BROWNSVILLE	19	1014.2	1014.9	92	75	83.4	- 0.6	96	28	70	13	29	0	72	74	1.08	- 0.60	1.00	3	1	0.0	0	10.2	15	34	SE	18	12	15	4	4.5	79
CORPUS CHRISTI	41	1013.5	1014.8	96	74	84.9	0.8	98	29+	70	30	31	0	74	74	0.31	- 2.01	0.30	2	0	0.0	0	10.6	15	34	SE	18	14	12	5	4.3	90
DALLAS	481	997.3	1014.3	95	78	86.1	1.2	104	19	63	31	22	0	66	55	4.72	2.78	2.32	7	6	0.0	0	6.2	17	26	NE	19	13	8	10	5.1	66
DEL RIO	1026	978.0	1013.5	92	72	82.0	- 4.2	96	23+	68	31	24	0	67	63	0.45	- 0.86	0.33	4	3	0.0	0	8.5	13	22	15	22+	15	9	7	4.6	
EL PASO	3918	882.2	1010.6	94	70	82.3	0.4	100	18+	62	2	28	0	53	41	2.34	1.05	1.65	8	9	0.0	0	2.7	12	43	W	22	16	11	4	3.5	88
FORT WORTH	537	994.6	1014.6	94	74	84.4	- 1.0	103	19+	60	31	23	0	67	60	3.60	1.85	1.40	7	6	0.0	0	5.9	18	28	24	2	12	10	9	5.1	
GALVESTON U	7			87	80	83.4	0.3	89	7	72	31	0	0			1.98	- 2.81	0.73	6		0.0	0			26	SE	10					69
HOUSTON INTERCON	96	1012.2	1015.9	96	72	83.9	1.5	100	7	67	13	30	0	70	70	1.42	- 2.61	0.60	4	10	0.0	0	4.3	18	23	19	27	8	12	11	6.0	74
LUBBOCK	3254	904.8	1013.0	93	67	80.0	0.5	104	5+	56	31	23	0	56	49	0.76	- 1.25	0.35	4	4	0.0	0	5.2	16	23	6	29+	14	8	9	4.8	
MIDLAND	2851	917.0	1012.9	93	68	80.7	- 2.2	104	5	59	30	26	0	57	48	0.79	- 1.09	0.32	5	4	0.0	0	8.1	15	30	6	29	19	7	5	3.5	
PORT ARTHUR	16	1015.6		91	72	81.7	- 0.2	97	5	67	31	27	0	75	87	4.31	- 1.69	1.34	15	16	0.0	0	3.7	20	24	SE	3	5	16	10	6.0	73
SAN ANGELO	1903	948.2	1013.1	95	70	82.8	- 2.0	104	5	62	31	25	0	60	50	1.84	0.43	1.37	6	4	0.0	0	7.5	17	23	10	26	12	10	9	4.7	
SAN ANTONIO	788	987.1	1014.5	97	75	85.9	1.9	100	16+	70	31	31	0	67	57	1.05	- 1.04	1.03	3	1	0.0	0	5.9	16	29	N	26	12	9	10	5.2	82
VICTORIA	104	1011.2	1015.2	95	75	85.2	2.0	98	21+	70	31	31	0	71	70	0.27	- 3.34	0.27	1	1	0.0	0	7.5	17	36Y	S	19	5	19	7	5.6	
WACO	501	997.0	1014.5	96	76	85.9	0.6	103	16+	63	31	25	0	68	59	8.58	6.59	3.51	9	8	0.0	0	7.4	17	27	20	26	16	6	9	4.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

JULY 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset	Possible sunshine
											No. of days							No of days		Snow, Ice pellets		Resultant speed	Resultant direction	Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In			In	In	M.p.h.		M.p.h.							%
TEXAS																																
WICHITA FALLS	994	977.3	1013.1	99	74	86.4	0.8	108	16+	59	31	25	0	62	50	1.83	- 0.14	1.37	6	6	0.0	0	6.3	14	39	18	2	10	14	7	5.0	
UTAH																																
MILFORD	5028	846.9		96	56	75.7	1.9	103	14	44	2	29	0			0.48	- 0.22	0.30	4		0.0	0						15	13	3	3.5	
SALT LAKE CITY	4220	871.3	1011.7	93	60	76.4	- 0.5	100	16+	51	1	24	0	45	36	0.94	0.36	0.90	2	7	0.0	0	0.3	5	34	SW	1	19	9	3	2.8	93
WENDOVER	4237	870.6	1012.6	92	69	80.0	0.6	99	27	61	5	20	0	38	24	0.20	- 0.11	0.14	2		0.0	0						16	13	2	3.7	
VERMONT																																
BURLINGTON	332	1002.4	1014.6	80	58	68.9	- 0.1	89	9	46	12+	0	0	57	68	4.29	0.44	1.39	13	7	0.0	0	2.9	20	34	S	13	7	11	13	6.3	75
VIRGINIA																																
LYNCHBURG	916			84	65	74.6	- 1.7	91	9	58	22+	1	0			4.48	0.27	1.01	14		0.0	0			21	NW	9	5	13	12	6.2	56
NORFOLK	24	1015.6	1016.7	85	69	77.2	- 1.6	94	1	60	23	7	0	68	77	4.81	- 1.11	1.76	15	13	0.0	0	2.6	18	45	SW	19	3	10	18	7.2	66
RICHMOND	164	1010.5	1016.7	87	67	76.6	- 1.5	92	14+	55	5	4	0	67	78	4.40	- 1.21	1.48	10	7	0.0	0	2.2	20	33	NW	25	6	12	13	6.1	65
ROANOKE	1149	975.6	1016.9	84	64	73.5	- 3.1	91	9	52	5	2	0	65	78	5.23	0.98	1.48	12	8	0.0	0	1.6	26	25	SW	6	8	9	14	6.3	
WALLOPS ISLAND	9			82	70	75.8		91	8	63	12	2	0			2.88		1.37			0.0	0			37Y	SSW	19+					
WASHINGTON																																
OLYMPIA	195			78	49	63.5	- 0.4	95	29	38	7+	5	0			0.78	0.02	0.42	6		0.0	0			16	20	9+	12	8	11	4.6	
QUILLAYUTE	179	1011.2	1018.7	68	49	58.4	- 1.3	88	18	39	7	0	0	51	80	1.04	- 1.27	0.33	12	1	0.0	0	2.8	25	17	NW	15+	9	9	13	6.0	50
SEATTLE-TACOMA	400	1001.4	1017.8	76	55	65.5	0.6	95	29	47	6	2	0	52	66	0.68	- 0.13	0.32	5	0	0.0	0	2.3	30	17	SW	9+	15	6	10	4.5	62
SPOKANE	2356	932.6	1015.1	85	55	69.7	- 0.8	99	31	38	7	14	0	43	41	0.50	0.12	0.50	2	1	0.0	0	1.2	16	30	SW	6	21	6	4	2.8	82
STAMPEDE PASS R	3958	882.5		69	51	59.6	3.4	88	31	34	6+	0	0			2.01	0.55	1.27	5		6.4	7						19	4	8	3.7	
WALLA WALLA U	949			90	63	76.4	0.4	106	31	46	7	18	0			0.65	0.44	0.64	3		0.0	0			19	W	6	21	7	3	2.6	86
YAKIMA	1052	977.0	1014.9	92	51	71.3	0.3	108	31	34	7	19	0	44	40	0.04	- 0.09	0.04	1	0	0.0	0	4.4	29	23	29	5+	22	5	4	2.5	
WEST INDIES																																
SAN JUAN P.R.	13	1015.2	1017.5	89	77	82.9	2.5	92	20	74	29	9	0	70	68	1.69	- 4.56	0.32	20	5	0.0	0	10.2	9	30	E	10	1	29	1	5.5	76
WEST VIRGINIA																																
BECKLEY	2504	930.6	1016.8	77	59	68.3	- 2.6	86	9	51	21	0	0	61	80	4.23	- 0.35	1.08	15	8	0.0	0	3.6	22	35	NW	11	4	10	17	7.2	
CHARLESTON	939	982.7	1016.4	83	62	72.4	- 2.5	94	9	53	28	3	0	64	78	6.59	0.92	1.35	13	9	0.0	0	1.5	24	23	26	29+	2	13	15	6.9	
ELKINS	1948	947.5		81	56	68.1	- 2.0	88	9+	45	5	0	0			4.10	- 1.39	1.02	16		0.0	0						3	15	13	6.9	
HUNTINGTON	827	986.8	1016.4	81	63	71.9	- 3.3	90	9	53	28	1	0	65	82	7.57	3.07	2.42	17	12	0.0	0	2.1	20	23	28	17+	1	15	15	7.2	
PARKERSBURG U	615			82	64	73.1	- 2.7	91	9	53	28	3	0			5.20	1.09	1.15	16		0.0	0			31	W	1					54
WISCONSIN																																
GREEN BAY	682	988.8	1014.0	80	56	67.8	- 2.7	91	16+	45	31	2	0	56	68	3.44	0.73	0.79	14	7	0.0	0	3.7	26	29	SW	12	6	14	11	6.0	62
LA CROSSE	651	990.9	1015.0	80	57	68.5	- 5.3	90	16	49	31+	1	0	59	76	4.06	0.31		14	9	0.0		2.1	23								
MADISON	858	984.1	1014.9	82	55	68.5	- 2.6	91	21+	43	31	3	0	56	65	1.65	- 1.93	0.65	9	8	0.0	0	3.8	24	33	N	16	7	11	13	6.1	59
MILWAUKEE	672	990.2	1015.1	77	59	68.0	- 0.7	88	22+	51	29	0	0	57	69	2.60	- 0.35	1.80	8	2	0.0	0	4.2	25	34	NW	8	8	15	8	5.6	79
WYOMING																																
CASPER	5338	840.5	1014.9	85	49	67.2	- 4.5	96	16	38	30	7	0	39	42	0.11	- 0.89	0.05	5	7	0.0	0	1.9	35	26	S	28+	15	10	6	4.2	
CHEYENNE	6126	815.8	1015.2	80	51	65.5	- 4.5	95	12	42	30	4	0	42	49	1.08	- 0.74	0.31	8	11	0.0	0	2.0	26	40	W	9	9	12	10	5.4	61
LANDER	5563	832.4	1014.8	83	54	68.3	- 2.3	93	16	47	28+	4	0	39	39	0.27	- 0.50	0.11	7	8	0.0	0	3.0	27	49	SW	9	11	14	6	4.6	72
SHERIDAN	3964	881.5	1016.1	85	47	66.0	- 5.3	98	16+	35	29	8	0	38	39	0.21	- 0.98	0.13	2	3	0.0	0	2.7	32	34	SW	6	17	7	7	3.6	78

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70 F or above for Alaskan Stations.
Y Peak Gust
+ And also on an earlier date or dates
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: No. of days: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C	C	C	C	C		C.				C.	%	Mm	Mm	Mm.			Mm	Mm	M.p.s.		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	994.9	1017.0	30.0	20.6	25.3	- 2.3	36.1	14	15.6	22	9	0	18.9	73	226	95	67	16	15	0	0	0.5	22	13.0	W	25	3	14	14	7.1	53
HUNTSVILLE	190	993.9	1016.7	30.0	20.0	25.1	- 2.2	35.0	11	15.6	22	10	0	20.0	77	119	11	56	13	6	0	0	0.8	18	11.6	10	15	5	9	17	6.9	
MOBILE	64	1009.5	1017.1	32.2	23.3	27.9	- 0.2	36.1	15	22.2	23+	20	0	23.3	83	197	- 49	41	18	22	0	0	0.8	19	10.3	1	18	2	13	17	7.3	
MONTGOMERY	56	1010.2	1017.2	31.7	21.1	26.5	- 1.2	36.1	14	16.7	23	19	0	21.7	81	125	- 12	34	18	11	0	0	0.8	21	10.7	N	12	2	12	17	7.2	48
ALASKA																																
ANCHORAGE	35	1012.5	1017.6	16.7	9.4	13.0	- 1.6	23.9	10	4.4	21	4	0	8.3	74	73	25	21	15	0	0	0	1.1	19	10.3	17	13	3	4	24	8.4	42
ANNETTE	34	1016.3	1020.2	21.1	12.2	16.5	2.4	30.0	27	8.3	1	14	0	11.1	76	14	-139	11	5	2	0	0	0.3	20	8.9	32	27+	8	8	15	6.3	
BARROW	9	1014.2	1014.9	7.8	1.7	4.7	0.7	17.2	19	- 1.1	17	0	4	2.8	91	25	5	9	8	0	T	T	1.1	9	13.4	21	30	6	7	18	7.2	
BARTER ISLAND	12	1013.2	1015.3	9.4	2.8	6.1	0.9	18.3	27	- 1.7	2	0	4	4.4	89	76	54	42	9	0	T	T	2.2	8	14.8	7	20	4	9	18	7.6	
BETHEL	38	1009.1	1014.8	15.6	7.8	11.6	- 1.1	25.6	5	3.9	29	5	0	8.3	82	68	16	14	23	1	0	0	2.2	19	13.0	24	13	3	2	26	8.8	
BETTLES	196	990.2	1015.1	20.6	8.3	14.4		26.7	3	1.7	16	14	0	9.4	72	54		20	12	4	0	0	0.8	21	10.7	22	26	1	16	14	7.4	
BIG DELTA	386			20.6	9.4	14.8		26.7	10	0.0	1	15	1			43		12	12	1	0	0			13.4	21	19	0	12	19	7.7	
COLD BAY	29	1010.5	1014.1	11.7	5.6	8.8	- 1.1	21.7	8	2.2	3+	1	0	6.7	89	58	11	18	13	0	0	0	3.8	16	19.7	16	11	1	3	27	9.2	
FAIRBANKS	133	999.0	1015.7	21.7	10.6	16.1	0.7	26.1	18+	5.0	22+	18	0	8.3	62	53	6	21	13	0	0	0	0.8	25	10.7	21	26	0	11	20	8.1	
GULKANA	479	960.4	1017.3	20.0	7.8	13.8		28.3	10	1.7	18	10	0	6.7	64	47		9	16	2	0	0	2.5	19	17.9	15	3	3	10	18	7.4	
HOMER	20	1014.9	1017.5	15.0	6.7	10.9		23.3	11	1.7	4	2	0	7.8	79	50	5	21	15	0	0	0	1.1	20	8.9	4	19+	3	8	20	7.6	
JUNEAU	4	1019.3	1020.0	20.0	8.3	14.2	1.2	27.2	9	3.9	4	13	0	10.6	82	42	- 72	18	6	0	0	0	0.4	6	11.6	12	15	6	10	15	7.0	46
KING SALMON	15	1013.2	1015.1	17.2	7.8	12.5	- 0.2	29.4	11	2.8	28	7	0	7.8	74	83	30	19	18	1	0	0	1.9	17	13.9	8	18	2	3	26	8.5	
KOTZEBUE	3	1012.9	1013.4	16.7	10.0	13.3	1.8	24.4	19	5.0	31	4	0	8.9	76	76	39	28	11	0	0	0	1.7	24	15.6	22	29	2	6	23	8.1	
MC GRATH	105	1003.1	1015.5	18.9	8.9	13.8	- 1.1	26.1	10	2.2	29	10	0	8.9	75	33	- 28	9	17	1	0	0	0.6	21	8.9	2	4	0	3	28	9.0	
NOME	4	1012.5	1013.5	13.9	7.2	10.6	0.8	24.4	20	3.3	29	2	0	6.7	77	39	- 19	11	15	0	0	0	1.5	18	10.7	12	23	2	6	23	8.3	39
ST. PAUL ISLAND	7	1010.8	1011.7	7.8	3.3	5.5	- 2.0	11.1	31	- 0.6	2	0	1	4.4	96	70	13	25	18	0	0	0	1.5	16	14.3	20	12	0	0	31	9.8	
SHEMYA	37	1006.8	1010.6	7.8	5.6	6.9	- 1.1	10.0	25+	4.4	23+	0	0	5.0	90	92	37	29	14	0	0	0	0.9	26	17.4	22	7	0	0	31	9.9	
SUMMIT	732	931.9	1017.3	15.0	5.6	10.2		24.4	10	1.7	1	2	0	6.1	76	67		14	21	3	0	0	2.0	24	13.4	12	19	3	7	24	8.6	
TALKEETNA	105			18.9	8.3	13.6	- 0.8	28.9	10+	2.8	2	9	0			107	26	25	18	0	0	0			7.2	18	13					
UNALAKLEET	5	1013.2	1014.0	16.1	8.3	12.2		22.2	19	3.9	29	2	0	8.3	77	73		17	18	0	0	0	1.0	17	15.6	24	13	1	6	24	8.7	
YAKUTAT	9	1019.3	1020.4	15.0	7.8	11.4	- 0.8	28.3	9	3.3	22+	3	0	9.4	92	273	59	84	17	0	0	0	1.4	15	13.0	14	15	1	3	27	9.0	
ARIZONA																																
FLAGSTAFF	2135	791.7	1015.3	28.9	10.6	19.7	1.1	32.8	14+	3.9	2+	4	0	5.6	44	50	- 8	22	12	19	0	0	1.4	23	10.3	21	22+	8	19	4	4.7	
PHOENIX	340	970.5	1008.1	41.7	28.3	34.9	2.8	45.6	11	22.2	1	31	0	12.2	26	6	- 13	4	2	4	0	0	1.6	27	22.8Y	SE	31	19	9	3	3.0	89
TUCSON	788	924.1	1009.3	37.8	23.9	30.8	0.7	42.2	11	20.0	16	31	0	13.9	40	55	3	19	8	14	0	0	1.3	21	31.7	SE	16	17	10	4	4.1	85
WINSLOW	1492	852.4	1011.1	37.2	18.9	28.1	1.3	42.8	13	13.9	8	29	0	7.2	31	5	- 21	4	6	12	0	0	2.3	23	14.3	23	30	12	16	3	4.3	
YUMA	59	1001.0	1008.0	41.1	26.7	33.8	0.1	45.0	11	21.1	1	31	0	15.6	37	T	- 6	T	0	1	0	0	3.5	17	14.8	SE	28	18	10	3	2.9	93
ARKANSAS																																
FORT SMITH	136	999.0	1015.2	33.3	20.6	26.8	- 1.5	39.4	14	11.7	31	19	0	19.4	67	70	- 1	43	5	7	0	0	0.8	9	11.6	N	28	9	9	13	6.0	69
LITTLE ROCK	78	1006.1	1015.3	32.2	21.1	26.7	- 1.1	37.8	15	15.0	31	16	0	21.1	74	102	17	40	10	8	0	0	1.3	21	12.1	SW	4	7	13	11	5.9	79
CALIFORNIA																																
BAKERSFIELD	145	993.9	1011.1	38.3	22.8	30.6	1.5	41.7	28+	18.3	11	31	0	11.7	34	0	T	0	0	0	0	0	2.2	33	9.4	32	16	29	2	0	1.0	
BISHOP	1252	873.0		37.2	14.4	25.8	1.0	41.1	27	10.0	9	30	0			4	1	3	2		0	0						17	13	1	2.5	
BLUE CANYON	1609			25.6	16.1	20.8	0.8	29.4	16	10.0	10+	0	0			1	- 2	1	2		0	0			6.7	19	10+	27	3	1	1.0	
EUREKA U	13			15.6	10.6	12.9	0.6	19.4	8	8.9	8+	0	0			4	1	4	2		0	0			11.2	NW	6	9	7	15	6.4	63
FRESNO	100	1000.0	1011.3	37.8	17.8	27.7	0.3	40.6	21+	12.2	11	31	0	11.7	40	T	0	T	0	1	0	0	3.1	29	9.4	NW	20+	30	0	1	0.6	97
LONG BEACH	8	1011.9	1013.2	28.9	17.8	23.3	1.3	36.7	11	14.4	1	7	0	15.0	66	T	0	T	0	0	0	0	1.4	21	8.0	32	10	17	13	1	3.5	
LOS ANGELES	30	1009.1	1012.9	23.9	17.8	20.8	0.2	27.8	11	15.6	8	0	0	16.7	79	T	T	T	0	0	0	0	2.8	24	11.2Y	SW	10	11	19	1	4.2	
LOS ANGELES U	82			28.3	18.3	23.4	0.7	34.4	11	15.6	8+	5	0			T	0	T	0	0	0	0			7.2	SW	31	23	8	0	2.4	78
MT SHASTA R	1080			30.0	11.7	20.7	0.7	35.0	27+	3.9	10	16	0			4	- 4	3	3		0	0										
OAKLAND	2	1014.9	1015.1	20.0	13.3	16.7	- 1.3	25.0	19+	11.7	10	0	0	11.7	77	0	T	0	0	0	0	0	3.7	28	10.7	32	14	17	10	4	3.3	
RED BLUFF	104	998.6	1011.1	37.8	19.4	28.4	- 0.4	42.2	20	13.3	10	29	0	10.0	35	T	- 1	T	0	1	0	0	0.7	14	14.3	SE	9	29	1	1	0.8	97
SACRAMENTO	5	1011.2	1011.9	35.0	14.4	24.6	0.4	39.4	19+	11.1	10	25	0	11.1	50	0	T	0	0	0	0	0	3.0	20	10.7	SW	9	29	1	1	0.7	97
SANDBERG R	1377	860.8		29.4	17.8	23.4	- 0.2	33.9	14	11.7	11	5	0	6.1	36	T	- 1	T	0		0	0	1.7	32	13.4	35	9	26	5	0	1.2	
SAN DIEGO	4	1012.2	1013.2	23.9	17.8	20.8	- 0.4	28.3	10	15.6	3+	0	0	16.1	76	T	T	T	0	0	0	0	2.0	26	8.0	NW	10	9	13	9	5.6	68
SAN FRANCISCO	2	1014.6	1015.3	20.6	11.7	15.9	- 1.1	26.1	19	9.4	2	0	0	10.6	76	T	T	T	0	0	0	0	5.3	29	13.0	28	10	20	7	4	2.8	
SAN FRANCISCO U	16			17.2	11.1	14.2	- 0.7	22.2	12	10.0	27+	0	0			T	0	T	1		0	0			12.5	W	10					67
SANTA MARIA	72			21.7	11.1	16.4	- 0.4	27.8	31	7.2	12	0	0			T	- 1	T	0		0	0						20	11	0	2.9	
STOCKTON	7	1011.9	1012.8	35.6	16.7	26.2	0.6	40.6	22	13.9	25+	28	0	11.7	45	0	T	0	0	0	0	0	3.4	30	10.3	26	9	29	1	1	0.7	
COLORADO																																
ALAMOSA	2297	777.2		27.2	8.3	17.7	- 0.6	33.9	13	3.3	5	3	0			66	39	40	13		0	0						7	12	12	5.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C.	C.	C	C	C		C.				C.	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							%
COLORADO																																
COLORADO SPRINGS	1873	815.4	1015.6	27.2	13.9	20.4	- 0.9	36.7	12	9.4	30	7	0	9.4	58	72	11	22	16	18	0	0	0.8	5	14.3	36	18+	8	12	11	5.7	
DENVER	1610	839.5	1013.8	30.0	12.8	21.4	+ 1.3	38.3	17+	6.1	30	13	0	8.9	53	30	- 8	20	9	7	0	0	0.8	11	18.3	N	27	5	17	9	5.6	63
GRAND JUNCTION	1476	852.4	1010.5	35.6	18.3	26.8	+ 1.1	40.6	13	14.4	11+	29	0	5.0	29	4	- 11	3	3	6	0	0	1.4	13	17.0	N	19	12	13	6	4.3	76
PUEBLO	1428	857.8	1013.5	32.2	16.1	24.1	+ 0.6	40.6	12+	12.8	31+	18	0	10.6	50	49	3	17	13	10	0	0	0.6	6	23.7	N	14	7	11	13	6.2	74
CONNECTICUT																																
BRIDGEPORT	4	1015.2	1016.0	27.2	18.9	23.1	+ 0.1	32.2	9+	13.9	18	3	0	16.7	71	326	230	151	10	7	0	0	1.7	21	14.3	30	17	8	12	11	5.6	
HARTFORD	52	1008.8	1015.1	30.6	16.1	23.2	0.2	36.1	1	10.0	4	9	0	15.0	63	82	- 10	24	10	4	0	0	1.4	22	11.6	NW	17	8	9	14	6.3	63
DELAWARE																																
WILMINGTON	23	1013.2	1016.1	30.0	18.9	24.4	+ 0.1	35.0	8	11.7	5	9	0	17.2	66	93	- 15	65	7	5	0	0	1.0	24	9.4	17	13	8	14	9	5.6	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	88	1004.7	1016.4	31.1	16.7	23.8		34.4	8	10.0	5	11	0	17.8	72	55		21	9	6	0	0	0.6	22	9.8	20	29	12	8	11	5.9	
WASHINGTON NATIONAL	3	1013.9	1016.2	30.6	20.6	25.7	0.1	33.9	8	16.1	12	9	0	17.8	64	126	21	33	10	10	0	0	1.1	20	15.2	NW	17	9	11	11	5.9	58
FLORIDA																																
APALACHICOLA U	4			31.1	23.9	27.5	0.0	32.2	29+	22.2	21+	5	0			134	- 68	26	16	12	0	0			9.8	S	S	1	17	13	6.7	39
DAYTONA BEACH	9	1017.3	1018.7	31.7	22.2	26.9	0.2	34.4	20	20.0	5	13	0	21.1	76	81	- 90	26	12	21	0	0	1.2	15	12.5	13	2	2	16	13	6.6	
FORT MYERS	5	1018.0	1018.3	32.2	23.3	27.8	+ 0.1	33.9	18+	21.1	24	19	0	22.2	79	241	11	74	20	25	0	0	1.2	12	14.3	1	S	4	20	7	6.9	
JACKSONVILLE	8	1017.3	1018.6	32.8	22.2	27.5	+ 0.6	35.6	15	20.6	9	22	0	22.2	80	129	- 66	53	18	26	0	0	1.2	20	21.0	NW	1	1	16	14	6.8	62
KEY WEST	1	1016.6	1017.3	31.1	26.7	28.9	0.4	32.2	21+	23.3	21	2	0	22.8	70	122	16	38	11	15	0	0	4.3	12	17.4	E	21	1	20	10	6.4	83
LAKELAND U	65			32.8	22.2	27.3	+ 0.2	34.4	27+	19.4	2	22	0			195	- 15	44	23		0	0						1	24	6	6.3	64
MIAMI	2	1018.0	1018.1	31.1	25.0	28.2	0.5	32.8	13	22.2	13	7	0	22.8	74	120	- 52	42	13	13	0	0	2.6	9	10.3	34	24+	5	19	7	5.9	
ORLANDO	33	1014.2	1018.5	33.3	23.3	28.4	0.3	35.0	19	20.6	23	30	0	22.2	74	214	7	39	18	26	0	0	1.3	16	11.2	21	13	4	16	11	6.5	
PENSACOLA	34	1013.2	1017.4	31.7	23.3	27.6	+ 0.1	35.6	14	21.1	31	14	0	22.8	79	166	- 38	40	19	20	0	0	0.8	22	8.9	19	25	1	15	15	7.3	
TALLAHASSEE	17	1015.2	1017.6	31.7	20.6	26.2	+ 1.2	35.0	15+	19.4	28+	15	0	21.1	80	274	70	91	22	24	0	0	0.8	16	12.5	11	8	0	18	13	6.9	
TAMPA	6	1018.0	1018.1	32.8	23.3	27.9	0.4	35.0	6	20.6	10	23	0	21.7	74	197	- 22	32	17	24	0	0	0.8	16	10.5	18	6	1	16	14	6.9	61
WEST PALM BEACH	5	1017.6	1018.4	32.2	23.3	27.9	- 0.2	33.9	30	22.2	21+	20	0	23.3	76	130	- 39	33	16	17	0	0	2.1	12	16.3	24	24+	10	11	10	5.7	
GEORGIA																																
ATHENS	244	988.5	1017.1	30.0	20.6	25.2	+ 1.3	33.3	12	18.9	21+	6	0	21.1	83	83	- 44	18	17	14	0	0	0.9	23	9.4	30	15	3	10	18	7.4	
ATLANTA	308	980.7	1016.9	28.9	20.0	24.6	+ 1.4	32.8	14	18.3	17+	1	0	20.0	81	209	89	50	18	8	0	0	1.1	23	15.1	NE	14	2	14	15	7.5	40
AUGUSTA	41	1011.9	1017.0	31.7	20.6	26.3	+ 0.8	33.9	14+	17.8	4	14	0	21.1	82	130	15	34	14	17	0	0	0.9	19	14.3	24	11	2	12	17	7.4	
COLUMBUS	117	1003.4		31.1	21.7	26.2	+ 1.1	33.3	19+	18.3	22	11	0	21.7	82	336	187	66	17	15	0	0	0.5	17	14.3	1	34	4	6	21	7.7	
MACON	108	1004.7	1017.7	32.2	22.2	27.3	+ 0.4	35.6	14	20.6	16+	17	0	21.7	78	168	25	44	18	17	0	0	0.7	21	15.2	NW	20	1	8	22	7.9	62
ROME	194			30.6	20.0	25.2	+ 0.9	34.4	14+	15.6	22	9	0			135	11	38	16		0	0										
SAVANNAH	14	1015.9	1017.7	32.2	22.2	27.2	- 0.2	34.4	26+	21.1	22+	18	0	21.7	79	230	62	65	21	18	0	0	1.6	22	14.3	NE	12	2	9	20	8.0	42
HAWAII																																
HILO	8	1015.9	1016.9	28.9	20.6	24.8	0.9	30.6	4+	17.8	26	0	0	20.0	78	105	-145	24	23	0	0	0	0.4	8	8.0	NE	22	2	12	17	7.5	44
HONOLULU	2	1015.9	1016.3	29.4	22.8	26.1	0.1	30.6	26+	21.1	17+	0	0	17.8	62	1	- 10	1	2	0	0	0	6.3	6	12.5	NE	13+	11	16	4	5.0	79
KAHULUI	15	1013.5	1015.8	30.6	20.6	25.6	+ 0.2	32.8	3	15.0	27	2	0	18.3	69	2	- 9	1	3	0	0	0	6.3	5	13.4	E	30	18	9	4	5.4	80
LIHUE	31	1012.9	1017.8	29.4	23.3	26.3	1.0	30.0	31+	21.1	17+	0	0	20.6	72	21	- 28	7	11	0	0	0	5.1	6	10.7	NE	9	8	12	11	5.4	44
IDAHO																																
BOISE	865	915.3	1013.1	32.2	15.0	23.7	- 0.3	37.8	31+	6.7	7	20	0	6.7	36	3	- 2	3	1	0	0	0	1.0	32	15.2	NW	21	24	4	3	2.1	89
LEWISTON	431			32.8	15.0	23.7	0.4	39.4	31	6.1	7	18	0			18	7	14	5		0	0						20	9	2	2.5	
POCATELLO	1358	863.9	1013.5	30.6	10.6	20.5	+ 1.9	36.7	16	4.4	4+	12	0	5.6	41	8	- 5	6	3	4	0	0	1.3	24	26.1	W	30	21	7	3	2.8	86
ILLINOIS																																
CAIRO U	96			30.0	21.1	25.3	+ 1.9	36.7	13	13.9	31	7	0			203	122	68	12		0	0			12.1	N	14	11	10	10	5.2	63
CHICAGO O HARE	201	991.2	1014.9	27.8	16.1	21.9	+ 0.7	32.2	4	9.4	31	1	0	14.4	64	91	5	41	10	4	0	0	1.3	25	15.2	36	9	6	14	11	6.0	
CHICAGO MIDWAY	185	993.2	1015.5	27.8	17.2	22.6	+ 1.6	34.4	4	11.7	31+	4	0	14.4	62	127	41	48	12	9	0	0	1.2	23	17.5	SW	13	8	14	9	5.4	62
MOLINE	177	994.2	1015.6	27.8	15.6	21.5	+ 2.7	33.9	8	7.8	31+	2	0	15.6	72	285	202	129	11	9	0	0	1.0	23	17.9	NW	12	8	12	11	5.8	
PEORIA	199	992.2	1015.8	27.8	15.6	21.8	+ 2.7	36.1	8	8.3	31	4	0	15.6	69	132	46	72	9	7	0	0	0.6	24	9.8	NW	26	8	12	11	5.8	75
ROCKFORD	221	988.8	1015.2	27.8	15.6	21.5	+ 1.9	33.3	7	8.3	30	1	0	14.4	67	71	- 34	26	9	6	0	0	1.0	24	19.2	29	8	7	13	11	6.0	
SPRINGFIELD	179	993.6	1015.4	28.3	16.7	22.4	+ 3.1	36.1	8	8.9	31	4	0	16.1	69	151	63	67	9	9	0	0	0.8	23	15.6	NW	18	8	12	11	5.9	70
INDIANA																																
EVANSVILLE	118	1002.4	1016.3	31.1	19.4	25.1	- 0.9	37.2	9+	11.1	31	9	0	18.9	70	86	2	34	11	6	0	0	0.4	25	11.2	W	13	10	11	10	5.4	73

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 x kilometers): Speed	Wind: Fastest mile (1.6 x kilometers): Direction	Wind: Fastest mile (1.6 x kilometers): Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths, sunrise to sunset	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	Mps		Mps							%
INDIANA																																
FORT WAYNE	241	986.8	1016.9	27.8	15.0	21.5	- 1.9	35.3	7	8.9	31	3	0	15.6	71	69	- 16	23	11	4	0	0	1.3	25	12.1	W	9	9	9	13	5.9	72
INDIANAPOLIS	241	987.5	1016.2	27.8	16.7	22.4	- 1.6	32.8	8	10.0	31	2	0	16.7	71	144	55	44	12	11	0	0	1.5	25	13.4	NW	8	8	13	10	6.0	72
SOUTH BEND	236	987.8	1015.5	26.1	15.6	20.8	- 2.3	31.1	4	10.6	31+	0	0	15.0	71	106	18	45	14	8	0	0	1.4	25	14.3	23	4	7	12	12	6.1	
IOWA																																
BURLINGTON	211			27.8	16.1	21.8	- 2.9	32.8	8	7.8	30	1	0	17.2	74	96	9	32	12	10	0	0	0.8	24	14.4	34	28	7	16	8	5.9	
DES MOINES	286	981.4	1015.6	27.8	16.7	22.3	- 2.3	33.3	21+	8.3	30	3	0	15.6	68	55	- 23	17	9	9	0	0	0.8	22	20.1	NW	9	6	17	8	5.0	64
DUBUQUE	322	977.3		25.6	14.4	20.0	- 2.6	30.0	16+	6.7	30	0	0			93	4	26	9		0	0						5	11	14	6.6	
SIOUX CITY	334	976.0	1015.1	28.9	16.1	22.5	- 2.7	34.4	7	5.6	30	5	0	16.1	69	40	- 39	14	14	9	0	0	0.4	17	14.8	NW	22	13	8	10	4.8	78
WATERLOO	265	984.1	1015.7	25.0	13.3	19.1	- 4.1	29.4	21+	6.1	31	0	0	14.4	76	80	- 17	27	11	7	0	0	0.8	25	14.3	18	12	7	11	13	6.1	
KANSAS																																
CONCORDIA	448	962.8	1014.5	30.0	17.2	23.6	- 3.3	37.2	12+	8.9	30	6	0	16.7	68	258	186	100	13	14	0	0	2.1	14	25.0	NW	3	13	13	5	4.4	84
DODGE CITY	787	925.2	1013.7	32.8	18.3	25.4	- 1.4	41.1	13	11.7	30	18	0	13.9	55	114	55	42	8	10	0	0	2.2	16	24.6	N	22	11	10	10	5.1	80
GOODLAND	1114	889.3	1013.9	30.6	15.0	22.8	- 1.9	38.9	17	6.1	30	11	0	12.8	59	41	- 27	22	10	10	0	0	1.8	13	13.0	29	15+	12	10	9	5.2	
TOPEKA	267	984.1	1015.3	29.4	17.8	23.6	- 3.0	35.0	17	10.0	30	8	0	17.8	72	103	12	34	14	14	0	0	0.7	14	11.6	NW	18	10	10	11	5.6	63
WICHITA	403	967.5	1014.1	31.7	19.4	25.6	- 1.6	38.9	17+	11.7	31	18	0	16.1	60	169	76	38	8	9	0	0	2.2	15	18.8	S	4	11	11	9	5.0	68
KENTUCKY																																
COVINGTON	265	985.4	1016.3	28.9	18.3	23.8	- 0.3	33.3	9	12.8	28	5	0	16.7	68	94	2	28	12	7	0	0	1.2	23	12.5	33	10	4	14	13	6.5	
LEXINGTON	294	982.1	1016.8	28.3	18.3	23.3	- 1.9	32.8	9	13.3	28+	2	0	17.8	74	194	93	60	17	12	0	0	0.9	21	10.7	2	18	6	14	11	6.3	
LOUISVILLE	145	998.6	1015.9	28.9	18.3	23.8	- 1.6	32.8	13+	11.7	31	4	0	17.8	71	171	86	86	14	8	0	0	0.8	23	24.6	W	13	7	16	8	6.0	62
LOUISIANA																																
ALEXANDRIA	28	1012.2	1016.7	33.3	21.1	27.3	- 0.6	36.7	19+	18.3	31	23	0			119	- 14	75	11	14	0	0	0.8	22	10.3	30	29+	8	12	11	6.1	
BATON ROUGE	20	1013.9	1016.6	32.8	22.8	27.7	- 0.4	34.4	20+	21.1	11	22	0	22.2	77	244	84	65	14	13	0	0	0.4	24	13.0	3	20	3	15	13	6.7	
LAKE CHARLES	3	1015.2	1016.2	33.3	23.3	28.3	0.4	35.0	15+	21.1	31+	26	0	23.3	82	113	- 72	58	11	14	0	0	1.2	19	10.3	33	30	4	12	15	6.9	
NEW ORLEANS	1	1016.3	1017.0	32.2	22.8	27.4	- 0.1	34.4	14+	20.0	1	19	0	22.8	79	116	- 55	22	20	17	0	0	0.8	21	10.3	25	24	4	14	13	6.6	
SHREVEPORT	77	1006.4	1015.4	33.9	23.3	28.5	- 0.2	40.0	16	17.2	31	22	0	21.1	70	156	61	66	12	7	0	0	1.3	17	10.3	26	24+	9	8	14	6.1	60
MAINE																																
CARIBOU	190	990.2		23.9	11.7	17.8	- 0.3	27.8	17+	4.4	13	0	0			71	- 32	14	13		0	0						4	11	16	6.8	
PORTLAND	13	1011.9	1014.4	27.2	14.4	20.6	0.5	33.9	1	8.9	13+	1	0	14.4	73	80	7	29	9	5	0	0	1.7	22	13.4	W	1	5	12	14	6.2	68
MARYLAND																																
BALTIMORE	45	1011.2	1016.7	30.6	18.9	24.7	- 0.2	35.6	8	13.3	5	10	0	17.2	66	102	- 5	42	9	4	0	0	0.9	24	14.8	SW	26	10	10	11	5.7	68
MASSACHUSETTS																																
BLUE HILL OBS R	192			27.8	16.7	22.1	0.5	33.3	9	12.2	18	2	0			87	4	27	9		0	0			18.8	SW	13					63
BOSTON	5	1013.9	1015.0	27.8	17.8	23.0	- 0.2	34.4	9	14.4	4	5	0	15.0	65	72	- 1	22	9	4	0	0	2.0	23	13.4	W	17+	10	10	11	5.8	71
WORCESTER	301	980.0	1016.5	27.2	16.1	21.4	0.4	32.2	1	11.1	18	1	0	12.8	60	134	42	35	8	6	0	0	2.4	25	9.8	31	7+	8	13	10	5.9	
MICHIGAN																																
ALPENA	210	989.5	1014.4	23.9	10.6	17.1	- 1.7	29.4	7	4.4	3	0	0	11.1	69	102	29	46	10	5	0	0	0.9	24	9.4	SE	22	10	11	10	5.6	61
DETROIT	189			27.8	17.2	22.4	- 1.1	33.3	7	10.0	3	2	0	13.3	57	44	- 28	16	8	2	0		1.3	24	11.2	22	13					
DETROIT METRO	193	991.2	1014.9	27.8	13.9	20.9	- 1.6	32.8	13	8.9	27+	2	0	13.3	64	50	- 19	21	8	5	0	0	1.3	25	14.8	W	13	7	11	13	6.2	65
FLINT	235	987.5	1014.9	25.6	13.9	19.7	- 2.1	30.6	7	7.8	18	0	0	13.3	67	99	25	34	10	6	0	0	1.7	25	16.5	29	25	8	13	10	5.7	
GRAND RAPIDS	239	986.5	1015.2	27.2	14.4	20.7	- 1.7	31.7	7+	7.8	31	0	0	13.3	65	62	- 7	23	8	3	0	0	2.0	24	15.6	W	13	7	15	9	5.7	71
HOUGHTON LAKE	350	973.6	1015.1	25.0	11.7	18.2	- 1.3	30.6	7	4.4	30+	0	0	12.8	70	80	7	32	11	7	0	0	1.5	26	10.3	29	22+	7	15	9	5.8	
LANSING	256	984.1		26.1	12.8	19.6	- 2.5	30.6	7	5.6	18	0	0	14.4	73	122	57	43	10	8	0	0	1.8	25	15.6	W	13	9	14	8	5.5	77
MARQUETTE U	206			22.8	13.3	17.9	- 1.4	28.9	25+	7.8	30+	0	0			56	- 25	34	8		0	0			11.6	NW	5	9	10	12	5.6	70
MUSKEGON	191	992.6	1015.2	26.1	13.9	19.9	- 1.9	30.0	7	7.8	31	0	0	13.9	69	44	- 17	23	11	4	0	0	1.8	23	12.5	19	28	11	12	8	4.9	
SAULT STE MARIE	220	987.1	1013.5	22.8	8.9	15.8	- 2.3	27.8	4	3.9	27	0	0	10.0	69	87	24	30	12	5	0	0	1.4	29	11.6	NW	13	9	8	14	6.0	68
MINNESOTA																																
DULUTH	435	963.4	1014.3	23.3	10.0	16.7	- 1.9	28.9	6	4.4	17	0	0	10.6	68	99	9	53	13	9	0	0	1.4	27	18.3	NW	5	5	16	10	6.0	63
INTERNATIONAL FALLS	359	969.9	1012.7	23.9	9.4	16.7	- 1.9	28.9	3	2.2	27	0	0	11.7	75	86	- 2	37	12	4	0	0	1.9	27	14.3	18	24	5	12	14	6.6	
MINNEAPOLIS	254	984.8	1014.7	26.7	14.4	20.4	- 1.9	32.2	21	8.3	29	1	0	12.8	62	100	17	61	8	5	0	0	1.2	26	14.8	NE	7	9	13	9	5.5	80
ROCHESTER	395	967.8	1015.1	25.6	13.3	19.4	- 2.9	31.1	21	7.8	31	0	0	13.9	72	80	- 13	26	10	8	0	0	2.0	25	22.8	17	12	11	9	11	5.6	
ST CLOUD	315	977.3	1014.8	25.6	13.3	19.2	- 2.4	32.8	21	6.7	30	1	0			58	- 25	27	11		0	0						8	17	6	5.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JULY 1947

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile 1.6 kilometers: Speed	Wind: Fastest mile 1.6 kilometers: Direction	Wind: Fastest mile 1.6 kilometers: Date	No. of days sunrise to sunset: Clear 0.3	No. of days sunrise to sunset: Partly cloudy 4.7	No. of days sunrise to sunset: Cloudy, 8.10	Sky cover, tenths, (sunrise to sunset)	Possible sunshine
	M	Mb	Mb.	C	C	C	C	C		C.				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							
MISSISSIPPI																																
JACKSON	94	1005.1	1016.7	32.8	21.7	27.2	- 0.7	36.7	14	16.7	22	20	0	22.2	80	169	39	39	12	13	0	0	0.7	18	12.5	N	16	6	11	14	6.5	70
MERIDIAN	88	1006.1	1016.9	32.2	21.1	26.4	- 1.1	37.2	15	17.8	22+	15	0	21.1	77	296	138	124	12	10	0	0	0.7	21	12.5	4	12	0	12	18	7.8	
MISSOURI																																
COLUMBIA REGIONAL	278	984.4	1016.1	29.4	17.8	23.6	- 2.4	37.2	8	10.0	31	9	0	16.1	68	84	- 3	32	12	8	0	0	0.5	10	14.8	N	8	4	10	17	5.9	68
KANSAS CITY	226	988.5	1016.3	30.0	19.4	24.7	- 2.8	36.7	17	11.1	30	11	0	17.2	66	80	- 2	28	11	10	0	0	0.4	24	12.1	N	18	9	12	10	6.6	64
ST JOSEPH	247			28.9	15.6	22.2	- 4.2	32.8	12	6.1	30	2	0	16.7	76	154	72		11		0	0	0.5	17	9.4	34	18	12	12	7	6.0	
ST LOUIS	163	995.9	1015.8	30.0	18.3	24.1	- 1.5	36.1	8	11.7	31	6	0	18.3	74	119	36	26	8	7	0	0	0.5	25	11.6	NE	9+	10	7	14	6.2	62
SPRINGFIELD	386	97.6	1016.0	31.7	17.2	24.4	- 1.6	38.9	17	7.8	31	14	0	16.1	63	65	- 34	25	10	8	0	0	1.0	17	11.6	NW	10	22	10	9	5.2	80
MONTANA																																
BILLINGS	1087	893.3	1015.3	29.4	12.2	20.7	- 3.1	36.1	16	6.1	29	9	0	5.6	42	10	- 13	5	4	1	0	0	1.1	27	14.8	NW	2	18	11	2	3.2	90
GLASGOW	696	934.0	1014.4	28.9	11.7	20.4	- 1.1	38.3	16	6.1	8	8	0	5.6	40	5	- 29	5	2	3	0	0	1.8	33	16.5	31	6	13	16	2	3.7	
GREAT FALLS	1116	891.0	1015.9	28.9	10.6	19.7	- 1.1	37.8	16	5.0	3	9	0	2.8	36	7	- 26	4	6	4	0	0	2.1	27	15.2	N	4	16	9	6	3.8	85
HAVRE	788	924.5	1015.1	29.4	10.6	20.0	- 1.1	40.0	16	3.9	8	9	0	4.4	39	9	- 23	6	4	3	0	0	1.6	29	17.9	N	21	15	11	5	3.8	88
HELENA	1167	883.9	1017.0	26.1	8.3	17.3	- 2.9	32.8	15	2.2	4	3	0	2.8	41	14	- 12	10	4	6	0	0	1.6	29	16.5	NW	8	18	9	4	5.4	81
KALISPELL	904	913.6	1017.0	26.7	7.8	17.3	- 1.4	34.4	31	- 0.6	7	8	1	7.8	58	24	- 3	16	5	6	0	0	0.3	36	10.3	S	27	17	7	7	4.5	
MILES CITY	801	922.8	1014.0	30.6	13.9	22.3	- 1.8	39.4	10	8.3	26	12	0	6.1	38	3	- 31		1	2	0	0	1.4	32								
MISSOULA	972	906.5	1016.9	30.0	8.9	19.5	- 0.1	37.2	16	- 0.6	7	12	1	6.7	49	13	- 8	4	7	4	0	0	1.2	36	15.2	NW	6	20	7	4	2.8	97
NEBRASKA																																
GRAND ISLAND	561	950.2	1015.0	29.4	16.1	22.7	- 2.4	34.4	21+	5.6	30	6	0	13.3	60	58	- 6	13	12	9	0	0	0.9	17	13.0	S	27	14	14	3	3.9	
LINCOLN	351			29.4	17.8	23.7	- 3.1	38.9	7	7.8	30	6	0			94	11	37	12		0	0			21.5	NE	3	14	12	7	4.5	75
NORFOLK	471			28.3	15.0	21.8	- 3.2	33.9	21+	5.6	30	3	0			105	28	34	11		0	0						14	12	5	4.5	
NORTH PLATTE	846	917.4	1015.4	28.3	13.9	21.0	- 3.5	34.4	17	5.0	30	3	0	13.9	68	88	24	40	15	15	0	0	1.1	11	19.7	NE	4	15	14	2	4.2	81
OMAHA	298	98.4	1016.0	30.0	17.2	23.4	- 2.4	37.2	7	7.2	30	7	0	15.6	65	45	- 41	20	10	6	0	0	0.2	14	12.5	N	7	11	14	5	4.7	90
SCOTTSBLUFF	1206	881.8	1014.8	29.4	13.3	21.2	- 2.5	35.6	17	7.2	30	6	0	11.1	59	37	T	17	8	12	0	0	1.2	9	17.9	N	8	17	7	7	4.2	
VALENTINE	789			30.0	12.8	21.6	- 2.5	36.7	24	3.3	30	11	0			41	- 18	24	8		0	0			21.5	NW	4	15	11	5	4.1	71
NEVADA																																
ELKO	1539	845.9	1013.7	31.7	9.4	20.4	- 0.5	36.1	29	4.4	11	14	0	3.9	38	5	- 5	3	5	4	0	0	0.5	26	12.1	SW	20	18	10	3	3.4	
ELY	1906	811.8	1011.8	31.7	8.9	20.1	0.4	35.6	14	3.9	11+	12	0	1.7	34	4	- 12	2	5	9	0	0	1.4	22	14.3	NE	1	15	11	5	4.1	81
LAS VEGAS	659	934.6	1008.6	41.7	26.1	33.8	1.7	45.0	28+	18.9	1	31	0	3.3	16	2	- 11	1	2	5	0	0	2.9	20	28.6	SW	14	17	13	1	2.9	95
RENO	1342	866.9	1013.4	32.9	10.6	21.9	2.1	38.9	28	3.9	11	20	0	7.2	43	27	20	16	6	8	0	0	1.9	28	16.1	E	14	24	5	2	2.1	93
WINNEMUCCA	1311	868.9	1012.6	35.6	11.1	23.5	1.8	41.1	28	2.2	11	24	0	4.4	33	1	- 6	1	2	4	0	0	1.1	33	13.4	NW	2	21	7	3	2.9	92
NEW HAMPSHIRE																																
CONCORD	104	1002.7	1016.1	28.3	12.2	20.2	- 0.7	33.3	9	4.4	13+	3	0	14.4	72	131	44	65	9	6	0	0	1.1	28	20.1	SW	1	6	16	10	5.4	71
MT WASHINGTON OBS	1909			12.2	5.0	8.8	- 0.7	18.3	6	- 1.7	3	0	1			235	65	68	15	5	0	0			34.7	W	14	0	9	22	8.4	16
NEW JERSEY																																
ATLANTIC CITY	20	1013.9	1016.4	27.8	16.7	22.2	- 1.7	32.8	8	9.4	13+	1	0	17.8	78	93	- 2	34	11	4	0	0	1.7	21	21.2	19	24	10	6	15	6.8	74
ATLANTIC CITY CO	3			25.6	18.9	22.2	- 1.3	31.7	8	14.4	12+	0	0			107	9	44	14						11.2							
NEWARK	2	1014.6	1015.7	30.0	20.6	25.4	0.8	35.6	9+	17.2	21+	7	0	16.1	60	177	84	86	10	6	0	0	1.5	23	24.3	24	1	9	9	12	5.8	
TRENTON	17			28.9	19.4	24.1	- 0.4	34.4	8	13.3	5	4	0			124	18	64	11		0	0			13.4	NE	9	10	12	9	5.4	68
NEW MEXICO																																
ALBUQUERQUE	1619	839.8	1011.9	33.9	17.8	25.6	- 0.2	40.0	13	13.9	31+	21	0	8.3	41	27	- 4	10	10	11	0	0	1.8	13	21.0	E	23	14	14	4	4.2	79
CLAYTON	1515			28.9	15.6	22.1	- 1.6	36.7	12	10.6	31	12	0			84	25	35	15		0	0						8	11	12	5.8	
ROSWELL	1101			35.0	18.3	26.5	0.2	41.1	5	15.6	31+	25	0			48	3	21	9		0	0			15.6	N	18					78
NEW YORK																																
ALBANY	84	1000.7	1015.3	27.2	13.3	20.2	- 2.1	31.1	1	6.7	28+	0	0	13.9	68	99	10	24	12	6	0	0	1.4	22	13.4	W	17+	8	10	13	6.1	64
BINGHAMTON	485	958.7	1015.6	24.4	13.3	18.9	- 1.4	30.0	8	8.3	18	0	0	13.3	74	117	23	55	10	9	0	0	1.4	25	12.5	S	13	5	15	11	6.6	45
BUFFALO	215	99.2	1015.5	25.6	16.6	20.4	- 0.6	30.0	8	10.6	18	0	0	12.8	63	114	49	59	9	6	0	0	2.6	24	14.3	NW	13	7	12	12	6.1	72
NEW YORK C	40	1000.9	1015.8	30.0	21.1	26.4	0.6	35.6	8	17.8	21+	6	0	16.1	62	183	89	91	9	6	0	0	1.4	23	13.4	W	17					60
NEW YORK KENNEDY	4	1015.2	1016.1	28.4	21.1	24.1	0.7	36.1	8	17.8	28+	5	0	17.2	64	81	- 22	29	10	7	0	0	2.7	25	11.6	19	29	10	10	9	5.4	
NEW YORK LA GUARDIA	3	1014.9	1016.1	28.9	20.6	24.5	0.4	33.9	8	16.7	5	3	0	16.1	63	161	66	97	8	8	0	0	1.3	22	14.3	NW	17	10	9	12	5.6	
ROCHESTER	167	990.4	1015.7	26.7	13.9	20.4	- 1.6	31.1	8	8.3	18	1	0	14.4	71	142	70	57	9	6	0	0	1.6	24	15.2	W	13	8	16	7	5.6	60
SYRACUSE	128	990.3	1015.6	27.2	13.9	20.6	- 1.8	33.9	8	8.3	28	1	0	14.4	70	165	86	64	10	7	0	0	1.4	24	13.9	W	1	7	13	11	5.8	66

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days sunrise to sunset: Clear 0-3	No. of days sunrise to sunset: Partly cloudy 4-7	No. of days sunrise to sunset: Cloudy 8-10	Sky cover (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s.		M.p.s							%
NORTH CAROLINA																																
ASHEVILLE	652	943.1	1017.8	27.8	17.2	22.5	0.1	32.2	18+	12.8	5	3	0	18.3	83	139	- 10	34	18	8	0	0	0.2	2	10.3	34	29	2	13	16	7.5	63
CAPE HATTERAS R	2	1016.9	1017.4	28.9	22.8	25.7	0.2	30.6	31+	18.3	9	0	0	22.8	85	165	8	62	16	8	0	0	2.6	22	11.6	22	19	3	11	17	7.6	50
CHARLOTTE	224	990.2	1017.1	29.4	20.0	24.6	1.7	32.8	18	16.1	5+	2	0	20.0	81	127	3	25	16	11	0	0	1.0	21	15.6	SW	14	4	9	18	7.3	67
GREENSBORO	273	986.1	1017.2	28.9	18.9	23.9	1.2	32.8	18	12.8	5	2	0	20.0	82	99	- 23	34	13	9	0	0	1.1	21	15.2	NW	11	3	10	18	7.5	54
RALEIGH	132	1001.7	1017.4	30.0	19.4	24.8	0.7	34.4	18	13.9	5	7	0	20.6	82	116	- 24	37	12	15	0	0	1.5	20	13.0	22	29	5	9	17	7.2	52
WILMINGTON	9	1016.3	1017.7	31.1	21.7	26.6	0.1	34.4	18	17.8	5	13	0	22.8	84	205	10	52	17	11	0	0	1.6	22	11.2	NE	3	4	9	18	7.4	56
NORTH DAKOTA																																
BISMARCK	502	955.3	1014.2	27.8	10.6	19.0	3.1	33.9	24	1.7	30	2	0	11.1	62	26	- 29	22	5	10	0	0	1.2	32	17.9	SE	11	12	16	3	4.8	84
FARGO	273	981.4	1013.7	25.6	11.1	18.4	3.5	30.6	24	3.9	30	0	0	13.9	76	71	- 3	19	11	9	0	0	1.0	26	17.0	NW	19	7	16	8	5.4	77
WILLISTON	579	946.5	1014.2	27.2	11.1	19.1	2.8	34.4	16	6.1	28+	4	0	9.4	58	49	1	34	6	7	0	0	1.6	31	22.4	SE	10	12	14	5	4.7	75
OHIO																																
AKRON	368	972.2	1016.0	27.8	15.6	21.7	0.9	32.8	8	10.6	27	2	0	15.0	66	67	- 28	35	10	6	0	0	1.0	23	11.2	22	15	4	15	12	6.4	
CINCINNATI ABBE OB	232			28.9	17.8	23.5	1.4	34.4	9	13.3	31+	5	0			72	- 19	29	11		0	0			7.6	W	19					36
CLEVELAND	237	987.5	1016.3	26.7	15.0	20.8	1.3	32.2	8	10.6	18	1	0	14.4	68	94	10	36	9	6	0	0	1.3	22	13.9	W	15	9	11	11	5.8	66
COLUMBUS	247	986.5	1016.2	27.2	15.6	21.4	2.4	31.7	8	11.1	28+	0	0	15.6	70	107	7	58	12	4	0	0	0.7	22	14.8	SW	15	8	11	12	6.0	63
DAYTON	305	980.7	1016.0	27.8	17.8	22.6	1.4	32.2	8	12.8	27	1	0	16.1	68	104	14	39	11	6	0	0	1.4	26	10.7	W	19	8	10	13	5.9	70
MANSFIELD	395			27.2	15.0	21.3	0.8	32.2	8+	10.0	20	2	0	15.0	70	96	8	39	11	4	0	0	1.6	23	9.8	27	14+	7	13	11	6.0	
TOLEDO	204	990.5	1015.3	27.2	13.9	20.6	2.1	32.8	7	7.8	27	3	0	13.9	68	70	5	35	10	6	0	0	1.3	24	11.6	SW	13	8	12	11	5.8	69
YOUNGSTOWN	359	974.3	1016.4	26.7	13.3	20.1	1.3	32.2	7	6.7	18	1	0	13.9	69	56	- 54	24	10	4	0	0	1.0	23	14.3	33	19	5	15	11	6.1	
OKLAHOMA																																
OKLAHOMA CITY	392	969.2	1014.4	33.3	20.6	27.1	1.0	40.6	18	11.7	31	19	0	17.2	60	105	45	51	8	9	0	0	2.3	15	12.1	SE	22+	12	13	6	4.7	75
TULSA	198	990.9	1014.7	32.8	20.6	26.7	1.2	38.9	14	10.6	31	17	0	19.4	68	85	10	26	8	7	0	0	1.7	16	15.2	N	5	11	8	12	5.4	70
OREGON																																
ASTORIA	2	1018.0	1018.9	18.9	11.7	15.2	0.7	23.9	19+	3.9	7	0	0	11.7	83	39	7	17	9	1	0	0	2.3	27	9.4	29	15+	6	7	18	7.3	
BURNS U	1265	874.7	1015.3	29.4	11.7	20.3	0.5	35.6	15	1.7	10	13	0	7.2	45	29	20	25	4		0	0	1.3	31				19	9	3	3.2	
EUGENE	109	1004.1	1017.3	28.3	10.6	19.3	0.1	36.7	19	6.1	12+	8	0	11.1	65	T	- 7	T	0	0	0	0	1.0	31	7.6	36	14+	14	12	5	4.0	
MEACHAM	1234	879.4	1015.8	25.6	11.7	18.6	1.1	35.0	31	2.8	7	3	0			10	- 3	10	1		0	0			7.2	32	9+	22	7	2	2.2	
MEDFORD	396	968.2	1015.1	32.8	12.8	22.8	0.6	39.4	29	5.6	5	17	0	10.0	48	2	- 4	2	2	1	0	0	1.7	31	13.0	15	21	24	5	2	2.0	
PENDLETON	452	962.8	1015.2	33.3	15.6	24.5	1.4	42.2	31	5.6	7	18	0	7.8	37	8	3	8	1	1	0	0	1.0	26	11.2	27	4	21	7	3	2.6	
PORTLAND	6	1015.9	1017.0	27.2	13.9	20.7	1.1	36.1	26	7.8	7	8	0	11.7	61	7	- 4	4	5	2	0	0	1.8	33	11.6	NW	15	13	11	7	4.5	72
SALEM	60	1009.8	1017.2	28.3	11.1	19.6	0.7	36.1	20	4.4	3	8	0	11.7	64	T	- 9	T	1	1	0	0	0.9	32	8.9	36	14	15	9	7	4.1	
SEXTON SUMMIT R	1169	886.2	1015.7	25.0	12.2	18.6	1.1	32.2	17	3.3	6	1	0			4	- 4	4	1		0	0			12.5	34	14	26	3	2	1.5	
PACIFIC AREA																																
GUAM TAGUAC R	110	996.6	1009.2	29.4	22.2	25.9	0.6	31.1	31+	20.6	23+	0	0	23.9	89	408	180	122	30	5	0	0	2.3	11	10.3	SE	14					36
JOHNSTON	2	1013.2	1013.7	28.3	25.0	26.6	0.7	29.4	27+	23.3	30+	0	0	22.2	76	19	- 14	5	13	1	0	0	6.8	9	13.0	E	15	5	19	7	6.0	82
KOROR R	29	1005.1	1008.7	30.0	23.9	27.1	0.1	31.7	31+	21.7	30	0	0	23.9	85	368	- 17	94	20	2	0	0	2.0	20	13.0	S	30	0	3	28	9.5	61
KWAJALEIN	2	1008.8	1009.7	30.0	24.4	27.1	0.4	30.6	29+	22.8	23+	0	0	23.9	83	417	191	107	23	0	0	0	4.2	9	13.0	9	14+	0	7	24	8.8	
MAJURO	3	1010.2	1010.3	29.4	24.4	26.9	0.2	30.6	2	22.8	22	0	0	23.3	81	393	75	137	26	0	0	0	3.9	8	12.5	E	6	1	8	22	8.3	62
PAGO PAGO	4	1012.2	1012.5	28.9	22.8	25.6		30.0	18	17.8	23+	0	0	21.7	80	80		20	20	0	0	0	3.1	10	11.2	SE	28	4	22	5	5.7	62
PONAPE R	37	1003.7	1009.1	30.6	22.2	26.4	0.1	31.7	29+	20.6	18	0	0	23.3	87	576	164	148	23	1	0	0	1.3	10	8.0	E	6	0	5	26	8.8	38
TRUK MOEN ISLAND	2	1008.8	1009.1	30.0	23.9	26.9	0.1	31.7	26	22.8	29+	0	0	23.9	84	335	22	56	27	1	0	0	1.6	10	12.5	SE	7	0	1	30	9.6	66
WAKE	3	1012.9	1013.0	31.7	25.0	28.4	0.6	32.2	23+	21.7	26	9	0	22.2	71	61	- 56	23	17	1	0	0	5.1	9	14.8	NE	26	5	13	13	6.4	74
YAP R	13			29.4	23.3	26.6	0.8	31.7	25	21.1	22	0	0			359	9	71	20	2	0	0			12.5	W	10	0	4	27	9.0	56
PENNSYLVANIA																																
ALLENTOWN	118	1002.4	1016.2	28.9	16.1	22.6	0.8	35.0	8	11.1	21+	5	0	16.1	69	77	- 45	16	12	7	0	0	1.2	24	16.1	27	17	9	15	7	5.5	
ERIE	223	989.5	1016.0	25.0	13.9	19.4	2.3	30.6	8	8.3	18	0	0	11.1	60	68	- 25	55	11	5	0	0	1.6	23	10.3	20	13	7	14	10	5.5	
HARRISBURG	103	1003.4	1015.8	30.6	18.3	24.2	0.4	35.6	8	12.2	3	7	0	16.1	64	72	- 17	13	14	7	0	0	0.8	25	12.1	W	9	9	14	8	5.4	61
PHILADELPHIA	2	1015.2	1016.1	30.6	20.0	25.2	1.0	35.6	8	14.4	5	9	0	17.8	68	123	17	86	10	3	0	0	1.3	24	10.3	NW	17	7	13	11	6.0	72
PITTSBURGH	347	973.2	1016.4	26.7	15.6	21.2	1.1	31.7	8	9.4	18	0	0	13.9	65	173	75	75	11	6	0	0	0.9	25	15.6	36	6	5	13	13	6.3	63
SCRANTON	283	982.4	1016.3	27.2	15.0	21.1	1.4	32.8	8	9.4	21+	2	0	15.0	72	146	24	35	14	9	0	0	1.0	22	11.2	S	13	11	8	12	5.6	68
WILLIAMSPORT	160	997.3	1016.2	28.3	15.6	22.1	1.0	34.4	8	10.0	4	3	0	16.1	71	144	38	50	10	7	0	0	1.1	24	10.3	21	13	10	13	8	5.3	
RHODE ISLAND																																
BLOCK ISLAND	34			25.0	17.8	21.6	0.7	30.6	8	13.3	23	0	0			79	11	34	9		0	0										
PROVIDENCE	16	1013.2	1015.7	28.3	18.3	23.5	1.2	33.3	9	12.8	4	3	0	16.7	68	88	14	62	7	6	0	0	1.9	23	10.3	22	17	8	10	13	6.1	68

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

JULY 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow Ice pellets: Total	Precipitation: Snow Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0.3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb.	C	C.	C.	C	C.		C.				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							%
SOUTH CAROLINA																																
CHARLESTON	12	1015.9	1017.8	31.7	22.2	26.8	- 0.2	34.4	19+	17.8	4	13	0	22.2	80	153	- 42	42	17	14	0	0	1.5	22	25.9Y	N	12	2	9	20	7.8	65
CHARLESTON U	3			30.6	23.3	27.1	- 0.4	33.3	19+	19.4	4	8	0			234	36	44	17		0	0			15.6	E	29					
COLUMBIA	65	1009.5	1017.4	31.7	21.7	26.7	- 0.9	35.6	18	17.8	4	15	0	21.1	78	283	128	56	16	20	0	0	0.9	20	13.0	27	15+	2	10	19	7.4	59
GRNVLLE-SPRTNBRG	292	983.1	1017.0	30.0	20.0	24.8	- 1.3	34.4	18	17.2	23+	7	0	20.0	79	143	25	34	13	11	0	0	0.8	24	13.0	N	14	1	13	17	7.6	42
SOUTH DAKOTA																																
ABERDEEN	395	968.2	1014.3	27.8	12.2	20.1	- 2.9	35.6	21	3.9	30	5	0	13.9	72	95	32	35	10	11	0	0	0.4	30	11.2	33	18+	14	13	4	4.2	
HURON	390	968.5	1014.2	29.4	12.2	20.8	- 3.1	38.3	21	2.8	30	6	0	12.2	60	23	- 23	17	6	9	0	0	0.4	18	16.2	SE	9	10	17	4	4.5	81
RAPID CITY	964	906.2	1015.1	28.3	11.7	20.0	- 3.2	35.6	16	5.0	29+	5	0	8.9	52	37	- 8	20	8	6	0	0	1.6	33	21.0	W	3	14	10	7	4.4	76
SIOUX FALLS	432	965.1	1015.7	27.8	13.9	20.7	- 2.8	34.4	21	3.3	30	2	0	13.3	66	74	2	57	8	8	0	0	0.5	30	9.4	23	27+	13	11	7	4.7	
TENNESSEE																																
BRISTOL	459	964.4	1017.5	28.3	18.3	23.3	- 1.1	32.2	9	15.0	5	1	0	18.3	77	151	10	37	16	10	0	0	0.3	25	10.3	32	9	3	12	16	7.1	
CHATTANOOGA	203	992.2	1016.3	29.4	20.6	25.1	- 2.0	34.4	11	15.6	22	5	0	20.0	75	185	55	62	14	11	0	0	1.1	19	13.4	NE	14	4	9	18	7.3	39
KNOXVILLE	299	982.4	1016.8	28.3	20.0	24.1	- 1.7	33.3	10	16.7	21	3	0	20.0	81	223	100	69	16	9	0	0	1.2	25	11.6	N	14+	4	9	18	7.6	44
MEMPHIS	79	1005.8	1015.7	31.7	22.2	27.0	- 0.4	37.8	15	13.9	31	18	0	18.9	65	74	- 16	27	12	9	0	0	0.8	20	15.2	NW	11	5	16	10	6.3	68
NASHVILLE	180	994.6	1016.0	30.6	19.4	24.9	- 1.9	33.9	13+	14.4	22	8	0	20.0	78	127	33	30	14	8	0	0	1.0	22	13.9	NW	11	4	16	11	6.3	63
OAK RIDGE R	276			28.9	18.9	23.9	- 1.2	33.3	18	15.0	21	4	0			209	58	50	16		0	0			14.3		13	1	10	20	8.1	
TEXAS																																
ABILENE	537	953.6	1013.6	35.6	22.8	29.1	0.7	39.4	5+	16.7	31	25	0	15.6	47	47	- 11	29	6	5	0	0	3.0	18	11.6	N	29+	14	10	7	4.5	80
AMARILLO	1098	892.7	1013.0	31.7	18.3	24.9	- 2.1	37.8	6	12.2	31	18	0	11.7	48	44	- 15	34	9	9	0	0	2.6	19	15.2	SE	27	12	10	9	4.9	85
AUSTIN	182	992.9	1014.4	36.1	23.9	29.9	0.8	38.3	20+	19.4	31	29	0	19.4	58	31	- 24	24	4	4	0	0	3.1	18	13.4	N	28	12	14	5	4.3	76
BROWNSVILLE	6	1014.2	1014.9	33.3	23.9	28.6	- 0.3	35.6	28	21.1	13	29	0	22.2	74	27	- 15	25	3	1	0	0	4.6	15	15.2	SE	18	12	15	4	4.5	79
CORPUS CHRISTI	12	1013.5	1014.8	35.6	23.3	29.4	0.4	36.7	29+	21.1	30	31	0	23.3	74	8	- 51	8	2	0	0	0	4.7	15	15.2	SE	18	14	12	5	4.3	90
DALLAS	147	997.3	1014.3	35.0	25.6	30.1	0.7	40.0	19	17.2	31	22	0	18.9	55	120	71	59	7	6	0	0	2.8	17	11.6	NE	19	13	8	10	5.1	66
DEL RIO	313	978.0	1013.5	33.3	22.2	27.8	- 2.3	35.6	23+	20.0	31	24	0	19.4	63	11	- 22	8	4	3	0	0	3.8	13	9.8	15	22+	15	9	7	4.6	
EL PASO	1194	882.2	1010.6	34.4	21.1	27.9	0.2	37.8	18+	16.7	2	28	0	11.7	41	59	27	42	8	9	0	0	1.2	12	19.2	W	22	16	11	4	3.5	88
FORT WORTH	164	994.6	1014.6	34.4	23.3	29.1	- 0.6	39.4	19+	15.6	31	23	0	19.4	60	91	47	36	7	6	0	0	2.6	18	12.5	24	2	12	10	9	5.1	
GALVESTON U	2			30.6	26.7	28.6	0.2	31.7	7	22.2	31	0	0			50	- 71	19	6		0	0			11.6	SE	10					69
HOUSTON INTERCON	29	1012.2	1015.9	35.6	22.2	28.8	0.8	37.8	7	19.4	13	30	0	21.1	70	36	- 66	15	4	10	0	0	1.9	18	10.3	19	27	8	12	11	6.0	74
LUBBOCK	992	904.8	1013.0	33.9	19.4	26.7	0.3	40.0	5+	13.3	31	23	0	13.3	49	19	- 32	9	4	4	0	0	2.3	16	10.3	6	29+	4	8	9	4.8	
MIDLAND	869	917.0	1012.9	33.9	20.0	27.1	- 1.2	40.0	5	15.0	30	26	0	13.9	48	20	- 28	8	5	4	0	0	3.6	15	13.4	6	29	10	7	6	3.6	
PORT ARTHUR	5	1015.6		32.8	22.2	27.6	- 0.1	36.1	5	19.4	31	27	0	23.9	87	109	- 43	34	15	16	0	0	1.7	20	10.7	SE	3	5	16	10	6.2	73
SAN ANGELO	580	948.2	1013.1	35.0	21.1	28.2	- 1.1	40.0	5	16.7	31	25	0	15.6	50	47	11	35	6	4	0	0	3.4	17	16.3	10	26	12	10	9	4.7	
SAN ANTONIO	240	987.1	1014.5	36.1	23.9	29.9	1.1	37.8	16+	21.1	31	31	0	19.4	57	27	- 26	26	3	1	0	0	2.6	16	13.0	N	26	12	9	10	5.2	82
VICTORIA	32	1011.2	1015.2	35.0	23.9	29.6	1.1	36.7	21+	21.1	31	31	0	21.7	70	7	- 85	7	1	1	0	0	3.4	17	16.1Y	S	19	5	19	7	5.6	
WACO	153	997.0	1014.5	35.6	24.4	29.9	0.3	39.4	16+	17.2	31	25	0	20.0	59	218	167	89	9	8	0	0	3.3	17	12.1	27	24	16	6	9	4.2	
WICHITA FALLS	303	977.3	1013.1	37.2	23.3	30.2	0.4	42.2	16+	15.0	31	25	0	16.7	50	46	- 4	35	6	6	0	0	2.8	14	17.4	18	2	12	14	7	5.0	
UTAH																																
MILFORD	1533	846.9		35.6	13.3	24.3	1.1	39.4	14	6.7	2	29	0			12	- 6	8	4		0	0						15	13	3	3.6	
SALT LAKE CITY	1286	871.3	1011.7	33.9	15.6	24.7	- 0.3	37.8	16+	10.6	1	24	0	7.2	36	24	9	23	2	7	0	0	0.1	S	15.2	SW	1	19	9	3	2.8	94
WENDOVER	1291	870.6	1012.6	33.3	20.6	26.7	0.3	37.2	27	16.1	5	20	0	3.3	24	5	- 3	4	2		0	0						16	13	2	1.7	
VERMONT																																
BURLINGTON	101	1002.4	1014.6	26.7	14.4	20.5	- 0.1	31.7	9	7.8	12+	0	0	13.9	68	109	11	35	13	7	0	0	1.3	20	15.2	S	14	7	11	13	6.3	75
VIRGINIA																																
LYNCHBURG	279			28.9	18.3	23.7	- 0.9	32.8	9	14.4	22+	1	0			114	7	26	14		0	0			9.4	NW	9	6	13	12	6.0	64
NORFOLK	7	1015.6	1016.7	29.4	20.6	25.1	- 0.9	34.4	1	15.6	23	7	0	20.0	77	122	- 28	45	15	13	0	0	1.2	18	20.1	SW	19	3	10	18	7.2	66
RICHMOND	50	1010.5	1016.7	30.6	19.4	24.8	- 0.8	33.3	14+	12.8	5	4	0	19.4	78	112	- 31	38	10	7	0	0	1.3	20	14.8	NW	25	6	12	13	6.1	65
ROANOKE	350	975.6	1016.9	28.9	17.8	23.1	- 1.7	32.8	9	11.1	5	2	0	18.3	78	133	25	38	12	8	0	0	0.7	26	11.2	SW	6	4	9	14	6.3	
WALLOPS ISLAND	3			27.8	21.1	24.3		32.8	8	17.2	12	2	0			73		35			0	0			16.5Y	SSW	19+					
WASHINGTON																																
OLYMPIA	59			25.6	9.4	17.5	- 0.2	35.0	29	3.3	7+	5	0			20	1	11	6		0	0			7.2	SW	24	12	8	11	4.6	
QUILLAYUTE	55	1011.2	1018.7	20.0	9.4	14.7	- 0.7	31.1	18	3.9	7	0	0	10.6	80	26	- 32	8	12	1	0	0	1.3	25	7.6	NW	15+	9	9	13	6.0	50
SEATTLE-TACOMA	122	1001.4	1017.8	24.4	12.8	18.6	0.3	35.0	29	8.3	6	2	0	11.1	66	17	- 3	8	5	0	0	0	1.0	30	7.6	W	24	15	6	10	6.6	62
SPOKANE	718	932.6	1015.1	29.4	12.8	20.9	- 0.4	37.2	31	3.3	7	14	0	6.1	41	13	3	13	2	1	0	0	0.5	16	13.4	SW	6	21	6	4	2.8	82
STAMPEDE PASS R	1206	882.5		20.6	10.6	15.3	1.9	31.1	31	1.1	6+	0	0			51	14	32	5		163	178						19	4	8	1.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

MAY 1971

State and Station	Elevation ground	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile 1.6 kilometers: Speed	Wind: Fastest mile 1.6 kilometers: Direction	Wind: Fastest mile 1.6 kilometers: Date	No. of days sunrise to sunset: Clear 0.3	No. of days sunrise to sunset: Partly cloudy 4.7	No. of days sunrise to sunset: Cloudy 8.10	Sky cover tenths sunrise to sunset	Possible sunshine
	M	Mb	Mb.	C	C.	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	Mps.		Mps							%
WASHINGTON																																
WALLA WALLA U	289			32.2	17.2	24.7	0.2	41.1	31	7.8	7	18	0			17	11	16	3		0	0			8.5	W	6	21	7	3	4.6	86
YAKIMA	321	977.0	1014.9	33.3	10.6	21.8	0.2	42.2	31	1.1	7	19	0	6.7	40	1	- 2	1	1	0	0	0	2.0	29	10.3	29	5+	22	5	4	2.5	
WEST INDIES																																
SAN JUAN P.R.	4	1015.2	1017.5	31.7	25.0	28.3	1.4	33.3	20	23.3	29	9	0	21.1	68	43	-116	8	20	5	0	0	4.6	9	13.4	F	10	1	29	1	5.5	76
WEST VIRGINIA																																
BECKLEY	763	930.6	1016.8	25.0	15.0	20.2	- 1.4	30.0	9	10.6	21	0	0	16.1	80	107	- 9	27	15	8	0	0	1.6	22	15.6	30	11	4	10	17	7.2	
CHARLESTON	286	982.7	1016.4	28.3	16.7	22.4	- 1.4	34.4	9	11.7	28	3	0	17.8	78	167	23	34	13	9	0	0	0.7	24	10.3	26	29+	3	13	15	6.9	
ELKINS	594	947.5		27.2	13.3	20.1	- 1.1	31.1	9+	7.2	5	0	0			104	- 35	26	16		0	0						3	15	13	6.9	
HUNTINGTON	252	986.8	1016.4	27.2	17.2	22.2	- 1.8	32.2	9	11.7	28	1	0	18.3	82	192	78	61	17	12	0	0	0.9	20	10.3	28	17+	1	15	15	7.2	
PARKERSBURG U	187			27.8	17.8	22.8	- 1.5	32.8	9	11.7	28	3	0			132	28	29	16		0	0			13.9	W	1					54
WISCONSIN																																
GREEN BAY	208	988.8	1014.0	26.7	13.3	19.9	- 1.5	32.8	16+	7.2	31	2	0	13.3	68	87	19	20	14	7	0	0	1.7	26	13.0	SW	12	6	14	11	6.0	62
LA CROSSE	198	990.9	1015.0	26.7	13.9	20.3	- 2.9	32.2	16	9.4	31+	1	0	15.0	76	103	8		14	9	0		0.9	23								
MADISON	262	984.1	1014.9	27.8	12.8	20.3	- 1.4	32.8	21+	6.1	31	3	0	13.3	65	42	- 49	17	9	8	0	0	1.7	24	14.8	N	16	7	11	13	6.1	59
MILWAUKEE	205	990.2	1015.1	25.0	15.0	20.0	- 0.4	31.1	22+	10.6	29	0	0	13.9	69	66	- 9	46	8	7	0	0	1.9	25	15.2	NW	8	8	15	8	5.6	79
WYOMING																																
CASPER	1627	840.5	1014.9	29.4	9.4	19.6	- 2.5	35.6	16	3.3	30	7	0	3.9	42	3	- 23	1	5	7	0	0	0.8	35	11.6	3	28+	15	10	6	4.2	
CHEYENNE	1867	815.8	1015.2	26.7	10.6	18.6	- 2.5	35.0	12	5.0	30	4	0	5.6	49	27	- 19	8	8	11	0	0	0.9	26	17.9	W	9	9	12	10	5.4	61
LANDER	1696	832.4	1014.8	28.3	12.2	20.2	- 1.3	33.9	16	8.3	28+	4	0	3.9	39	7	- 13	3	7	8	0	0	1.3	27	21.9	SW	9	11	14	6	4.6	72
SHERIDAN	1208	881.5	1016.1	29.4	8.3	18.9	- 2.9	36.7	16+	1.7	29	8	0	3.3	39	5	- 25	3	2	3	0	0	1.2	32	15.2	SW	6	17	7	7	3.6	78

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month

Wind directions under resultant direction are in tens of degrees

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
\+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	0	0	0
HUNTSVILLE	0	0	0
MOBILE	0	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	291	291	211
ANNETTE	145	145	242
BARROW	755	755	803
BARTER ISLAND	676	676	735
BETHEL	374	374	319
BETTLES	221	221	
BIG DELTA	197	197	
COLD BAY	527	527	474
FAIRBANKS	134	134	171
FALKANA	257	257	
HOMER	409	409	
JUNEAU	227	227	301
KING SALMON	324	324	313
KOTZEBUE	276	276	381
MC GRATH	251	251	208
NOME	427	427	481
ST. PAUL ISLAND	713	713	605
SHEMYA	633	633	577
SUMMIT	449	449	
TALKEETNA	260	260	220
UNALAKLEET	332	332	
YAKUTAT	375	375	338
ARIZONA			
FLAGSTAFF	24	24	46
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	0	0	0
YUMA	0	0	0
ARKANSAS			
FORT SMITH	0	0	0
LITTLE ROCK	0	0	0
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	0	0	0
BLUE CANYON	17	17	34
EUREKA U	299	299	270
FRESNO	0	0	0
LONG BEACH	0	0	0
LOS ANGELES	0	0	19
LOS ANGELES U	0	0	0
MT SHASTA R	31	31	25
OAKLAND	97	97	53
RED BLUFF	0	0	0
SACRAMENTO	0	0	0
SANDBERG R	0	0	0
SAN DIEGO	0	0	6
SAN FRANCISCO	133	133	81
SAN FRANCISCO U	225	225	192
SANTA MARIA	110	110	99
STOCKTON	0	0	0
COLORADO			
ALAMOSA	64	64	65
COLORADO SPRINGS	33	33	9
DENVER	24	24	6
GRAND JUNCTION	0	0	0
PUEBLO	3	3	0
CONNECTICUT			
BRIDGEPORT	0	0	0
HARTFORD	2	2	0
DELAWARE			
WILMINGTON	0	0	0
DIST.OF COLUMBIA			
WASHINGTON DULLES	0	0	
WASHINGTON NATIONAL	0	0	0
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	0	0	0
ATLANTA	0	0	0
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	0	0	0
ROME	0	0	0
SAVANNAH	0	0	0
IDAHO			
BOISE	10	10	0
LEWISTON	16	16	0
POCATELLO	19	19	0
ILLINOIS			
CAIRO U	0	0	0
CHICAGO O HARE	7	7	0
CHICAGO MIDWAY	5	5	0
MOLINE	17	17	0
PEORIA	17	17	0
ROCKFORD	14	14	6
SPRINGFIELD	9	9	0
INDIANA			
EVANSVILLE	0	0	0
FORT WAYNE	5	5	0
INDIANAPOLIS	3	3	0
SOUTH BEND	16	16	0
IOWA			
BURLINGTON	15	15	6
DES MOINES	8	8	0
DUBUQUE	29	29	12
SIOUX CITY	11	11	0
KANSAS			
CONCORDIA	3	3	0
DODGE CITY	2	2	0
GOODLAND	11	11	0
TOPEKA	4	4	0
WICHITA	4	4	0
KENTUCKY			
COVINGTON	0	0	0
LEXINGTON	0	0	0
LOUISVILLE	0	0	0
LOUISIANA			
ALEXANDRIA	0	0	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	0	0	0
MAINE			
CARIBOU	59	59	78
PORTLAND	3	3	12
MARYLAND			
BALTIMORE	0	0	0
MASSACHUSETTS			
BLUE HILL OBS R	0	0	0
BOSTON	0	0	0
WORCESTER	3	3	6
MICHIGAN			
ALPENA	93	93	68
DETROIT	0	0	0
DETROIT METRO	13	13	0
FLINT	29	29	9
GRAND RAPIDS	15	15	8
HOUGHTON LAKE	70	70	54
LANSING	35	35	6
MARQUETTE U	90	90	59
MUSKEGON	31	31	12
SAULT STE MARIE	144	144	96
MINNESOTA			
DULUTH	111	111	71
INTERNATIONAL FALLS	111	111	71
MINNEAPOLIS	16	16	22
ROCHESTER	29	29	25
ST CLOUD	42	42	28
MISSISSIPPI			
JACKSON	0	0	0
MERIDIAN	0	0	0
MISSOURI			
COLUMBIA REGIONAL	4	4	0
KANSAS CITY	4	4	0
ST JOSEPH	15	15	0
ST LOUIS	0	0	0
SPRINGFIELD	3	3	0
MONTANA			
BILLINGS	25	25	6
GLASGOW	27	27	31
GREAT FALLS	34	34	28
HAVRE	27	27	28
HELENA	91	91	31
KALISPELL	116	116	50
MILES CITY	8	8	6
MISSOULA	75	75	34
NEBRASKA			
GRAND ISLAND	6	6	0
LINCOLN U	4	4	0
NORFOLK	14	14	9
NORTH PLATTE	12	12	0
OMAHA	5	5	3
SCOTTSBLUFF	13	13	0
VALENTINE	25	25	9
NEVADA			
ELKO	14	14	4
ELY	18	18	24
LAS VEGAS	0	0	0
RENO	9	9	43
WINNEMUCCA	3	3	0
NEW HAMPSHIRE			
CONCORD	26	26	6
MT WASHINGTON OBS	527	527	493
NEW JERSEY			
ATLANTIC CITY	4	4	0
ATLANTIC CITY U	0	0	0
NEWARK	0	0	0
TRENTON U			
NEW MEXICO			
ALBUQUERQUE	0	0	0
CLAYTON	25	25	0
ROSWELL	0	0	0
NEW YORK			
ALBANY	20	20	0
BINGHAMTON	45	45	22
BUFFALO	11	11	19
NEW YORK U	0	0	0
NEW YORK KENNEDY	0	0	
NEW YORK LA GUARDIA	0	0	
ROCHESTER	17	17	9
SYRACUSE	13	13	6
NORTH CAROLINA			
ASHEVILLE	0	0	0
CAPE HATTERAS R	0	0	0
CHARLOTTE	0	0	0
GREENSBORO	0	0	0
RALEIGH	0	0	0
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	52	52	34
FARGO	57	57	28
WILLISTON	42	42	31
OHIO			
AKRON	0	0	0
CINCINNATI ABBE OB	0	0	0
CLEVELAND	9	9	0
COLUMBUS	3	3	0
DAYTON	0	0	0
MANSFIELD	4	4	0
TOLEDO	18	18	0
YOUNGSTOWN	16	16	6
OKLAHOMA			
OKLAHOMA CITY	0	0	0
TULSA	0	0	0
OREGON			
ASTORIA	165	165	146
BURNS U	68	68	12
EUGENE	60	60	34
MEACHAM	143	143	84
MEDFORD	16	16	0
PENDLETON	11	11	
PORTLAND	33	33	25
SALEM	61	61	37
SEXTON SUMMIT R	123	123	81
PENNSYLVANIA			
ALLENTOWN	0	0	0
ERIE	32	32	16
HARRISBURG	0	0	0
PHILADELPHIA	0	0	0
PITTSBURGH	1	1	0
SCRANTON	5	5	0
WILLIAMSPORT	0	0	0
RHODE ISLAND			
BLOCK ISLAND	0	0	0
PROVIDENCE	0	0	0
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	
COLUMBIA	0	0	
GRNVLLE-SPRTNBRG	0	0	0
SOUTH DAKOTA			
ABERDEEN	32	32	25
HURON	32	32	
RAPID CITY	43	43	22
SIOUX FALLS	29	29	19
TENNESSEE			
BRISTOL	0	0	
CHATTANOOGA	0	0	
KNOXVILLE	0	0	0
MEMPHIS	0	0	
NASHVILLE	0	0	0
OAK RIDGE R	0	0	0
TEXAS			
ABILENE	0	0	0
AMARILLO	1	1	0
AUSTIN	0	0	
BROWNSVILLE	0	0	
CORPUS CHRISTI	0	0	0
DALLAS	0	0	
DEL RIO	0	0	0
EL PASO	0	0	0
FORT WORTH	0	0	
GALVESTON U	0	0	
HOUSTON INTERCON	0	0	
LUBBOCK	0	0	
MIDLAND	0	0	0
PORT ARTHUR	0	0	
SAN ANGELO	0	0	0
SAN ANTONIO	0	0	
VICTORIA	0	0	
WACO	0	0	
WICHITA FALLS	0	0	
UTAH			
MILFORD	0	0	
SALT LAKE CITY	0	0	
WENDOVER	0	0	
VERMONT			
BURLINGTON	12	12	28
VIRGINIA			
LYNCHBURG	0	0	
NORFOLK	0	0	
RICHMOND	0	0	
ROANOKE	0	0	
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	113	113	88
QUILLAYUTE	201	201	170
SEATTLE-TACOMA	82	82	56
SPOKANE	64	64	47
STAMPEDE PASS R	247	247	273
WALLA WALLA U	12	12	0
YAKIMA	52	52	
WEST VIRGINIA			
BECKLEY	6	6	11
CHARLESTON	0	0	
ELKINS	0	0	9
HUNTINGTON	2	2	
PARKERSBURG U	0	0	0
WISCONSIN			
GREEN BAY	32	32	28
LA CROSSE	15	15	12
MADISON	28	28	25
MILWAUKEE	20	20	43
WYOMING			
CASPER	36	36	6
CHEYENNE	56	56	19
LANDER	12	12	6
SHERIDAN	59	59	25

Dash indicates no data available.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

JULY 1971

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	393	913	
HUNTSVILLE	386	908	
MOBILE	541	1551	
MONTGOMERY	460	1122	
ALASKA			
ANCHORAGE	1	1	
ANNETTE	51	51	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	9	83	
BIG DELTA	7	22	
COLD BAY	0	0	
FAIRBANKS	16	89	
GULKANA	11	12	
HOMER	0	0	
JUNEAU	0	0	
KING SALMON	5	5	
KOTZEBUE	2	16	
MC GRATH	2	29	
NOME	0	4	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	3	3	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	148	136	
PHOENIX	934	2005	
TUCSON	706	1453	
WINSLOW	551	848	
YUMA	868	1949	
ARKANSAS			
FORT SMITH	482	1011	
LITTLE ROCK	470	1014	
CALIFORNIA			
BAKERSFIELD	691	1245	
BISHOP	423	628	
BLUE CANYON	162	172	
EUREKA U	0	0	
FRESNO	529	897	
LONG BEACH	286	477	
LOS ANGELES	148	248	
LOS ANGELES U	291	633	
MT SHASTA R	165	173	
OAKLAND	9	18	
RED BLUFF	569	885	
SACRAMENTO	355	563	
SANDBERG R	287	369	
SAN DIEGO	142	207	
SAN FRANCISCO	5	17	
SAN FRANCISCO U	0	7	
SANTA MARIA	7	17	
STOCKTON	442	712	
COLORADO			
ALAMOSA	35	38	
COLORADO SPRINGS	158	285	
DENVER	203	352	
GRAND JUNCTION	479	799	
PUEBLO	329	592	
CONNECTICUT			
BRIDGEPORT	269	431	
HARTFORD	274	482	
DELAWARE			
WILMINGTON	345	622	
DIST.OF COLUMBIA			
WASHINGTON DULLES	316	574	
WASHINGTON NATIONAL	422	811	
FLORIDA			
APALACHICOLA U	519	1429	
DAYTONA BEACH	484	1473	
FORT MYERS	532	1899	
JACKSONVILLE	516	1378	
KEY WEST	599	2634	
LAKELAND U	511	1744	
MIAMI	558	2402	
ORLANDO	569	1987	
PENSACOLA	523	1445	
TALLAHASSEE	443	1164	
TAMPA	541	1745	
WEST PALM BEACH	542	2071	
GEORGIA			
ATHENS	389	933	
ATLANTA	358	885	
AUGUSTA	452	1015	
COLUMBUS	444	1126	
MACON	506	1260	
ROME	387	881	
SAVANNAH	502	1310	
HAWAII			
HILO	366	1635	
HONOLULU	435	2261	
KAHULUI	409	2032	
LIHUE	454	2251	
IDAHO			
BOISE	320	432	
LEWISTON	323	400	
POCATELLO	146	175	
ILLINOIS			
CAIRO U	399	988	
CHICAGO O HARE	213	515	
CHICAGO MIDWAY	246	618	
MOLINE	203	599	
PEORIA	217	612	
ROCKFORD	197	502	
SPRINGFIELD	248	738	
INDIANA			
EVANSVILLE	382	896	
FORT WAYNE	188	503	
INDIANAPOLIS	237	580	
SOUTH BEND	163	466	
IOWA			
BURLINGTON	218	616	
DES MOINES	234	635	
DUBUQUE	124	400	
SIOUX CITY	251	606	
WATERLOO	87	311	
KANSAS			
CONCORDIA	303	676	
DODGE CITY	404	829	
GOODLAND	270	529	
TOPEKA	309	756	
WICHITA	414	923	
KENTUCKY			
COVINGTON	313	684	
LEXINGTON	281	572	
LOUISVILLE	310	698	
LOUISIANA			
ALEXANDRIA	508	1227	
BATON ROUGE	530	1446	
LAKE CHARLES	563	1567	
NEW ORLEANS	514	1471	
SHREVEPORT	576	1418	
MAINE			
CARIBOU	38	76	
PORTLAND	135	201	
MARYLAND			
BALTIMORE	363	665	
MASSACHUSETTS			
BLUE HILL OBS R	216	331	
BOSTON	269	430	
WORCESTER	184	271	
MICHIGAN			
ALPENA	33	119	
DETROIT	237	509	
DETROIT METRO	161	380	
FLINT	116	314	
GRAND RAPIDS	154	380	
HOUGHTON LAKE	68	204	
LANSING	112	328	
MARQUETTE U	73	136	
MUSKEGON	125	281	
SAULT STE MARIE	7	41	
MINNESOTA			
DULUTH	24	56	
INTERNATIONAL FALLS	27	83	
MINNEAPOLIS	141	366	
ROCHESTER	106	320	
ST CLOUD	102	263	
MISSISSIPPI			
JACKSON	503	1189	
MERIDIAN	462	1109	
MISSOURI			
COLUMBIA REGIONAL	304	752	
KANSAS CITY	366	943	
ST JOSEPH	235	797	
ST LOUIS	326	835	
SPRINGFIELD	353	799	
MONTANA			
BILLINGS	162	235	
GLASGOW	153	229	
GREAT FALLS	120	176	
HAVRE	126	196	
HELENA	42	56	
KALISPELL	66	72	
MILES CITY	236	387	
MISSOULA	146	161	
NEBRASKA			
GRAND ISLAND	256	615	
LINCOLN U	309	754	
NORFOLK	214	508	
NORTH PLATTE	167	345	
OMAHA	295	734	
SCOTTSBLUFF	179	330	
VALENTINE	214	419	
NEVADA			
ELKO	140	147	
ELY	122	130	
LAS VEGAS	871	1652	
RENO	217	228	
WINNEMUCCA	295	340	
NEW HAMPSHIRE			
CONCORD	135	230	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	228	412	
ATLANTIC CITY U	219	343	
NEWARK	403	735	
TRENTON U	327	578	
NEW MEXICO			
ALBUQUERQUE	414	722	
CLAYTON	239	460	
ROSWELL	463	1042	
NEW YORK			
ALBANY	132	239	
BINGHAMTON	82	196	
BUFFALO	136	264	
NEW YORK U	404	723	
NEW YORK KENNEDY	384	631	
NEW YORK LA GUARDIA	352	593	
ROCHESTER	143	286	
SYRACUSE	145	307	
NORTH CAROLINA			
ASHEVILLE	238	498	
CAPE HATTERAS R	419	781	
CHARLOTTE	354	803	
GREENSBORO	321	669	
RALEIGH	364	768	
WILMINGTON	465	1045	
NORTH DAKOTA			
BISMARCK	94	161	
FARGO	65	177	
WILLISTON	90	155	
OHIO			
AKRON	196	428	
CINCINNATI ABBE OB	296	671	
CLEVELAND	158	378	
COLUMBUS	181	468	
DAYTON	247	576	
MANSFIELD	175	402	
TOLEDO	148	381	
YOUNGSTOWN	119	299	
OKLAHOMA			
OKLAHOMA CITY	493	1061	
TULSA	471	1053	
OREGON			
ASTORIA	0	2	
BURNS U	187	195	
EUGENE	119	122	
MEACHAM	161	165	
MEDFORD	275	293	
PENDLETON	363	449	
PORTLAND	170	189	
SALEM	140	145	
SEXTON SUMMIT R	147	154	
PACIFIC AREA			
GUAM TAGUAC R	429	2991	
JOHNSTON	470	2732	
KOROR R	495	3575	
KWAJALEIN	494	3472	
MAJURO	486	3312	
PAGO PAGO	412	3046	
PONAPE R	457	3167	
TRUK MOEN ISLAND	482	3480	
WAKE	568	3200	
YAP R	468	3374	
PENNSYLVANIA			
ALLENTOWN	239	427	
ERIE	96	208	
HARRISBURG	331	589	
PHILADELPHIA	394	705	
PITTSBURGH	171	388	
SCRANTON	160	321	
WILLIAMSPORT	221	430	
RHODE ISLAND			
BLOCK ISLAND	185	223	
PROVIDENCE	296	456	
SOUTH CAROLINA			
CHARLESTON	480	1241	
CHARLESTON U	495	1248	
COLUMBIA	470	1179	
GRNVLLE-SPRTNBRG	369	819	
SOUTH DAKOTA			
ABERDEEN	138	332	
HURON	175	393	
RAPID CITY	142	223	
SIOUX FALLS	167	383	
TENNESSEE			
BRISTOL	285	595	
CHATTANOOGA	384	898	
KNOXVILLE	328	731	
MEMPHIS	489	1119	
NASHVILLE	374	832	
OAK RIDGE R	316	701	
TEXAS			
ABILENE	607	1450	
AMARILLO	381	840	
AUSTIN	656	1858	
BROWNSVILLE	578	2465	
CORPUS CHRISTI	625	2156	
DALLAS	662	1701	
DEL RIO	534	1755	
EL PASO	543	1360	
FORT WORTH	606	1445	
GALVESTON U	574	1548	
HOUSTON INTERCON	594	1599	
LUBBOCK	476	1090	
MIDLAND	491	1224	
PORT ARTHUR	527	1644	
SAN ANGELO	557	1563	
SAN ANTONIO	658	2005	
VICTORIA	630	1931	
WACO	655	1784	
WICHITA FALLS	672	1563	
UTAH			
MILFORD	336	454	
SALT LAKE CITY	361	502	
WENDOVER	474	663	
VERMONT			
BURLINGTON	138	242	
VIRGINIA			
LYNCHBURG	304	606	
NORFOLK	383	801	
RICHMOND	367	720	
ROANOKE	270	553	
WALLOPS ISLAND	343	564	
WASHINGTON			
OLYMPIA	71	74	
QUILLAYUTE	5	8	
SEATTLE-TACOMA	106	112	
SPOKANE	216	243	
STAMPEDE PASS R	88	88	
WALLA WALLA U	373	456	
YAKIMA	257	307	
WEST INDIES			
SAN JUAN P.R.	562	3252	
WEST VIRGINIA			
BECKLEY	119	265	
CHARLESTON	237	534	
ELKINS	105	239	
HUNTINGTON	225	518	
PARKERSBURG U	258	561	
WISCONSIN			
GREEN BAY	125	321	
LA CROSSE	129	370	
MADISON	144	386	
MILWAUKEE	120	268	
WYOMING			
CASPER	109	167	
CHEYENNE	77	135	
LANDER	123	189	
SHERIDAN	96	145	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

JULY 1971

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	† DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama												5		2	6	6												5	5
Alaska*																													
Arizona	2	2		2	4			4	4	3	3	5																	
Arkansas	1	1						3	4		4	4		1	1														
California*																													
Colorado	3	2			3			4	5			2																4	
Connecticut	2	2			5			4				4			2	5												5	
Delaware*																													
Florida	10	10			4						2	3		6	12	4													
Georgia	3	1			4							4				4													
Hawaii*																													
Idaho								2	4			4				4												4	3
Illinois	1	1			4			4	3																				
Indiana	1	1			4			4	4		3	4	3	2	2	4													
Iowa	5	1		10	7			5	5		14	7	7			4												5	5
Kansas	3	3						5	5		4	5	5			5	4											4	5
Kentucky	2	2			4			°6	C		3	?	?	1		6												6	C
Louisiana												5		2		5													
Maine	4	2		1	6							4			1	5													
Maryland	2	2			5				3			4	3			4													
Massachusetts	3	2		3	4				3		2	4			6	5												4	3
Michigan	1	1			4			4				4			1	5													
Minnesota	6	4			5			6	6			6	5		1	5													
Mississippi											1	4	2	2	13	5											1	6	
Missouri	4	3		6	4			6	7	4	26	6		3		6													
Montana	1	1						4	6		1	5																	
Nebraska	8	5			5			5	6			5	4		1														
Nevada																												?	?
New Hampshire												4				5												4	
New Jersey	2	1			5									1	15	4												4	
New Mexico	1	1						3	?		1			4	5	?												4	
New York	2	1			5				5	1	2	5	4	3	1	4												5	
North Carolina								3	6		1	5	3	ø2	ø9	6												4	4
North Dakota	5	1		1	5			5	6		4	5	5																
Ohio	3	3		5	5				C		?	5		1	2	5													
Oklahoma	1	1			4							4			2	4													
Oregon								3	5			3				4													5
Pacific Area*																													
Pennsylvania	1	1		4	5			3	3		6	5			2	5													3
Puerto Rico*																													
Rhode Island												4				5												4	5
South Carolina														1		4												5	
South Dakota	9	4			5			4	6		8	5	4																
Tennessee	1	1		6	5			°5	C			°4	C		3	5												5	?
Texas	7	6		10	5			5	5		2	4		3	1	4											1	5	3
Utah								3	5			4																4	3
Vermont											3	4	2			4												3	
V.S. Virgin Is.*																													
Virginia								°3	C			4			2	4												4	
Washington									5			5				3													
West Virginia	1	1			4				2																		1	5	5
Wisconsin	5	4	1	2	5			5	6			5	5			5													
Wyoming															1														

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
JULY 1971

Elmer R. Nelson, Office of Hydrology

Numerous flash floods were reported throughout the nation during July. The most damaging flash floods occurred in central and eastern Kentucky during the middle of the month. Flood damages were estimated in excess of $3.3 million. The threat to Cave Run's Coffer Dam necessitated the evacuation of 1,500 people from their homes.

Major flooding occurred in the Nueces Basin in Texas during July. The crest of 25.7 ft. at Cotulla, Tex., ranked as the third highest of record.

ATLANTIC SLOPE DRAINAGE

All major water supply reservoirs in New Jersey decreased storage in July. Some reservoirs recovered as much as a half billion gallons near the end of the month due to heavy rains. The 13 principal reservoirs in New Jersey decreased storage by 8.4 billion gallons or about 12 percent of capacity. New York's three reservoirs on the upper Delaware decreased storage by 51.1 gallons or 21 percent of capacity.

Heavy thunderstorm activity on July 29 in the Washington, D. C., metropolitan area caused a flash flood on Four Mile Run in Alexandria, Va. The Corps of Engineers estimated the damage at $100,000.

Heavy thundershowers on July 2 caused flash flooding in urban areas of Columbia, S. C. Flood damage was estimated at $85,000 which is the highest in several years. This flash flooding was due to 3.5 inches of rain that occurred in less than 1 hour. Flash flooding occurred at Moncks Corner, S. C., during the evening of July 28 due to 4.55 inches of rain within a few hours. A creek which runs through the town overflowed its banks for several hundred yards. Water covered a highway to a depth of 1 foot for several hundred feet, but was passable. Minor damage was reported. Over 4 inches of rainfall over the headwaters of the Edisto Basin during the last 3 days of the month caused the North Fork to rise above flood stage at Orangeburg, S. C., on the 31st. It was almost 1 foot above flood stage late on the 31st and still rising.

EAST GULF OF MEXICO DRAINAGE

Locally heavy showers caused flooding along Peachtree Creek in Atlanta, Ga., on the 30th. It crested 3.2 ft. above flood stage during the evening of the 30th.

Shower activity was widespread in Mississippi during July. Monthly totals ranged from near 2 inches in De Soto County to 17 inches at Jackson County Fire Tower. Streams and rivers rose moderately as the precipitation increased. All rivers remained within their banks except the Pearl River in the vicinity of Jackson, Miss., which rose above flood stage for a short period at the end of the month.

Heavy thundershowers at Laurel, Miss., on the 27th caused flash flooding in the eastern areas of the city. The rainfall totalled 3.83 inches in 2 hours. Seventy-five to 80 families were evacuated by Civil Defense from the low areas of the city which is subject to flooding from the Tallahoma and Tallahala Creeks. Water in low areas rose to a depth of 4 ft. Damage was estimated at around $500,000 by Civil Defense. Minor flash flooding occurred elsewhere in Mississippi but was of short duration and of little consequence.

MISSISSIPPI SYSTEM

Upper Mississippi Basin--Heavy rain on the 10th caused flash flooding on Geneseo Creek at Geneseo, Ill., during the evening of the 10th and the morning of the 11th. Extensive damage resulted to commercial and private property. The rainfall totalled more than 5 inches in less than 3 hours.

Missouri Basin--Lowland flooding occurred in the upper portions of the Little Sioux River in Iowa from the 6th to the 8th. This flooding was due to 1 to 3 inches of rain over northwest Iowa during the night of the 3d. Recurring rains of near 1 inch during the following week kept the Little Sioux at near bankfull stages in the upper reaches until about the middle of the month. A crest of 11.98 ft. was observed at Linn Grove, Iowa, on the 12th.

Snowmelt from the higher elevations of the Rocky Mountains and rainfall from storm systems across the Platte River Basin in Nebraska kept the Platte River above flood stage near Grand Island, Nebr., from May 5 to July 1.

Heavy rains ranging from 2 to 7 inches caused flooding on the Little Platte, Fishing, and Platte Rivers in northwest and west-central Missouri on the 10th-11th. The crest on the Little Platte River at Smithville, Mo., was nearly 8 ft. above flood stage on the 11th. The Platte River from Agency, Mo., downstream was bankfull, but no significant flooding resulted. The Crooked River at Richmond, Mo., rose to around bankfull stage.

General to locally heavy rains of 3 to more than 5 inches from north-central through east-central Kansas on the 3d, 4th, and 22d caused mostly localized agricultural overflow. The heaviest flooding occurred on Lyon Creek, a tributary of the lower Smoky Hill River, which crested 10.3 ft. above flood stage near Woodbine, Kans., on the 23d. It crested nearly 5 ft. above flood stage on the 5th. Minor agricultural flooding occurred on the lower Republican River, and the Solomon River just above Waconda Lake, and Buffalo Creek, between the 3d and 5th. Minor flooding occurred on the upper Marais des Cynes River above Melvern Reservoir, and on Pattawatomie Creek on the 23d and 24th. Losses were generally light.

Ohio Basin--A flash flood occurred in the left fork area of Tupplers Creek, about 10 miles north of Charleston, W. Va., near Sissonville on the 11th. The flooding was confined to a small area about 8 miles in diameter. The flash flooding was due to locally heavy rains that occurred between 4:30 p.m. and 9:15 p.m. on the 11th. Twelve bridges were washed out and some roads were damaged. Many houses and cars were flooded.

Flash flooding occurred in Elliott County, Kentucky, in the Little Sandy River Drainage during the night of the 17th-18th. Several creeks were flooded in the vicinity of Sandy Hook, Ky., Isonville, Ky., Newfoundland, Ky., Bruin, Ky., and Sandy Hook, Ky. Damage to crops was estimated at $1 million. Other damage was estimated at $65,000.

A flash flood occurred in West Virginia, in Boone and Lincoln Counties, on the 18th. Part of the area drained into the Coal River and part into the Mud River. Flooding occurred on the left fork of Mud River in vicinity of Yawkey, W. Va. The heavy rain began about 10 a.m. and lasted about 50 minutes. This storm also covered adjoining areas in Boone County, on Little Horse Creek and Camp Creek. According to Civil Defense, about $90,000 damage occurred in Boone County and about $52,000 in Lincoln County.

Locally heavy rain caused some flash flooding in Greenup County, Kentucky. Some damage resulted to crops along Lost Creek, Little Sandy River, and East Fork in Greenup County. Damage was estimated at

$2,000 by the County Agent.

A flash flood occurred during the afternoon of the 19th on Grasslick Run at Fairplain, W. Va. Considerable damage resulted to streets, bridges, and growing crops. According to the County Agricultural Extension agent, 100 basements were flooded. Damage was estimated at $330,000.

Intense rain between 6 and 7 p.m. on the 21st, caused a flash flood on Arbuckle Creek in the Oak Hill-Minden-Minersville, W. Va., area. Approximately 50 to 75 homes had water in basements. Damage was estimated at $8,000.

Heavy rain of 3 to 4 inches on the 19th over the Muscatatuck Basin in southeast Indiana caused flooding at Austin, Ind., on the 19th-20th. The crest on the 19th was 2.3 ft. above flood stage.

Heavy rain and damage from flash flooding was widespread over central and eastern Kentucky between the 18th and 22d. The total damage in Morgan, Bath, Rowan, McGoffen, and Carter Counties was estimated in excess of $3.3 million. Damage to highways and bridges was estimated around $1 million. The threat to Cave Run's Coffer Dam necessitated the evacuation of 1,500 people from their homes in Bath and Rowan Counties. Flash flooding forced the evacuation of around 50 homes in Morgan, Carter, and McGoffin Counties.

Heavy rains produced minor flooding along the Cache River below Ullin, Ill., early on the 24th. The heaviest rain occurred in the Olive Branch-Horseshoe Lake area, where it is estimated that the amounts ranged from 5.5 to 8 inches.

White Basin--Heavy rains of 3 to 4 inches on the 23d and 24th caused flooding on the Cache River at Patterson, Ark., beginning on the 26th. The crest on the 27th was 0.5 foot above flood stage. The flooding continued into August.

Stages on the White River below Bull Shoals Reservoir were low during July due to lack of precipitation. The low stages interfered with barge traffic on the White. There were reports of fish kills due to increased temperature of the water at low stages.

Arkansas Basin--Heavy thunderstorm activity over southern Lincoln and northern Crowley Counties in Colorado on the 13th caused some flash flooding from normally dry arroyos along and adjacent to State Highway 71. The Colorado State Police reported some flooding west of La Junta, Colo.

Heavy rainfall on the 4th and 5th caused flooding along the lower portion of the Cottonwood River in Kansas from the 5th to the 8th. The crests ranged from slightly over flood stage at Cottonwood Falls, Kans., to 5.3 ft. over flood stage at Plymouth, Kans.

WEST GULF OF MEXICO DRAINAGE

Heavy rain over the upper Trinity and upper Brazos River Basins during the latter part of July caused some flash flooding. Changes in reservoir levels were minor since general rainfall accumulation was distributed over several days.

Flash flooding occurred in the south portion of Tarrant County, Texas, on the 28th-29th. A 4-inch rain in a 6-hour period on the 29th resulted in 25 to 30 flooded basements in the southwest portion of Fort Worth, Tex.

Heavy rains on the 24th-25th caused minor flooding on Leon River and Cowhouse Creek in central Texas on the 25th. The Leon River crested at Gatesville at 26.83 ft. on the 25th and Cowhouse Creek at Pidcoke, Tex, at a stage of 19.3 ft. on the same date.

Flooding occurred on the San Saba River at San Saba, Tex., on the 26th-28th. Lesser flooding occurred on the Llano River in Llano County on the 26th. The total rainfall causing these floods ranged from 4 inches to near 12 inches at Brady, Tex.

The flooding on Turkey Creek and the Nueces River in Texas in the beginning of the month was due to heavy rain on June 26-27. Harrison Ranch reported 13.75 inches and Light Ranch, 8.90 inches of rain in 24 hours. Flood crests of around 10 ft. above flood stage occurred on the 1st and 2d at the Turkey Creek Junction with the Nueces at Crystal City, Tex., and on the Nueces at Asherton and Cotulla, Tex. Major flooding occurred at Cotulla with a crest of 25.7 ft. (flood stage 15 ft.) ranking as the third highest of record. Extensive flooding occurred near Tilden and Three Rivers, Tex., from the 2d to the 15th. The crests on the 5th and 7th ranged from 9 to 15 ft. above flood stage. Lake Corpus Christi rose to the top of Wesley Seale Dam and began spilling over on the morning of the 9th. Extensive flooding moved rapidly down river below the dam, with flood stage reaching Calallen, Tex., on the 11th. Extensive flooding occurred through the 16th. Two boys were drowned on the 11th, one fishing below Wesley Seale Dam, and the other wading near Calallen, Tex. The water fell below flood stage on the 19th. Flood damage along the middle Nueces River was mostly to irrigation pumps, pump houses, and farm machinery. Damage along the extreme lower Nueces below Corpus Christi to Nueces Bay was mostly to seasonal dwellings. The total flood damage was estimated at $58,000.

Flash flooding occurred in the El Paso, Tex., metropolitan area on July 2. Considerable flooding of streets, arroyos, and drainage ditches occurred. Damage to private dwellings and lawns due to erosion and mud deposition was widespread, but, in most cases, fairly low in dollar cost. One death resulted. Damage was estimated at $95,000.

GREAT BASIN

Locally heavy thunderstorms caused flash flooding in a few areas of south-central Utah and in southwestern Colorado from the 19th through the 22d. The local flooding in Salt Lake City, Utah, during the evening of the 19th was due to 0.75 inch of rain that occurred in 1 hour. East of Paonia, Colo., heavy rain caused mud and rock slides that covered railroad tracks and blocked irrigation canals. Two buildings and a vehicle were washed down an embankment.

Heavy local thunderstorms caused flash flooding in the Reno, Nev., area on the 16th and 31st. Considerable property damage resulted from the first storm.

PACIFIC SLOPE DRAINAGE

Columbia Basin--Streamflow in the upper Columbia and Kootenai Basins reached the highest seasonal flow in late July but was controlled by reservoir storage. Consequently, flow in the lower Columbia River at Bonneville, Oreg., receded from 400,000 c.f.s. on July 1 to 200,000 c.f.s. at the end of the month. The stage of the Columbia River at Vancouver, Wash., was slightly over 15 ft. (flood stage, 16 ft.) on July 1. It continued to recede through the middle of the month and held fairly stationary except for tidal fluctuations through the 27th. The stage at the close of the month was near 5 ft. The average stage for Vancouver, Wash., for July was 9.4 ft. or 2.8 ft. above the long term monthly normal stage.

PUGET SOUND DRAINAGE

Warm weather beginning on the 13th caused rapid

melt of the heavy snowpack in the upper Skagit River Basin. The river rose to 1 to 2 ft. below flood stage at Concrete and Mt. Vernon, Wash., on the 22d, but no overflow was reported.

ALASKA

Major rises were observed on three different river systems in Alaska during July. The rise on the Tanana River in south-central Alaska resulted almost entirely from high elevation snow and glacier melt. Heavy rains during the middle of the month were the major causes of the other rises. However, streams in Alaska are usually at their highest baseflow levels during this time of the year due to high elevation snow and glacier melt.

The Kuskokwim River crested 1 ft. below flood stage at Nikolai on July 1. Heavy rainfall in the White Mountains northwest of Fairbanks caused a rise on the Chatanika River to near bankfull stage on the 13th. The Tanana River crested 0.5 ft. below flood stage at Big Delta on the 15th and at flood stage at Nenana on the 16th. The Chisana River crested just below bankfull level on the 17th. No damage resulted from the high water in Alaska during July.

The U. S. Geological Survey reported the monthly mean discharge for the Kenai River at Cooper Landing as the second highest July in 24 years of record and 140 percent of the median.

FLOOD STAGE DATA

(All dates in July unless otherwise specified)

JULY 1957

River and station	Flood stage	Above flood stages -dates		Crest •	
		From—	To—	Stage	Date
	Ft.			*Ft.*	
ATLANTIC SLOPE DRAINAGE					
North Fork Edisto:					
Orangeburg, S. C.	8	31	Aug. 4	9.7	Aug. 2
EAST GULF OF MEXICO DRAINAGE					
Peachtree Creek:					
Atlanta, Ga.	13	30	30	16.2	30
Pearl River					
Jackson, Miss.	18	29	Aug. 5	23 9	31
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Geneseo Creek:					
Geneseo, Ill.	U	10	11	U	10-11
Missouri Basin					
Little Sioux:					
Linn Grove, Iowa	12	6	8	14.5	7
		12	12	12.0	12
Platte:					
Grand Island (nr), Nebr.	3.5	May 5	1	4.9	June 14
Little Platte:					
Smithville, Mo.	24	11	13	31.9	11
Buffalo Creek:					
Jamestown, Kans.	16	4	5	17.45	5
Republican:					
Clay Center, Kans.	15	4	5	18.5	4
Solomon: Portis, Kans.	15	3	4	18.1	3
Lyon Creek: Woodbine (nr), Kans.	17	5	5	21.7	5
		23	24	27.3	23
Pottawatomie Creek:					
Garnett (nr), Kans.	26	23	23	27.3	23
Lane, Kans.	23	24	24	20.7	24
Ohio Basin					
Muscatatuck:					
Austin, Ind.	16	19	20	#18.3	19

River and station	Flood stage	Above flood stages -dates		Crest*	
		From—	To—	Stage	Date
	Ft.			*Ft*	
MISSISSIPPI SYSTEM (Continued)					
White Basin					
Cache: Patterson, Ark.	7	26	Aug. 16	7.5	27
				8.5	Aug. 7
Arkansas Basin					
Cottonwood:					
Cottonwood Falls, Kans.	9	5	6	9.1	6
Plymouth, Kans.	28	5	8	33.3	6
Emporia, Kans.	20	6	8	22.7	7
WEST GULF OF MEXICO DRAINAGE					
San Saba: San Saba, Tex.	24	26	27	27.2	26
		27	28	25.55	27
Turkey Creek:					
Crystal City, Tex.	8	June 29	5	17.6	1
Nueces: Asherton, Tex.	20	June 29	M	29.7	2
Cotulla, Tex.	15	June 29	7	25.7	1
Tilden 11 S, Tex.	14	2	M	22.8	5
Three Rivers 2 S, Tex.	25	5	15	39.9	7
Mathis 3 SW, Tex.	15	10	17	30.1	10
Calallen, Tex.	7	11	19	9.3	14
ALASKA					
Tanana:					
Nenana, Alaska	12	16	17	12 02	16

• Provisional
Highest Stage Observed
E Estimated
M Missing
T Tentative
U Unknown

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	17.3	14.4	20	1.4
1000	31	137	17.5	12.0	21	1.5
950	31	576	17.6	9.7	26	4.0
900	31	1,038	15.3	6.6	28	5.6
850	31	1,520	12.4	2.8	28	6.3
800	31	2,026	9.4	-.5	27	7.5
750	31	2,559	7.0	-6.1	27	8.5
700	31	3,124	4.0	-10.6	26	9.6
650	31	3,723	.9	-14.0	26	11.1
600	31	4,362	-2.4	-18.9	26	12.5
550	31	5,048	-6.6	-23.4	26	13.5
500	31	5,786	-11.3	-27.0	26	14.6
450	31	6,586	-16.5	-31.3	26	16.5
400	31	7,462	-22.4	-36.2	26	17.5
350	31	8,432	-29.4	-42.7	26	19.0
300	31	9,511	-37.9	-49.7	26	20.7
250	30	10,742	-46.4		26	24.9
200	30	12,196	-54.4		26	26.2
175	30	13,048	-56.2		26	23.5
150	30	14,022	-58.4		26	19.9
125	30	15,166	-59.8		26	15.1
100	30	16,561	-59.2		26	10.7
80	29	17,967	-57.2		25	3.6
70	28	18,813	-55.9		24	1.0
60	28	19,798	-54.4		11	1.7
50	27	20,971	-52.4		10	4.2
40	27	22,420	-50.5		09	6.5
30	26	24,306	-48.1		09	9.5
25	26	25,513	-46.3		09	10.9
20	26	27,004	-44.1		09	12.0
15	22	28,942	-41.5		09	15.2
10	21	31,734	-37.2			
7						
5						

ALBUQUERQUE, N. MEX. 841 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	19.2	7.8	09	2.1
1000	31	98				
950	31	553				
900	31	1,027				
850	31	1,524				
800	31	2,047	19.4	4.1	17	3.3
750	31	2,599	15.9	1.6	22	3.5
700	31	3,181	11.9	-.9	25	3.8
650	31	3,797	7.7	-3.4	26	3.2
600	31	4,451	2.6	-5.7	30	2.4
550	31	5,148	-2.7	-10.3	33	2.4
500	31	5,896	-8.0	-17.6	35	2.4
450	31	6,708	-12.7	-25.6	32	3.5
400	31	7,597	-18.5	-34.2	30	4.6
350	31	8,583	-25.5	-40.5	29	5.6
300	31	9,679	-34.1	-48.4	29	6.7
250	31	10,929	-44.1		28	7.2
200	31	12,389	-55.3		29	8.2
175	30	13,230	-61.0		29	8.4
150	30	14,174	-66.3		30	7.5
125	29	15,269	-70.3		31	4.6
100	26	16,592	-69.6		01	3.2
80	22	17,936	-65.2		08	3.6
70	21	18,756	-62.0		08	6.3
60	21	19,715	-59.4		08	8.0
50	20	20,863	-56.4		09	9.9
40	20	22,287	-54.5		09	12.9
30	20	24,143	-51.0		09	14.8
25	20	25,334	-49.3		09	16.5
20	19	26,807	-46.2		09	16.7
15	15	28,723	-43.5		09	18.7
10	10	31,472	-39.5			
7						
5						

AMARILLO, TEXAS 893 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	19.5	12.8	21	2.4
1000	31	109				
950	31	559				
900	31	1,029				
850	31	1,524	20.6	10.8	22	7.6
800	31	2,047	18.0	7.3	23	5.8
750	31	2,597	14.7	4.3	24	3.4
700	31	3,176	10.9	-.4	27	2.2
650	31	3,790	6.6	-3.7	31	.9
600	31	4,442	2.1	-8.9	34	.8
550	31	5,138	-2.8	-12.5	34	2.4
500	31	5,888	-7.3	-20.1	32	2.7
450	31	6,701	-12.2	-24.6	30	4.4
400	31	7,592	-18.2	-31.7	30	5.8
350	31	8,578	-25.4	-38.1	30	6.7
300	31	9,674	-33.9	-46.8	30	9.4
250	31	10,926	-43.7		30	11.2
200	31	12,389	-55.1		30	12.0
175	31	13,231	-60.4		30	10.9
150	30	14,180	-65.5		31	8.4
125	30	15,279	-69.5		32	6.5
100	29	16,609	-69.4		35	3.9
80	24	17,960	-64.1		07	4.3
70	28	18,781	-61.5		07	6.1
60	26	19,743	-59.0		08	8.5
50	28	20,895	-56.3		09	9.9
40	28	22,318	-54.3		09	12.0
30	26	24,170	-51.4		09	14.0
25	25	25,361	-49.0		09	16.1
20	24	26,837	-46.1		09	17.3
15	24	28,761	-43.8		09	18.6
10	19	31,512	-39.6		09	21.1
7						
5						

* ANCHORAGE, ALASKA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	11.1	7.2	17	2.5
1000	31	152	12.1	6.2	17	2.4
950	31	581	10.2	4.7	18	3.7
900	31	1,029	7.6	2.8	17	3.5
850	31	1,497	4.3	.6	16	3.6
800	31	1,989	1.8	-1.9	16	3.9
750	31	2,507	-.9	-5.2	18	4.2
700	31	3,055	-3.9	-10.5	20	4.6
650	31	3,637	-7.0	-13.3	21	5.9
600	31	4,258	-10.3	-18.0	22	6.3
550	31	4,924	-14.1	-22.6	22	7.1
500	31	5,640	-19.0	-27.8	22	8.9
450	31	6,417	-24.3	-34.6	22	9.8
400	31	7,265	-30.4	-39.8	22	10.8
350	31	8,206	-36.5	-42.1	22	12.3
300	31	9,255	-43.8	-46.3	23	13.7
250	31	10,461	-50.2		23	13.0
200	31	11,914	-50.1		23	9.2
175	31	12,788	-49.5		23	6.9
150	31	13,798	-49.3		22	5.4
125	31	14,993	-49.6		22	4.3
100	31	16,456	-48.9		20	2.6
80	31	17,921	-48.9		16	2.1
70	31	18,799	-48.6		13	1.8
60	31	19,815	-48.0		12	2.6
50	31	21,020	-47.3		10	3.1
40	29	22,500	-46.1		10	4.9
30	26	24,420	-44.2		09	6.8
25	23	25,643	-43.1		09	7.6
20	20	27,152	-41.7		09	7.7
15	10	29,125	-39.2			
10						
7						
5						

* ANNETTE, ALASKA 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	13.1	10.8	09	.7
1000	31	172	12.6	9.2	01	1.2
950	31	603	11.3	7.1	34	1.6
900	31	1,054	9.6	3.2	33	1.6
850	31	1,527	7.2	-.6	31	1.4
800	31	2,024	5.2	-2.8	31	1.7
750	31	2,549	2.8	-7.8	31	1.7
700	31	3,104	-.4	-10.1	32	1.9
650	31	3,693	-3.7	-14.8	31	1.8
600	31	4,322	-7.4	-20.5	29	1.7
550	31	4,994	-11.9	-24.8	29	1.4
500	31	5,716	-17.1	-29.0	28	1.6
450	31	6,498	-22.5	-35.0	29	1.9
400	31	7,351	-29.2	-39.8	30	1.6
350	31	8,294	-36.4	-44.6	32	2.1
300	31	9,341	-44.7	-50.3	32	2.4
250	31	10,539	-52.8		30	2.5
200	31	11,973	-53.4		28	3.0
175	31	12,834	-52.9		26	3.6
150	31	13,830	-52.9		25	4.4
125	31	15,006	-53.1		25	3.6
100	31	16,444	-53.0		24	2.1
80	31	17,885	-52.4		18	.9
70	31	18,749	-52.1		12	.9
60	31	19,749	-51.4		09	1.9
50	31	20,937	-50.5		09	3.4
40	31	22,398	-48.7		09	4.6
30	30	24,302	-46.3		08	6.9
25	30	25,518	-44.6		09	8.0
20	29	27,022	-42.3		09	8.8
15	25	28,965	-39.9		08	10.4
10	23	31,774	-35.6		09	12.8
7	20	34,281	-30.4		09	14.2
5	16	36,705	-25.0		09	17.4

ATHENS, GEORGIA 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	20.9	19.7	26	.7
1000	31	148				
950	31	594	21.1	17.6	27	3.2
900	31	1,063	19.2	14.6	26	4.3
850	31	1,553	16.3	11.1	26	4.3
800	31	2,067	13.6	7.6	25	4.3
750	31	2,609	10.5	2.8	25	4.1
700	31	3,181	7.0	-1.0	26	4.5
650	31	3,786	3.3	-4.4	26	4.9
600	31	4,432	-.1	-9.3	26	4.9
550	31	5,125	-3.8	-14.0	26	5.4
500	31	5,872	-8.1	-20.9	26	5.7
450	31	6,683	-12.8	-25.5	26	5.4
400	31	7,572	-18.7	-31.0	28	6.0
350	31	8,557	-25.5	-39.0	28	7.2
300	31	9,654	-33.8	-47.0	28	8.0
250	31	10,905	-44.1		29	7.8
200	31	12,364	-55.7		29	9.4
175	31	13,204	-61.0		30	9.3
150	31	14,151	-65.9		30	5.7
125	31	15,249	-68.8		31	2.7
100	31	16,586	-67.5		05	1.6
80	31	17,941	-64.3		08	4.8
70	31	18,763	-61.6		08	6.6
60	31	19,723	-59.7		08	9.3
50	31	20,870	-56.9		09	11.9
40	31	22,293	-54.4		09	14.1
30	29	24,153	-50.6		09	14.8
25	29	25,346	-48.9		09	16.2
20	28	26,922	-46.4		09	17.8
15	28	28,741	-44.3		09	19.8
10	18	31,494	-39.9		09	24.6
7	5	33,961	-35.6			
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* BARROW, ALASKA 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	8	2.8	2.2	19	.7
1000	29	123	4.4	2.0	13	1.1
950	29	544	5.9	.1	23	2.3
900	29	986	5.0	-2.5	24	2.9
850	29	1,451	2.8	-3.5	25	2.7
800	29	1,940	.2	-6.2	24	2.8
750	29	2,455	-2.5	-8.5	24	3.0
700	29	2,999	-5.4	-12.3	23	3.3
650	29	3,577	-8.8	-16.7	23	3.2
600	29	4,193	-12.4	-21.7	23	4.0
550	29	4,853	-16.7	-26.2	23	3.7
500	29	5,562	-21.5	-30.8	22	3.0
450	29	6,330	-27.1	-36.6	24	3.2
400	29	7,169	-33.3	-43.1	23	3.3
350	29	8,096	-40.1	-46.4	24	3.4
300	29	9,130	-47.0		25	4.2
250	29	10,324	-50.4		26	5.0
200	29	11,799	-45.1		24	3.7
175	29	12,692	-44.8		25	3.0
150	29	13,722	-45.2		25	2.0
125	29	14,939	-45.3		24	1.4
100	29	16,427	-45.6		19	1.0
80	29	17,914	-45.5		10	.8
70	27	18,807	-45.0		09	2.1
60	27	19,839	-44.5		09	3.0
50	27	21,062	-43.9		08	3.9
40	24	22,561	-43.4		08	4.3
30	23	24,503	-42.7		08	5.0
25	21	25,733	-41.7		08	6.0
20	11	27,251	-40.2			
15	8	29,230	-37.4			
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BARTER IS., ALASKA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	5.0	3.9	09	1.7
1000	31	123	6.6	3.7	10	1.7
950	31	547	8.8	2.7	19	1.0
900	31	995	7.8	.6	25	2.6
850	31	1,464	5.1	-2.2	25	4.1
800	31	1,957	2.1	-4.9	25	5.2
750	31	2,475	-1.4	-7.6	25	5.7
700	31	3,021	-5.1	-10.7	26	5.7
650	31	3,600	-8.2	-16.0	26	5.6
600	31	4,217	-12.0	-21.2	25	5.5
550	31	4,878	-16.1	-25.0	25	5.6
500	31	5,589	-20.8	-31.4	26	5.7
450	31	6,360	-26.2	-38.2	26	6.6
400	31	7,201	-32.3	-42.7	26	7.5
350	31	8,134	-38.8	-46.6	26	9.4
300	31	9,172	-46.2		26	10.8
250	31	10,373	-49.3		26	10.6
200	31	11,850	-44.8		26	8.4
175	31	12,744	-44.6		26	6.4
150	31	13,775	-44.9		26	4.2
125	31	14,992	-45.5		26	2.6
100	31	16,480	-45.5		27	1.6
80	31	17,969	-45.0		02	.3
70	31	18,863	-44.6		08	.9
60	31	19,896	-43.9		08	1.7
50	31	21,122	-43.2		08	2.9
40	29	22,629	-42.5		08	4.0
30	29	24,576	-41.9		08	4.9
25	27	25,813	-41.0		08	4.9
20	27	27,336	-39.3		09	5.0
15	[illegible]	29,318	-36.6		09	5.2
10	[illegible]	32,161	-31.4		09	6.0
7	13	34,688	-27.8			
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BETHEL, ALASKA 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	39	9.7	8.1	21	1.6
1000	26	116	10.2	6.3	20	1.7
950	26	542	8.3	4.4	15	3.7
900	26	988	6.1	1.8	16	4.3
850	26	1,455	3.9	-.2	17	4.9
800	26	1,946	1.2	-2.4	17	5.6
750	26	2,462	-1.7	-5.9	17	5.6
700	26	3,008	-4.8	-11.9	16	5.8
650	26	3,589	-7.4	-16.0	17	5.9
600	26	4,209	-11.0	-20.6	18	5.2
550	26	4,872	-15.0	-25.9	18	6.5
500	26	5,586	-19.7	-31.2	19	7.5
450	26	6,360	-25.2	-35.2	19	7.9
400	26	7,205	-31.4	-40.3	19	8.3
350	26	8,140	-38.5	-43.0	19	8.9
300	26	9,180	-45.9	-49.7	20	9.7
250	26	10,383	-48.7		20	8.9
200	26	11,853	-47.6		21	6.2
175	26	12,733	-48.5		21	4.3
150	26	13,748	-48.2		21	3.6
125	26	14,949	-48.4		19	2.8
100	26	16,417	-48.6		17	1.8
80	25	17,887	-48.6		13	2.1
70	25	18,766	-48.6		11	2.3
60	25	19,781	-48.1		11	3.1
50	25	20,985	-47.5		09	3.4
40	24	22,461	-46.3		09	4.5
30	24	24,379	-45.0		08	6.0
25	24	25,600	-43.9		08	7.2
20	21	27,101	-42.5		08	7.3
15	19	29,060	-39.8		08	8.5
10	17	31,847	-35.7			
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* BISMARCK, N. DAK. 956 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	503	12.2	10.2	35	.8
1000	31	119				
950	31	552			33	.9
900	31	1,012	15.9	6.8	27	4.5
850	31	1,497	13.8	2.4	29	6.2
800	31	2,005	10.4	-.4	30	7.6
750	31	2,539	7.0	-3.9	30	8.7
700	31	3,102	3.4	-8.4	30	10.3
650	31	3,699	-.5	-12.6	30	11.5
600	31	4,335	-4.6	-17.4	30	14.1
550	31	5,014	-9.0	-22.4	30	16.1
500	31	5,745	-13.5	-29.2	29	17.3
450	31	6,539	-18.9	-33.9	29	18.2
400	31	7,405	-25.2	-39.7	29	20.2
350	31	8,363	-32.4	-45.4	29	21.8
300	31	9,430	-40.5	-50.5	29	24.2
250	31	10,650	-48.6		29	26.4
200	31	12,099	-52.7		29	26.0
175	31	12,961	-53.1		29	25.5
150	31	13,952	-54.5		29	22.3
125	31	15,116	-56.1		29	17.3
100	31	16,532	-56.7		30	10.6
80	31	17,948	-55.8		32	5.7
70	31	18,801	-54.7		34	3.4
60	28	19,791	-53.0		02	2.3
50	26	20,974	-51.2		06	3.2
40	25	22,432	-49.1		08	5.5
30	24	24,331	-46.5		08	7.1
25	24	25,546	-44.7		08	9.8
20	22	27,046	-42.6		09	10.2
15	21	28,999	-40.0		08	11.9
10	17	31,793	-36.2		09	14.1
7	15	34,297	-31.6		08	18.2
5	7	36,691	-26.7			

BOISE, IDAHO 915 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	871	17.0	6.8	16	1.7
1000	31	107				
950	31	552				
900	31	1,016	19.8	5.4	18	.5
850	31	1,510	20.4	.8	33	1.8
800	31	2,030	17.0	-1.4	33	3.2
750	31	2,576	13.1	-3.3	31	3.3
700	31	3,150	8.5	-4.9	28	4.3
650	31	3,758	4.0	-7.6	26	6.9
600	31	4,403	-.6	-12.4	26	9.8
550	31	5,092	-5.5	-18.1	25	12.1
500	31	5,832	-10.6	-23.7	25	13.5
450	31	6,634	-16.2	-29.8	25	14.3
400	31	7,510	-22.6	-35.6	26	15.9
350	31	8,480	-29.6	-42.1	26	17.9
300	31	9,558	-37.8	-47.0	26	21.1
250	31	10,792	-46.2		26	23.9
200	31	12,247	-54.1		26	25.6
175	31	13,099	-56.8		26	23.2
150	30	14,071	-60.1		26	19.5
125	30	15,201	-62.9		26	13.5
100	30	16,575	-62.3		27	5.5
80	30	17,959	-60.3		23	.2
70	30	18,795	-58.6		08	2.1
60	29	19,770	-56.7		08	3.8
50	29	20,933	-54.1		08	5.6
40	29	22,374	-51.7		08	7.3
30	28	24,252	-48.7		08	9.4
25	27	25,453	-47.1		08	10.9
20	27	26,937	-45.2		08	11.8
15	27	28,869	-42.4		09	13.9
10	21	31,541	-37.8		08	17.2
7	5	34,107	-35.7			
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BOOTHVILLE, LA. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	25.4	23.6	24	.7
1000	30	140	25.8	23.0	25	1.4
950	30	592	23.0	19.9	24	2.3
900	30	1,063	20.1	16.3	23	2.0
850	30	1,554	17.1	12.2	21	1.6
800	30	2,070	14.2	9.2	23	.6
750	30	2,613	11.3	5.4	17	.8
700	30	3,187	7.9	1.5	12	.5
650	30	3,795	4.4	-1.9	05	.7
600	30	4,443	.7	-6.0	03	.7
550	30	5,138	-3.1	-10.8	03	1.3
500	30	5,887	-7.4	-17.1	04	1.4
450	30	6,701	-12.1	-23.4	03	2.2
400	30	7,592	-18.1	-29.7	02	2.3
350	30	8,579	-25.0	-37.2	04	2.8
300	30	9,678	-33.4	-45.9	04	2.5
250	30	10,932	-43.5		03	3.5
200	30	12,394	-55.4		06	4.0
175	30	13,234	-61.4		04	4.7
150	30	14,176	-67.5		05	6.0
125	30	15,261	-72.1		05	7.3
100	30	16,579	-70.1		07	6.5
80	30	17,918	-66.1		08	8.4
70	30	18,733	-63.5		09	10.4
60	30	19,685	-61.1		09	12.6
50	29	20,825	-58.0		09	14.7
40	29	22,241	-55.2		09	16.9
30	28	24,093	-51.7		09	18.2
25	25	25,285	-49.5		09	20.5
20	24	26,756	-46.9		09	22.2
15	23	28,676	-44.3		09	22.5
10	13	31,412	-40.4			
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* BROWNSVILLE, TEXAS 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	24.0	22.2	15	2.1
1000	30	129	25.1	24.1	16	4.1
950	30	579	22.5	20.4	17	8.7
900	30	1,050	20.4	14.3	17	9.2
850	30	1,543	17.8	8.9	17	8.0
800	30	2,060	15.1	5.5	16	6.7
750	30	2,604	11.8	2.1	15	5.2
700	30	3,178	8.4	-2.6	13	4.4
650	30	3,787	4.8	-6.2	12	4.7
600	30	4,435	1.1	-11.3	11	5.0
550	30	5,130	-3.0	-16.3	10	4.0
500	30	5,879	-7.5	-20.7	09	4.4
450	30	6,691	-12.7	-26.8	08	4.6
400	30	7,580	-18.7	-32.5	07	4.8
350	30	8,566	-25.4	-40.1	06	4.8
300	30	9,662	-33.9	-47.2	07	4.9
250	30	10,914	-43.7		07	5.9
200	30	12,376	-55.3		07	7.1
175	30	13,216	-61.1		07	8.5
150	30	14,159	-67.3		06	6.9
125	29	15,246	-71.7		06	9.4
100	26	16,563	-71.1		07	9.4
80	24	17,895	-67.8		08	11.7
70	24	18,704	-64.8		09	12.7
60	24	19,652	-62.1		09	13.6
50	23	20,787	-59.1		09	16.4
40	[illegible]	22,195	-56.4		09	17.9
30	[illegible]	24,038	-52.9		09	20.3
25	[illegible]	25,220	-50.4		09	22.1
20	[illegible]	26,687	-46.7		09	22.7
15	19	28,601	-43.8		09	24.2
10	18	31,345	-40.0		09	26.9
7	[illegible]	33,785	-37.1			
5	10	36,128	-33.7			

BUFFALO, N. Y. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	216	17.0	13.2	22	2.4
1000	31	135				
950	31	574	17.6	10.3	25	4.0
900	31	1,035	14.8	7.4	27	5.8
850	31	1,516	11.6	4.6	27	6.6
800	31	2,021	8.7	.8	27	8.0
750	31	2,553	6.4	-5.5	27	8.9
700	31	3,117	3.7	-9.7	27	9.4
650	31	3,716	.8	-12.6	26	10.2
600	30	4,355	-2.9	-17.6	26	11.8
550	30	5,038	-7.2	-23.4	27	12.7
500	30	5,775	-12.0	-27.4	26	14.2
450	29	6,570	-17.0	-32.5	26	15.5
400	29	7,443	-23.2	-35.9	26	16.3
350	29	8,411	-29.9	-43.5	26	18.8
300	29	9,487	-38.1	-48.0	26	20.7
250	29	10,718	-47.0		26	23.2
200	29	12,171	-53.4		26	24.6
175	29	13,026	-55.6		26	23.2
150	29	14,003	-57.5		27	18.8
125	29	15,151	-58.6		26	16.1
100	29	16,554	-57.9		26	11.6
80	29	17,963	-57.0		26	5.9
70	29	18,812	-55.5		26	2.4
60	29	19,798	-54.1		11	.8
50	29	20,973	-52.2		09	4.0
40	28	22,424	-50.3		09	6.0
30	27	24,312	-47.7		09	9.1
25	25	25,519	-46.0		09	10.0
20	23	27,008	-44.0		08	12.0
15	22	28,951	-41.0		09	14.3
10	12	31,728	-36.6			
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CAPE HATTERAS, N. C. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	24.2	22.2	24	1.9
1000	31	152	23.9	21.3	24	3.3
950	31	600	21.5	18.2	25	5.1
900	31	1,069	19.1	14.1	25	5.7
850	31	1,559	16.4	10.8	25	6.4
800	31	2,073	13.4	7.4	25	7.1
750	31	2,614	10.3	4.3	25	7.5
700	31	3,185	6.9	.3	26	8.2
650	31	3,792	3.7	-4.6	26	8.2
600	31	4,438	.0	-8.9	26	8.2
550	31	5,130	-3.7	-14.9	25	8.2
500	31	5,878	-7.7	-19.4	25	8.6
450	31	6,691	-12.4	-24.9	25	8.8
400	31	7,581	-18.1	-31.5	25	9.3
350	31	8,568	-25.1	-38.5	25	9.4
300	31	9,667	-33.4	-46.7	25	9.4
250	31	10,921	-43.5		25	9.2
200	31	12,383	-55.4		27	9.9
175	31	13,224	-60.7		28	8.8
150	31	14,173	-65.2		28	6.4
125	30	15,277	-67.0		27	4.5
100	29	16,627	-65.2		29	.3
80	28	17,993	-62.7		08	2.7
70	28	18,820	-60.8		08	5.5
60	27	19,786	-58.2		09	8.3
50	27	20,942	-55.3		07	11.1
40	27	22,374	-52.9		09	13.8
30	27	24,245	-49.5		09	15.7
25	27	25,444	-47.8		09	16.6
20	24	26,929	-45.2		09	17.5
15	21	28,876	-41.8		09	19.3
10	17	31,643	-39.3		09	21.7
7	8	34,127	-34.8			
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See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	CARIBOU, MAINE 991 MB				Resultant Wind		CHARLESTON, S. C. 1016 MB				Resultant Wind		CHATHAM, MASS. 1014 MB				Resultant Wind		ALBUQUERQUE, NEW MEXICO 858 MB				Resultant Wind		COLD BAY, ALASKA 1011 MB				Resultant Wind	
	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	191	14.8	11.8	23	1.7	31	13	23.3	21.4	25	1.1	31	16	18.8	16.2	29	1.7	31	1,428	20.7	13.6	17	.4	31	30	6.9	5.9	17	3.3
1000	31	112					31	152	23.3	21.3	25	2.8	31	135	18.9	14.1	26	2.4	31	81					31	119	6.9	5.1	17	3.7
950	31	547	14.6	8.7	26	4.5	31	600	21.9	17.4	24	5.4	31	576	18.5	10.4	25	4.8	31	536					31	[illegible]	6.6	[illegible]	18	3.7
900	31	1,003	12.6	6.2	27	6.2	31	1,070	19.4	14.8	25	5.6	31	1,039	16.2	7.2	25	5.8	31	1,012					31	985	5.5	2.3	19	3.4
850	31	1,481	9.6	3.4	27	7.7	31	1,560	16.5	11.2	24	5.4	31	1,523	13.3	3.9	25	7.1	31	1,509	21.4	13.0	18	.7	31	1,451	3.4	.4	17	3.9
800	31	1,982	6.7	-.3	27	8.9	31	2,075	13.4	8.3	25	5.2	31	2,032	10.9	-.4	26	8.2	31	2,033	18.6	10.1	19	1.1	31	1,941	-.3	-4.1	17	5.1
750	31	2,510	3.8	-5.1	27	10.3	31	2,616	10.4	4.8	25	5.4	31	2,567	7.9	-4.4	24	9.2	31	2,585	15.2	7.5	16	2.8	31	2,459	-4.9	-8.4	17	6.4
700	31	3,057	1.0	-10.3	26	11.3	31	3,187	7.2	-.2	25	5.7	31	3,133	5.0	-10.2	26	10.3	31	3,166	10.9	4.3	12	4.7	31	3,008	-3.6	-10.3	17	6.8
650	31	3,650	-1.7	-15.5	26	13.2	31	3,794	3.7	-3.1	26	5.7	31	3,735	2.3	-13.6	26	11.2	31	3,780	6.5	-.2	09	4.3	31	3,590	-6.5	-15.3	17	7.7
600	31	4,294	-5.0	-20.6	26	15.2	31	4,446	.0	-8.4	26	5.7	31	4,378	-1.2	-16.9	26	13.0	31	4,432	2.0	-4.1	07	6.0	31	4,213	-9.7	-19.4	17	8.9
550	31	4,977	-9.0	-24.7	26	15.6	31	5,133	-3.7	-13.9	25	5.9	31	5,066	-5.5	-20.1	26	13.1	31	5,129	-.4	-11.7	08	7.1	31	4,879	-13.9	-22.4	17	8.8
500	31	5,733	-13.9	-29.5	26	17.7	31	5,881	-7.6	-20.6	25	5.4	31	5,807	-10.1	-24.6	26	15.2	31	5,880	-8.9	-16.8	08	6.9	31	5,596	-18.7	-26.4	17	9.2
450	31	6,496	-18.9	-33.7	26	18.9	31	6,694	-12.5	-25.9	25	4.3	31	6,612	-15.1	-29.6	25	16.6	31	6,695	-11.6	-24.3	10	7.2	31	6,374	-24.0	-32.3	23	10.0
400	31	7,363	-25.2	-39.5	26	20.3	31	7,583	-18.2	-32.7	26	4.8	31	7,492	-21.2	-34.2	25	19.3	31	7,589	-17.1	-32.2	10	7.6	31	7,223	-30.0	-37.6	23	10.4
350	31	8,323	-32.0	-45.2	26	21.2	31	8,570	-25.1	-39.2	27	4.8	31	8,468	-27.9	-40.8	25	22.0	31	8,580	-24.2	-38.6	10	8.6	31	8,164	-36.6	-41.3	23	11.7
300	31	9,390	-40.2	-49.4	26	23.8	31	9,669	-33.6	-47.0	29	7.1	31	9,554	-36.1	-48.1	25	24.1	31	9,682	-32.9	-45.6	08	6.0	31	9,214	-43.2	-47.3	23	13.2
250	31	10,615	-47.9		26	26.0	31	10,922	-43.5		30	3.2	31	10,795	-45.2		25	24.7	31	10,938	-43.0		09	6.0	31	10,429	-47.9		24	12.5
200	31	12,066	-53.2		26	25.3	31	12,385	-55.1		32	4.0	31	12,254	-54.5		25	26.1	31	12,404	-54.8		03	7.8	29	11,901	-51.1		24	10.2
175	31	12,930	-54.0		25	22.5	31	13,226	-61.0		33	4.7	31	13,102	-58.2		26	25.5	31	13,246	-61.0		04	7.8	29	12,768	-51.4		24	8.0
150	30	13,918	-54.6		25	19.4	31	14,172	-66.0		34	3.2	31	14,067	-60.4		26	19.9	31	14,190	-67.2		03	7.5	29	13,770	-51.3		24	7.0
125	30	15,083	-55.6		25	14.1	31	15,271	-68.2		36	2.0	31	15,203	-61.0		25	15.1	30	15,277	-71.3		07	8.2	28	14,950	-50.9		24	4.3
100	30	16,506	-55.1		25	8.2	31	16,613	-66.9		03	2.4	30	16,590	-68.4		26	8.9	29	16,597	-70.8		08	7.9	28	16,402	-50.8		22	2.3
80	29	17,934	-54.1		24	3.8	31	17,970	-63.9		08	6.0	29	17,987	-67.9		23	2.3	27	17,936	-66.8		07	10.1	27	17,854	-50.2		18	1.7
70	29	18,791	-53.0		22	1.5	30	18,794	-61.4		08	8.4	29	18,833	-65.0		12	1.6	26	18,746	-64.8		08	13.3	27	18,726	-50.1		13	1.6
60	29	19,787	-52.0		17	1.2	30	19,757	-58.6		06	10.7	29	19,817	-64.7		11	3.4	24	19,694	-62.0		08	14.6	26	19,731	-49.6		11	2.4
50	29	20,973	-50.3		11	2.5	28	20,940	-55.7		09	13.3	29	20,989	-62.8		10	5.5	16	20,828	-59.4		09	17.5	26	20,926	-49.1		10	3.8
40	29	22,434	-49.0		10	5.2	28	22,339	-53.6		09	15.4	29	22,436	-58.7		09	8.5	05	22,238	-58.1		09	20.6	25	22,397	-48.0		09	4.6
30	29	24,334	-46.5		10	7.3	27	24,202	-49.9		09	16.4	29	24,324	-54.5		09	10.4	05	24,086	-51.6		09	21.5	25	24,301	-46.5		09	6.1
25	29	25,549	-44.8		09	9.7	27	25,401	-47.7		09	17.8	27	25,531	-45.8		09	11.3	04	25,278	-49.5		09	24.3	25	25,515	-45.4		09	6.6
20	29	27,049	-42.6		09	9.7	26	26,888	-45.0		09	18.4	27	27,024	-43.7		09	13.8	03	26,741	-47.4		08	24.3	25	27,009	-43.9		09	8.4
15	26	28,999	-40.3		09	11.8	25	28,824	-42.1		09	20.8	25	28,974	-40.8		09	16.1	04	28,660	-43.4		08	25.5	24	28,957	-41.0		09	9.2
10	23	31,785	-35.9		09	13.0	17	31,589	-38.6		09	23.7	20	31,732	-36.6		10	15.4	7	31,413	-41.9				23	31,733	-37.0		09	9.9
7	15	34,320	-29.9		09	15.5	8	34,074	-35.1				8	34,201	-33.5										19	34,207	-34.3		09	13.2
5																									15	36,571	-32.1			
4																									8	38,144	-30.3			
3																									5	40,145	-29.6			

Standard pressure surface (mb)	DAYTON, OHIO 982 MB						DEL RIO, TEXAS 978 MB						DENVER, COLO. 841 MB						DODGE CITY, KANS. 925 MB						EL PASO, TEXAS 883 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	299	17.2	15.4	20	.6	31	314	23.5	20.0	11	4.0	31	1,611	14.4	9.7	21	1.0	31	791	19.0	13.3	16	1.9	31	1,193	22.8	12.7	14	.6
1000	31	141					31	122					31	117					31	116					31	90				
950	31	582	18.7	13.0	24	2.7	31	570	23.0	19.2	15	8.1	31	565					31	563					31	547				
900	31	1,045	16.2	8.8	27	4.1	31	1,042	21.6	16.4	17	9.8	31	1,031					31	1,031	21.0	12.4	19	4.2	31	1,023				
850	31	1,530	13.2	4.6	27	5.4	31	1,537	19.0	13.1	16	8.5	31	1,519					31	1,526	20.1	8.4	21	6.7	31	1,522	22.4	11.2	14	2.5
800	31	2,038	10.9	-2.0	27	6.8	31	2,057	16.0	8.7	16	8.1	31	2,035	16.6	5.3	30	2.9	31	2,047	17.4	5.5	23	5.8	31	2,048	19.6	8.7	16	2.8
750	31	2,574	8.4	-6.6	27	8.1	31	2,603	13.4	2.9	16	6.4	31	2,584	14.8	1.6	31	2.9	31	2,595	13.9	2.2	25	4.0	31	2,600	15.9	5.8	16	1.7
700	31	3,141	5.6	-11.0	27	8.4	31	3,184	10.1	-1.5	16	4.2	31	3,165	11.3	-2.7	30	4.3	31	3,173	9.9	-3.5	27	3.7	31	3,182	11.9	1.9	09	1.1
650	31	3,744	2.3	-15.3	27	9.3	31	3,794	6.1	-5.3	19	3.0	31	3,779	6.9	-6.6	30	5.2	31	3,783	5.6	-7.6	28	4.3	31	3,798	7.2	-1.2	04	2.7
600	31	4,386	-1.4	-19.5	27	9.3	31	4,445	1.9	-8.6	12	2.3	31	4,441	1.8	-10.7	30	6.0	30	4,433	1.2	-11.6	29	5.3	31	4,461	2.2	-4.7	04	5.0
550	31	5,074	-5.5	-23.0	27	10.3	31	5,142	-2.3	-13.7	20	2.2	31	5,125	-4.9	-14.2	30	7.2	30	5,127	-3.8	-15.4	29	6.7	31	5,148	-4.6	-9.7	05	6.2
500	31	5,814	-10.3	-29.2	27	11.5	31	5,892	-7.1	-19.9	09	3.2	31	5,870	-9.1	-20.2	29	9.7	30	5,872	-8.8	-21.5	30	7.2	31	5,898	-7.2	-17.0	06	5.1
450	31	6,618	-15.7	-31.7	27	12.8	31	6,707	-11.8	-25.3	09	3.6	31	6,677	-14.2	-28.3	29	11.0	30	6,630	-13.9	-28.4	29	9.3	31	6,712	-11.9	-22.9	08	5.1
400	31	7,495	-21.8	-37.1	27	14.0	31	7,598	-18.0	-31.7	07	4.8	31	7,560	-20.5	-35.0	29	13.7	30	7,565	-19.9	-34.0	29	11.9	31	7,605	-17.6	-29.5	08	3.6
350	31	8,468	-28.7	-44.2	26	15.9	31	8,586	-24.9	-37.9	06	5.1	31	8,536	-28.1	-40.8	28	16.6	30	8,545	-26.8	-39.8	29	13.9	31	8,593	-24.9	-36.6	09	2.1
300	31	9,580	-36.7	-50.9	26	19.6	31	9,686	-33.3	-45.	06	7.1	31	9,621	-36.0	-48.5	28	20.8	30	9,635	-35.3	-45.7	29	16.8	31	9,692	-33.5	-43.9	06	1.7
250	31	10,788	-46.0		27	22.5	31	10,940	-43.3		05	6.8	31	10,864	-44.9		28	24.1	30	10,880	-44.9		29	18.2	31	10,945	-43.8		01	1.6
200	31	12,243	-54.5		27	25.1	31	12,454	-55.0		03	6.0	31	12,324	-54.4		28	26.1	3	12,338	-55.0		29	19.1	31	12,405	-55.6		36	2.7
175	31	13,092	-58.0		27	22.4	30	13,245	-61.0		04	6.2	31	13,171	-58.8		28	22.7	30	13,182	-59.8		29	18.4	31	13,245	-61.4		34	3.2
150	31	14,057	-60.5		28	17.4	30	14,188	-63.3		05	6.1	31	14,128	-63.3		29	18.9	30	14,134	-64.5		30	16.5	31	14,186	-67.7		36	3.4
125	31	15,188	-62.4		27	11.8	29	15,275	-67.6		06	6.9	31	15,239	-67.0		30	13.1	28	15,237	-67.9		31	12.3	31	15,271	-72.2		04	4.2
100	31	16,365	-62.4		27	7.5	29	16,590	-71.2		07	7.4	31	16,387	-65.9		31	5.6	28	16,582	-66.3		32	5.2	28	16,582	-71.3		07	4.9
80	31	17,949	-60.1		27	1.7	27	17,927	-65.8		08	9.0	31	17,953	-62.2		02	2.3	27	17,944	-63.2		02	3.1	27	17,916	-66.9		07	5.7
70	31	18,787	-57.9		06	1.2	28	18,744	-63.7		08	10.9	30	18,783	-59.9		06	3.9	27	18,770	-60.7		05	4.4	27	18,728	-64.5		08	8.1
60	31	19,762	-56.1		08	3.2	28	19,696	-61.1		09	12.1	30	19,755	-57.5		08	5.2	25	19,738	-57.8		08	6.2	25	19,676	-61.8		09	11.6
50	31	20,928	-53.9		09	5.9	27	20,834	-58.8		09	14.4	30	20,911	-54.7		08	7.7	22	20,898	-55.2		08	7.7	25	20,815	-58.3		09	14.0
40	30	22,368	-51.9		09	8.7	27	22,244	-56.6		09	16.1	30	22,345	-52.8		09	9.4	20	22,320	-53.6		09	9.9	25	22,227	-55.7		09	15.6
30	29	24,247	-49.2		09	10.8	25	24,090	-52.1		09	19.4	29	24,215	-49.8		09	12.3	16	24,185	-51.1		09	12.1	25	24,076	-52.0		09	16.7
25	28	25,449	-47.3		08	12.7	23	25,277	-49.1		09	21.3	29	25,413	-48.0		09	13.3	15	25,379	-48.5		08	13.4	25	25,263	-49.8		09	18.3
20	28	26,937	-44.7		08	14.5	20	26,751	-47.2		09	20.2	28	26,892	-45.2		09	14.8	12	26,849	-45.7		09	16.1	24	26,732	-47.4		09	19.4
15	24	28,874	-41.5		09	16.5	18	28,674	-44.2		09	23.1	28	28,824	-42.8		08	16.6	10	28,775	-43.5				22	28,647	-44.3		09	20.9
10	14	31,666	-37.5				13	31,432	-39.5		09	27.3	24	31,564	-39.4				5	31,546	-38.8				15	31,374	-41.0			
7							11	33,880	-36.3																					

Standard pressure surface (mb)	ELY, NEV. 811 MB						EMPALME, MEXICO 1010 MB						FAIRBANKS, ALASKA 1000 MB						FLINT, MICH. 988 MB						FORT WORTH, TEXAS 994 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed
SURFACE	31	1,958	11.0	.9	20	3.3	30	12	26.5	22.7	04	.9	31	135	12.5	8.5	36	.9	31	236	15.4	13.2	21	1.1	31	180	24.5	18.1	20	2.1
1000	31	127					30	96	27.5	22.4	07	1.0	31	132				.9	31	130					31	123				
950	31	571					30	551	25.9	18.4	14	1.8	31	563	11.5	5.0	25	2.0	31	544	17.4	9.6	26	3.1	31	574	24.4	16.8	22	7.5
900	31	1,034					30	1,027	24.1	14.4	14	1.8	31	1,013	8.7	2.3	24	3.4	31	1,030	15.0	6.4	27	4.9	31	1,048	22.5	13.8	22	7.5
850	31	1,519					30	1,525	21.4	12.0	11	1.9	31	1,483	5.3	-.2	23	4.1	31	1,511	11.6	3.7	27	6.1	31	1,543	19.6	10.8	22	5.0
800	31	2,029	16.6	4.2	19	2.1	30	2,048	18.1	10.2	09	2.6	31	1,976	1.8	-1.9	23	5.0	31	2,016	8.9	-1.1	27	7.3	31	2,063	16.5	7.2	21	3.3
750	31	2,581	16.6	.4	17	1.4	30	2,597	14.4	7.6	09	3.3	31	2,493	-1.6	-5.0	22	5.7	31	2,548	6.4	-6.4	27	8.2	31	2,609	13.0	3.6	22	2.1
700	31	3,164	12.6	-2.9	21	2.9	30	3,177	10.6	3.6	10	4.1	31	3,040	-4.6	-9.5	22	6.2	31	3,111	3.2	-9.9	27	8.6	31	3,185	9.1	-.5	21	1.1
650	31	3,781	7.7	-5.5	23	4.1	27	3,793	6.7	.6	10	5.6	31	3,620	-8.1	-13.5	22	7.1	31	3,709	.3	-13.3	27	9.9	31	3,796	5.4	-4.9	16	1.0
600	31	4,434	2.4	-8.7	23	5.5	27	4,446	2.3	-2.8	10	5.0	31	4,238	-11.8	-18.1	22	8.0	31	4,346	-3.4	-16.5	27	10.9	31	4,446	1.2	-10.2	12	.9
550	31	5,130	-3.2	-12.4	23	6.2	27	5,144	-2.3	-7.9	10	4.9	31	4,899	-15.8	-23.5	22	8.7	31	5,029	-7.6	-21.3	27	11.6	31	5,141	-2.7	-16.1	16	.6
500	31	5,876	-8.8	-17.4	24	7.9	27	5,895	-6.7	-14.6	08	4.8	31	5,611	-20.4	-29.3	23	9.1	31	5,764	-12.3	-26.6	27	13.1	31	5,890	-7.1	-21.7	36	1.1
450	31	6,685	-13.8	-25.6	25	9.4	27	6,711	-11.5	-19.6	09	4.6	31	6,383	-25.6	-33.3	22	9.8	31	6,561	-17.7	-31.6	27	14.7	31	6,705	-11.9	-29.0	34	1.7
400	31	7,570	-19.7	-32.5	25	11.3	27	7,604	-17.3	-26.6	10	6.1	31	7,227	-31.7	-39.3	23	10.1	31	7,432	-24.1	-38.0	27	15.9	31	7,597	-17.7	-36.6	34	2.7
350	31	8,550	-26.8	-39.1	25	13.0	27	8,596	-23.9	-32.5	10	5.3	31	8,161	-38.3	-42.9	22	12.4	31	8,395	-31.1	-43.7	27	18.7	31	8,585	-26.8	-42.9	34	3.8
300	31	9,641	-35.2	-46.1	25	15.2	27	9,7	-32.0	-40.2	09	4.8	31	9,203	-45.3		23	13.6	31	9,468	-38.7	-49.9	27	21.4	31	9,685	-33.3	-50.0	34	4.9
250	31	10,882	-44.5		25	18.6	27	10,9	-42.3		10	4.9	31	10,402	-51.1		24	14.3	31	10,697	-47.3		27	23.8	31	10,939	-43.4		34	6.1
200	31	12,350	-53.9		25	18.9	27	12,429	-54.7		09	5.1	31	11,858	-48.8		24	10.6	31	12,150	-53.6		27	26.1	31	12,404	-56.6		33	6.7
175	31	13,198	-58.8		25	16.8	27	13,271	-61.1		09	4.3	31	12,736	-48.5		24	8.9	31	13,007	-55.3		27	25.0	31	13,247	-60.4		33	5.8
150	31	14,154	-63.6		26	13.6	27	14,213	-67.7		09	4.8	31	13,752	-48.2		23	5.4	31	13,986	-51.1		28	20.3	31	14,194	-66.0		34	5.8
125	31	15,265	-66.6		26	8.9	27	15,290	-71.9		09	5.6	28	14,946	-48.2		22	3.5	31	15,136	-58.4		27	14.9	31	15,288	-70.3		36	4.8
100	31	16,617	-66.4		28	1.8	26	16,610	-71.9		08	7.0	28	16,416	-48.0		21	1.9	31	16,537	-59.0		28	9.1	31	16,613	-69.1		09	3.8
80	31	17,977	-62.8		07	2.1	24	17,937	-67.7		08	9.4	28	17,887	-47.9		14	1.5	30	17,941	-57.5		27	8.6	31	17,960	-66.8		07	6.0
70	31	18,807	-60.1		08	4.1	24	18,746	-65.3		09	12.5	27	18,767	-47.7		10	1.9	29	18,788	-54.6		28	[illegible]	31	18,781	-68.1		08	7.9
60	31	19,774	-57.9		08	5.7	24	19,691	-62.5		09	14.7	27	19,786	-47.2		10	2.7	29	19,772	-54.5		27	1.6	31	19,742	-59.5		09	9.8
50	31	20,931	-55.2		08	7.6	24	20,826	-59.2		09	16.2	27	20,996	-46.4		10	3.4	28	20,946	-52.6		09	3.4	28	20,892	-56.7		09	11.5
40	28	22,366	-52.6		09	9.1	24	22,233	-56.8		09	17.6	27	22,481	-45.4		09	5.3	24	22,336	-50.6		09	6.0	28	22,313	-54.9		09	13.9
30	27	24,236	-49.6		09	12.2	23	24,075	-52.6		09	19.2	27	24,403	-44.2		09	6.7	24	24,277	-48.2		09	9.2	28	24,196	-51.4		09	16.1
25	27	25,436	-47.7		09	13.5	21	25,256	-50.9		09	20.3	25	25,627	-43.1		09	8.0	21	25,486	-45.4		08	11.0	27	25,487	-49.1		09	18.7
20	27	26,918	-45.3		09	15.4	18	26,716	-48.1		09	20.8	22	27,135	-41.2		09	8.1	18	26,973	-44.5		08	12.6	27	26,833	-45.7		09	20.0
15	26	28,853	-43.0		09	16.2	16	28,627	-45.4		09	22.3	18	29,098	-38.3		08	8.4	6	28,908	-44.4		8	13.8	26	28,761	-43.5		09	20.0
10	21	31,611	-38.6		09	19.6		31,921	-33.4		09	11.3	11	31,921	-33.4		09	11.3	11	31,686	36.8				14	31,506	-39.9		09	24.2
7	8	34,027	-34.5																											

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT. — 935 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	13.5	5.6	02	1.0
1000	31	122				
950	31	559				
900	31	1,019	16.9	5.5	29	2.7
850	31	1,505	15.0	1.8	31	5.1
800	31	2,015	11.2	-.4	31	7.1
750	31	2,550	7.3	-3.7	30	8.4
700	31	3,113	3.3	-8.3	30	10.6
650	31	3,711	.1	-14.0	29	11.1
600	31	4,347	-4.0	-17.8	29	13.2
550	31	5,028	-8.4	-23.4	29	13.9
500	31	5,760	-13.5	-27.8	29	15.6
450	31	6,554	-18.9	-33.9	29	16.5
400	31	7,420	-25.4	-38.8	29	19.3
350	31	8,378	-32.5	-44.5	29	20.9
300	31	9,443	-40.8	-51.7	29	23.3
250	31	10,660	-49.7		29	26.1
200	31	12,103	-53.4		29	27.6
175	31	12,964	-52.7		29	25.7
150	31	13,957	-54.1		29	21.9
125	31	15,122	-55.6		29	16.3
100	31	16,543	-56.1		30	8.5
80	31	17,963	-55.2		31	4.4
70	31	18,817	-54.7		34	2.9
60	31	19,807	-53.2		02	2.5
50	31	20,987	-51.4		05	3.5
40	31	22,443	-49.4		08	4.7
30	31	24,340	-47.2		09	6.4
25	30	25,549	-45.4		09	7.1
20	28	27,041	-43.0		09	8.8
15	27	28,992	-40.6		09	10.5
10	22	31,774	-37.1		09	12.9
7	12	34,274	-32.0			

GRAND JUNCTION, COLO. — 853 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	19.8	4.9	13	3.5
1000	31	75				
950	31	530				
900	31	1,004				
850	31	1,501	20.9	3.8	13	3.5
800	31	2,026	21.1	2.8	14	4.1
750	31	2,581	17.6	.0	19	1.4
700	31	3,166	13.1	-2.5	27	2.9
650	31	3,783	8.2	-4.8	27	4.9
600	31	4,438	2.8	-7.1	26	6.4
550	31	5,135	-2.8	-12.1	27	7.5
500	31	5,882	-8.6	-17.2	27	8.5
450	31	6,691	-13.8	-26.4	28	10.5
400	31	7,576	-19.9	-33.[illegible]	29	12.9
350	31	8,556	-26.9	-39.3	28	14.5
300	31	9,646	-35.1	-46.8	28	17.0
250	31	10,893	-44.3		28	19.4
200	30	12,358	-54.1		28	20.1
175	30	13,205	-59.3		28	18.7
150	29	14,158	-63.7		28	14.6
125	27	15,266	-67.5		29	11.0
100	24	16,607	-67.0		31	3.6
80	23	17,966	-63.4		05	1.9
70	22	18,791	-60.7		07	4.1
60	22	19,756	-58.3		08	5.5
50	22	20,912	-55.2		08	7.6
40	21	22,345	-53.0		09	9.2
30	21	24,213	-50.1		09	12.1
25	21	25,409	-48.3		09	14.0
20	20	26,887	-45.7		09	15.2
15	18	28,813	-43.3		09	15.6
10	10	31,572	-38.9			

* GREAT FALLS, MONT. — 891 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,118	12.1	3.3	24	3.1
1000	31	134				
950	31	573				
900	31	1,031				
850	31	1,514	14.3	.8	28	2.6
800	31	2,023	11.1	-1.1	29	2.5
750	31	2,558	7.6	-4.4	28	3.5
700	31	3,122	3.9	-7.5	28	5.7
650	31	3,720	-.2	-11.8	27	7.9
600	31	4,356	-4.5	-17.1	27	9.9
550	31	5,036	-9.1	-21.7	27	11.6
500	31	5,767	-13.8	-27.6	27	13.5
450	31	6,559	-19.0	-32.9	27	16.2
400	31	7,426	-25.2	-38.5	27	19.1
350	31	8,385	-32.3	-44.4	27	21.4
300	31	9,451	-40.5	-50.9	27	24.2
250	31	10,671	-48.5		27	27.8
200	31	12,118	-53.7		28	28.6
175	31	12,976	-54.1		28	26.3
150	31	13,961	-56.0		28	22.6
125	31	15,116	-57.5		28	16.2
100	31	16,526	-57.7		29	8.2
80	31	17,938	-56.7		32	3.4
70	31	18,787	-55.4		01	2.4
60	31	19,773	-54.1		04	3.3
50	31	20,949	-52.2		06	4.4
40	31	22,401	-49.9		08	5.8
30	31	24,293	-47.5		08	8.4
25	31	25,503	-45.7		08	9.2
20	31	26,998	-43.3		09	10.4
15	29	28,945	-40.7		09	12.1
10	27	31,736	-35.8		09	15.7
7	19	34,218	-31.8		09	16.0

GREEN BAY, WIS. — 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	210	14.7	11.9	25	1.7
1000	30	116				
950	30	553	16.5	8.8	28	3.6
900	30	1,013	14.2	5.9	29	4.7
850	30	1,493	11.1	2.1	28	5.3
800	30	1,996	7.8	-1.4	28	6.8
750	30	2,526	5.0	-6.5	28	7.7
700	30	3,086	2.1	-10.5	28	9.0
650	30	3,681	-.9	-15.0	28	10.9
600	30	4,316	-4.6	-19.4	28	11.4
550	30	4,995	-8.7	-24.4	28	12.2
500	30	5,727	-13.5	-29.6	28	12.9
450	30	6,521	-18.7	-35.2	28	14.9
400	30	7,388	-25.1	-41.2	29	16.4
350	30	8,346	-31.9	-46.5	29	19.1
300	30	9,416	-39.8	-52.4	29	20.1
250	30	10,640	-48.0		29	23.5
200	30	12,093	-53.2		28	24.8
175	30	12,953	-53.8		28	22.6
150	30	13,938	-56.0		28	19.3
125	30	15,095	-56.7		28	15.1
100	30	16,507	-57.1		28	10.1
80	30	17,920	-56.2		29	4.7
70	30	18,772	-54.8		32	2.3
60	30	19,761	-53.6		04	1.1
50	29	20,938	-51.8		06	2.2
40	26	22,392	-50.2		08	4.7
30	25	24,280	-47.8		09	8.0
25	24	25,489	-45.7		09	9.0
20	23	26,984	-43.4		09	10.7
15	23	28,930	-41.3		09	12.7
10	16	31,704	-36.8		08	17.3
7	5	34,191	-32.7			

GREENSBORO, N. C. — 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	19.8	19.2	23	.8
1000	31	149				
950	31	594	20.9	16.6	28	2.0
900	31	1,062	19.1	12.9	29	2.7
850	31	1,552	16.2	10.2	28	3.8
800	31	2,066	13.4	6.5	27	4.7
750	31	2,607	10.4	2.3	27	5.5
700	31	3,178	7.0	-2.8	27	6.7
650	31	3,765	4.1	-8.4	27	7.0
600	31	4,432	.4	-12.6	27	7.2
550	31	5,125	-3.7	-17.7	27	7.5
500	31	5,871	-8.1	-23.5	26	7.6
450	31	6,682	-13.2	-28.1	26	7.9
400	31	7,569	-19.1	-33.1	27	8.7
350	31	8,553	-25.9	-40.8	27	11.5
300	31	9,648	-34.0	-48.4	27	13.0
250	31	10,900	-43.7		27	14.9
200	31	12,362	-54.8		28	15.6
175	31	13,207	-59.8		28	13.7
150	31	14,159	-64.2		28	10.5
125	31	15,267	-66.6		27	6.4
100	31	16,621	-65.0		29	2.8
80	31	17,991	-62.1		07	2.7
70	31	18,821	-60.2		08	5.0
60	30	19,789	-57.6		08	7.3
50	30	20,947	-55.1		09	10.2
40	30	22,380	-52.8		09	12.6
30	30	24,252	-49.2		10	13.8
25	30	25,454	-47.3		09	14.8
20	30	26,938	-45.1		09	16.4
15	26	28,873	-42.6		09	19.5
10	14	31,624	-38.7			
7	6	34,067	-36.3			

GUADALUPE IS., MEXICO — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	23	16.8	15.0	33	5.1
1000	27	119	16.2	14.2	32	4.7
950	27	556	18.1	5.2	32	2.0
900	27	1,025	24.2	-3.0	33	1.1
850	27	1,524	23.0	-3.8	35	.8
800	27	2,048	19.7	-4.1	07	1.2
750	27	2,599	15.9	-4.6	10	2.0
700	27	3,180	11.8	-7.2	10	1.6
650	27	3,795	7.6	-9.6	11	3.0
600	26	4,448	3.0	-14.2	09	4.3
550	26	5,146	-1.6	-18.0	09	4.6
500	26	5,898	-6.4	-24.3	11	4.1
450	26	6,713	-11.6	-27.5	11	3.1
400	26	7,606	-17.2	-35.8	12	3.0
350	26	8,597	-24.1	-42.9	15	2.7
300	26	9,699	-32.3	-50.5	15	3.6
250	26	10,959	-42.3		15	5.0
200	25	12,430	-53.5		14	7.1
175	25	13,277	-59.9		13	6.9
150	23	14,221	-66.6		13	6.9
125	23	15,311	-71.0		12	5.7
100	23	16,635	-69.5		08	6.3
80	23	17,976	-66.5		07	9.2
70	21	18,786	-64.9		07	10.4
60	21	19,735	-61.0		08	12.5
50	20	20,875	-57.8		08	13.7
40	20	22,291	-55.5		08	15.0
30	20	24,138	-52.4		07	19.3
25	20	25,324	-49.9		08	19.1
20	18	26,798	-47.7		08	21.0
15	14	28,706	-44.7			
10						
7						
5						
4						

* GUAM, MARIANA IS. — 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.8	23.4	12	2.0
1000	31	89				
950	31	540	23.1	19.4	12	5.1
900	31	1,011	20.1	15.5	12	5.2
850	31	1,503	17.4	12.5	12	5.0
800	31	2,020	14.8	9.1	12	4.8
750	31	2,564	11.8	5.5	12	4.7
700	31	3,139	8.5	2.7	11	5.3
650	31	3,749	5.2	-.8	10	5.1
600	31	4,399	1.6	-5.2	10	5.6
550	31	5,096	-2.3	-9.6	10	5.1
500	31	5,848	-6.5	-14.6	11	4.4
450	31	6,664	-11.2	-20.7	10	3.6
400	31	7,559	-17.0	-26.1	09	2.5
350	31	8,549	-23.7	-34.7	09	1.8
300	31	9,656	-32.0	-42.7	09	1.3
250	31	10,916	-42.4		07	1.1
200	31	12,383	-55.2		02	3.3
175	30	13,221	-62.6		36	5.6
150	30	14,154	-70.4		36	6.8
125	30	15,215	-78.0		03	7.6
100	29	16,487	-76.5		08	8.9
80	27	17,793	-71.8		09	13.8
70	27	18,587	-68.9		09	15.3
60	25	19,515	-65.9		09	16.0
50	25	20,631	-62.6		09	15.8
40	24	22,022	-58.8		09	15.9
30	23	23,845	-54.6		09	16.9
25	23	25,021	-51.8		09	16.2
20	20	26,480	-49.8		09	16.6
15	19	28,374	-47.8		09	21.2
10	12	31,087	-44.5		08	22.6

HILO, HAWAII — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	21.7	18.2	25	1.7
1000	31	147	21.8	18.5	25	.5
950	31	591	18.7	16.6	09	2.5
900	31	1,054	15.5	13.9	08	3.3
850	31	1,537	12.2	11.2	08	3.9
800	31	2,045	10.7	4.0	08	4.9
750	31	2,583	10.5	-7.1	09	4.4
700	31	3,154	8.1	-10.7	09	3.5
650	31	3,763	5.3	-14.4	10	3.5
600	31	4,413	2.1	-19.7	09	3.0
550	31	5,109	-2.3	-23.1	08	2.0
500	31	5,858	-7.4	-27.1	10	.3
450	31	6,669	-13.4	-31.5	24	.9
400	31	7,555	-19.9	-37.0	26	4.2
350	31	8,534	-27.2	-43.0	26	6.7
300	31	9,622	-36.0	-50.5	27	9.9
250	31	10,861	-46.0		27	13.8
200	31	12,310	-56.9		27	16.4
175	31	13,147	-61.3		26	16.1
150	31	14,095	-65.2		26	13.0
125	31	15,191	-70.5		24	7.6
100	31	16,505	-72.3		12	4.1
80	26	17,828	-69.4		10	11.5
70	25	18,630	-67.0		10	13.2
60	25	19,569	-63.9		09	14.8
50	25	20,696	-61.1		09	17.3
40	25	22,091	-58.1		09	18.6
30	25	23,921	-54.4		09	19.5
25	25	25,097	-51.5		09	20.7
20	25	26,556	-48.5		09	21.6
15	19	28,460	-46.6		10	21.1
10	16	31,177	-43.0			
7	5	33,582	-37.8			

HUNTINGTON W. VA. — 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	18.4	16.9	15	1.2
1000	31	141				
950	31	583	19.8	15.8	24	3.1
900	31	1,049	17.6	13.0	26	4.4
850	31	1,536	14.7	10.1	26	5.4
800	31	2,047	12.0	4.5	27	6.6
750	31	2,586	9.3	-.9	27	7.0
700	31	3,155	6.2	-5.6	27	7.6
650	31	3,760	2.9	-10.3	27	8.2
600	31	4,404	-.6	-16.8	27	9.0
550	31	5,094	-4.6	-21.1	27	9.1
500	31	5,838	-9.3	-25.5	27	9.7
450	30	6,647	-14.4	-29.2	27	11.1
400	30	7,529	-20.4	-34.9	27	11.9
350	30	8,507	-27.3	-41.1	27	13.8
300	30	9,597	-35.2	-48.2	27	16.9
250	30	10,842	-44.6		27	19.7
200	30	12,303	-54.4		27	21.9
175	30	13,150	-58.6		28	20.4
150	30	14,112	-62.0		29	14.8
125	30	15,232	-64.3		27	9.2
100	30	16,598	-63.9		27	5.3
80	29	17,971	-61.0		03	.5
70	29	18,805	-59.2		09	3.0
60	29	19,778	-56.6		09	5.0
50	29	20,941	-54.3		09	7.1
40	29	22,378	-52.2		09	9.8
30	27	24,252	-48.7		09	11.8
25	25	25,449	-47.4		09	12.8
20	24	26,929	-45.3		09	15.7
15	18	28,855	-42.6		09	17.5
10	9	31,622	-37.3			

* INTERNATIONAL FALLS, MINN. — 970 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	11.3	9.1	26	1.5
1000	31	103				
950	31	535	13.9	9.2	26	3.1
900	31	991	12.1	5.8	27	6.2
850	31	1,467	8.9	2.8	28	7.4
800	31	1,967	6.3	-1.5	28	8.4
750	31	2,494	3.3	-5.6	29	9.7
700	31	3,050	.2	-9.9	29	9.9
650	31	3,641	-2.7	-14.9	29	11.4
600	31	4,272	-6.3	-20.0	29	12.7
550	31	4,947	-10.4	-24.5	29	13.5
500	31	5,674	-15.3	-29.4	29	14.5
450	31	6,462	-20.8	-33.9	29	15.2
400	31	7,321	-27.0	-39.3	29	17.4
350	31	8,273	-34.3	-45.9	29	19.2
300	31	9,330	-42.5	-52.4	29	20.8
250	31	10,540	-50.2		29	24.1
200	31	11,987	-52.3		28	26.8
175	31	12,852	-51.7		29	22.7
150	31	13,852	-52.0		29	17.7
125	31	15,029	-53.3		29	14.1
100	31	16,465	-53.9		30	9.5
80	31	17,899	-53.3		31	5.1
70	31	18,760	-52.7		33	3.0
60	31	19,758	-51.8		36	1.9
50	31	20,944	-50.7		05	2.9
40	31	22,405	-48.7		07	3.5
30	31	24,307	-46.1		08	6.0
25	30	25,525	-44.6		09	7.1
20	30	27,025	-42.7		09	8.6
15	[illegible]	28,979	-40.3		09	10.9
10	24	31,764	-36.1		09	13.0
7	20	34,262	-30.5		09	14.9
5	14	36,674	-26.8			
4	7	38,293	-24.1			

JACKSON, MISS. — 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	22.4	21.7	18	1.0
1000	31	145	22.3	21.0	22	1.5
950	31	594	22.7	18.9	24	5.2
900	31	1,065	20.3	15.1	24	4.4
850	31	1,557	17.2	11.4	25	3.8
800	31	2,073	14.2	7.8	26	3.0
750	31	2,616	11.1	3.8	27	2.8
700	31	3,188	7.5	.0	29	2.5
650	31	3,796	4.0	-3.4	29	2.9
600	31	4,443	.3	-8.6	29	2.9
550	31	5,136	-3.5	-13.9	29	3.3
500	31	5,885	-7.4	-20.4	29	3.4
450	31	6,698	-12.4	-24.5	30	4.2
400	31	7,588	-18.2	-30.4	31	4.8
350	31	8,575	-25.1	-37.6	31	6.0
300	31	9,673	-33.5	-45.4	31	5.6
250	31	10,926	-43.7		31	5.7
200	31	12,387	-55.6		31	6.8
175	31	13,226	-61.6		31	6.6
150	31	14,168	-67.1		34	5.4
125	31	15,258	-70.4		01	3.4
100	31	16,585	-68.7		06	3.8
80	31	17,931	-65.3		07	5.8
70	31	18,750	-62.6		08	8.0
60	31	19,707	-60.0		08	10.7
50	31	20,853	-57.2		09	12.9
40	31	22,273	-54.7		09	14.2
30	30	24,128	-51.4		09	16.1
25	28	25,318	-49.4		08	18.3
20	23	26,782	-46.9		09	20.2
15	21	28,703	-44.2		09	21.1
10	12	31,455	-39.5			
7	5	33,926	-36.9			
5						

JOHN F. KENNEDY INT. AP NY — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	21.7	15.9	28	1.3
1000	30	139	20.4	13.5	28	1.9
950	30	581	18.9	10.1	28	2.7
900	30	1,044	16.5	7.2	27	4.5
850	30	1,529	13.6	3.2	26	5.8
800	30	2,037	11.1	-2.0	27	7.4
750	30	2,573	8.2	-6.7	27	8.8
700	30	3,140	5.1	-10.7	27	10.4
650	30	3,741	1.9	-13.5	27	11.4
600	30	4,383	-1.5	-19.2	26	11.9
550	30	5,071	-5.4	-23.4	26	13.3
500	30	5,812	-9.8	-27.8	26	14.6
450	30	6,617	-15.2	-32.1	26	15.2
400	30	7,496	-21.3	-38.4	26	17.4
350	29	8,470	-28.0	-45.3	26	20.1
300	29	9,555	-36.3	-51.4	26	22.0
250	29	10,795	-45.5		26	23.9
200	29	12,252	-54.7		26	25.7
175	28	13,094	-58.2		27	23.9
150	27	14,057	-59.9		27	21.5
125	26	15,191	-61.7		26	17.6
100	26	16,574	-60.7		27	13.5
80	26	17,968	-58.8		27	5.0
70	25	18,81[illegible]	-57.1		12	1.0
60	25	19,790	-55.1		10	4.1
50	25	20,960	-53.3		10	7.7
40	24	22,405	-51.3		09	10.3
30	23	24,291	-47.9		09	14.1
25	22	25,496	-45.7		10	14.4
20	21	26,986	-42.9		10	15.3
15	18	28,941	-40.5		10	16.8
10	8	31,723	-37.0			

JOHNSTON IS., PACIFIC AREA — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	26.1	22.0	09	7.2
1000	31	124	24.2	20.9	09	7.4
950	31	572	20.6	18.7	09	8.8
900	31	1,039	17.8	14.8	09	9.5
850	31	1,527	15.0	10.9	09	8.4
800	31	2,039	12.9	5.7	08	6.7
750	31	2,581	11.7	-2.7	09	5.4
700	31	3,155	9.1	-6.6	09	4.9
650	31	3,765	5.8	-10.7	09	4.6
600	31	4,416	2.0	-15.2	10	4.6
550	31	5,112	-2.7	-18.7	10	3.6
500	31	5,860	-7.7	-22.0	13	1.4
450	31	6,672	-13.1	-26.9	21	1.9
400	31	7,559	-19.3	-32.0	24	3.4
350	31	8,540	-26.4	-37.1	25	7.2
300	31	9,633	-34.8	-43.7	25	11.8
250	31	10,879	-44.8		26	14.8
200	31	12,335	-56.0		26	20.3
175	31	13,172	-62.1		26	21.8
150	31	14,112	-67.8		26	18.1
125	29	15,199	-71.5		25	12.2
100	29	16,511	-72.8		12	2.6
80	28	17,833	-69.1		09	10.2
70	28	18,636	-66.8		09	13.5
60	26	19,578	-64.4		09	15.1
50	26	20,702	-61.1		09	16.0
40	25	22,101	-57.8		09	17.6
30	25	23,934	-53.3		09	17.2
25	22	25,116	-51.6		09	16.8
20	22	26,573	-49.0		09	19.9
15	20	28,463	-46.8		09	23.8
10	19	31,173	-43.5		09	26.2
7	6	33,575	-39.3			

KEY WEST, FLA. — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	27.1	23.2	11	3.6
1000	31	150	26.7	23.3	11	4.6
950	31	600	23.2	20.9	11	5.9
900	31	1,074	20.1	15.2	11	6.2
850	31	1,566	17.3	10.9	11	5.1
800	31	2,082	14.3	5.5	10	4.7
750	31	2,622	11.5	-.5	10	4.5
700	31	3,199	8.1	-4.7	10	4.5
650	31	3,800	4.4	-9.4	10	4.0
600	31	4,455	.6	-14.7	10	4.0
550	31	5,138	-3.9	-17.6	10	4.3
500	31	5,894	-8.5	-21.3	10	4.1
450	31	6,696	-13.7	-24.8	09	4.1
400	31	7,590	-19.6	-29.9	08	5.2
350	31	8,568	-26.9	-38.6	07	5.9
300	31	9,662	-35.5	-47.4	06	7.8
250	31	10,904	-45.6		05	8.6
200	31	12,354	-57.1		05	10.1
175	31	13,188	-62.3		05	10.4
150	31	14,131	-66.1		05	8.6
125	31	15,229	-68.8		06	7.4
100	31	16,560	-70.0		07	9.7
80	31	17,896	-67.3		07	12.9
70	31	18,704	-65.1		08	15.0
60	31	19,649	-62.3		08	17.0
50	31	20,783	-59.3		09	19.3
40	31	22,193	-56.0		09	21.0
30	31	24,041	-51.4		09	21.6
25	31	25,234	-48.7		09	22.6
20	30	26,709	-46.1		08	22.8
15	27	28,637	-42.8		08	24.6
10	23	31,384	-40.7		08	29.1
7	16	33,820	-36.6			
5	5	36,114	-35.3			

KING SALMON, ALASKA — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	9.0	6.8	14	2.6
1000	31	126	9.4	6.4	16	2.7
950	31	551	8.4	5.2	17	4.4
900	31	997	6.4	3.8	17	4.4
850	31	1,464	3.7	.5	17	4.5
800	31	1,956	1.8	-3.6	18	4.1
750	31	2,474	-.5	-7.0	19	4.4
700	31	3,023	-3.8	-10.5	19	4.9
650	31	3,606	-6.4	-16.6	20	5.8
600	31	4,228	-9.8	-21.4	20	6.3
550	31	4,894	-13.9	-24.1	20	6.7
500	31	5,612	-18.6	-27.5	21	7.5
450	31	6,389	-24.1	-32.4	21	8.2
400	31	7,238	-30.2	-36.7	21	9.7
350	31	8,178	-36.8	-39.4	21	10.7
300	31	9,226	-44.2	-45.1	22	11.9
250	31	10,433	-49.6		22	12.4
200	31	11,893	-49.8		23	8.4
175	31	12,765	-50.2		23	7.1
150	31	13,772	-50.1		23	5.4
125	31	14,964	-49.8		22	3.7
100	31	16,424	-50.0		20	2.7
80	31	17,884	-49.4		15	2.0
70	31	18,760	-49.3		13	2.0
60	31	19,772	-48.9		11	2.6
50	28	20,957	-48.5		11	4.0
40	27	22,438	-47.4		10	4.8
30	24	24,352	-45.9		09	7.0
25	21	25,570	-44.7		09	7.3
20	17	27,067	-43.2		09	8.0
15	6	29,017	-41.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

+ KOROR, CAROLINE IS. 1006 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	27.4	24.3	19	2.5
1000	31	80	26.6	22.9	20	2.5
950	31	532	23.4	19.8	22	4.4
900	31	1,004	20.7	16.2	23	5.2
850	31	1,497	17.9	12.7	24	4.7
800	31	2,015	15.4	9.5	24	4.3
750	31	2,560	12.5	6.1	24	4.0
700	31	3,136	9.2	2.7	24	3.4
650	31	3,747	5.7	-.5	21	2.6
600	31	4,399	2.1	-4.4	18	2.1
550	31	5,097	-1.5	-9.6	17	2.2
500	31	5,851	-5.8	-14.2	14	2.8
450	31	6,669	-10.6	-19.0	12	3.7
400	31	7,567	-16.0	-25.9	12	5.5
350	31	8,563	-22.9	-33.3	10	6.9
300	31	9,672	-31.0	-41.3	09	8.4
250	31	10,938	-41.3		07	9.9
200	31	12,412	-53.8		05	13.4
175	31	13,255	-60.9		05	14.3
150	31	14,198	-68.0		05	16.4
125	31	15,273	-75.6		06	14.5
100	31	16,547	-77.9		08	10.3
80	31	17,846	-70.8		08	12.1
70	31	18,646	-67.0		09	10.5
60	30	19,582	-64.9		09	9.7
50	29	20,703	-61.8		09	8.5
40	29	22,096	-58.3		09	8.1
30	2[illegible]	23,924	-53.8		09	7.8
25	23	25,105	-51.4		10	7.7
20	21	26,565	-49.1		11	9.3
15	21	28,463	-46.5		10	10.6
10	19	31,178	-43.7		10	14.9
7	8	33,617	-40.6			
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KOTZEBUE, ALASKA 1012 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	5	11.9	8.9	10	.5
1000	27	106	12.1	5.6	14	1.2
950	27	534	9.4	3.9	16	2.7
900	27	980	6.2	1.4	17	3.5
850	27	1,446	3.1	-.7	17	3.7
800	27	1,935	.4	-4.6	18	3.7
750	27	2,450	-2.3	-7.3	18	3.9
700	27	2,996	-5.0	-11.0	18	4.0
650	27	3,575	-8.1	-14.7	19	4.2
600	27	4,193	-11.5	-19.4	19	3.7
550	27	4,856	-15.6	-25.4	20	3.4
500	27	5,569	-20.3	-30.2	21	3.6
450	27	6,341	-25.5	-35.3	21	3.5
400	27	7,185	-31.6	-40.9	20	2.4
350	27	8,119	-38.3	-43.0	21	3.5
300	27	9,160	-45.6		21	3.6
250	26	10,364	-49.6		23	6.6
200	26	11,834	-46.4		24	4.9
175	26	12,722	-46.0		22	3.6
150	25	13,743	-45.8		22	4.6
125	25	14,956	-46.3		20	2.6
100	25	16,438	-46.4		18	2.7
80	25	17,921	-46.2		15	2.0
70	25	18,810	-45.9		12	3.1
60	24	19,835	-45.4		11	3.3
50	24	21,054	-44.8		10	3.8
40	23	22,548	-44.1		09	4.8
30	23	24,484	-42.8		09	6.4
25	22	25,720	-41.5		08	7.3
20	20	27,231	-40.4		10	7.4
15	17	29,202	-37.7		09	7.2
10	10	32,005	-33.9			

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.5	23.8	08	4.6
1000	31	94	25.8	23.1	09	5.4
950	31	545	22.5	20.3	09	7.3
900	31	1,015	19.7	17.0	09	8.0
850	31	1,507	17.1	13.6	09	7.9
800	31	2,023	14.6	10.7	09	7.6
750	31	2,568	11.9	6.3	10	7.6
700	31	3,143	8.8	2.9	10	7.7
650	31	3,754	5.3	-1.2	10	8.0
600	31	4,405	1.6	-3.2	09	8.0
550	31	5,102	-2.3	-7.8	09	7.0
500	31	5,854	-6.5	-12.0	10	6.2
450	31	6,671	-11.3	-17.8	09	5.5
400	31	7,565	-16.9	-25.4	09	4.5
350	31	8,555	-23.9	-32.5	11	3.1
300	31	9,661	-32.6	-42.0	15	2.2
250	31	10,919	-42.9	-52.2	18	3.3
200	31	12,381	-55.8	-63.8	24	3.5
175	31	13,217	-62.8		27	4.6
150	30	14,148	-70.4		27	7.9
125	29	15,213	-76.8		26	8.7
100	24	16,488	-78.5		13	2.7
80	27	17,780	-71.9		09	8.6
70	26	18,575	-68.3		09	9.1
60	26	19,507	-65.4		09	8.9
50	26	20,627	-61.8		08	8.1
40	26	22,020	-58.5		09	8.2
30	25	23,848	-54.9		09	7.3
25	25	25,019	-52.7		09	8.7
20	25	26,470	-49.8		09	8.9
15	25	28,362	-47.9		09	10.9
10	25	31,049	-45.5		09	18.7
7	22	33,435	-42.0		09	32.1
5	18	35,747	-36.2		09	41.4

LAKE CHARLES, LA. 1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	23.8	23.0	12	.3
1000	31	140	25.2	23.4	22	2.0
950	31	591	22.6	19.8	[illegible]	4.9
900	31	1,062	20.2	15.2	[illegible]	4.7
850	31	1,553	[illegible]	11.0	20	3.9
800	31	2,069	14.2	8.1	20	2.4
750	31	2,61[illegible]	[illegible]	3.6	18	1.5
700	31	3,194	7.5	-.4	13	1.1
650	31	3,792	4.1	-3.7	11	1.7
600	31	4,438	.1	-7.7	08	1.4
550	31	5,131	-3.8	-13.4	06	1.2
500	31	5,878	-7.7	-19.3	07	1.5
450	31	6,67[illegible]	-1[illegible].5	-25.8	05	2.1
400	31	7,581	-18.3	-33.1	04	3.1
350	31	8,568	-25.1	-40.6	03	2.9
300	31	9,666	-33.3	-48.0	02	2.4
250	31	10,919	-43.7		04	2.2
200	31	12,381	-55.2		02	2.6
175	31	13,223	-60.8		03	4.1
150	31	14,168	-66.8		04	6.1
125	29	15,265	-70.3		05	6.8
100	29	16,591	-69.2		06	6.5
80	29	17,937	-65.5		08	8.5
70	29	18,755	-62.4		08	10.5
60	29	19,711	-60.4		09	12.5
50	29	20,856	-57.5		09	14.1
40	28	22,273	-55.1		09	16.4
30	26	24,128	-51.4		09	18.0
25	26	25,318	-49.5		09	20.2
20	25	26,789	-47.0		09	21.1
15	21	28,707	-44.4		09	22.7
10	15	31,457	-39.9		09	27.0
7	5	33,917	-35.9			

LANDER, WYO. 833 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,697	13.5	3.4	25	2.2
1000	31	123				
950	31	57[illegible]				
900	31	1,035				
850	31	1,523				
800	31	2,037	15.5	1.1	26	.9
750	31	2,582	12.4	-1.1	16	.8
700	31	3,156	8.8	-3.9	24	2.6
650	31	3,765	4.8	-7.1	26	6.1
600	31	4,413	.2	-10.8	27	8.9
550	31	5,103	-5.1	-15.9	27	10.6
500	31	5,844	-10.6	-22.1	27	11.6
450	31	6,646	-16.2	-28.4	27	12.5
400	31	7,523	-22.5	-35.5	28	14.1
350	31	8,492	-29.6	-41.2	28	17.2
300	31	9,570	-38.0	-48.5	28	21.1
250	31	10,802	-46.9		28	24.7
200	31	12,256	-54.0		28	27.0
175	31	13,108	-57.0		28	24.2
150	31	14,075	-60.7		28	20.8
125	31	15,202	-63.3		28	14.7
100	31	16,570	-63.9		29	7.1
80	31	17,949	-60.7		35	2.0
70	31	18,784	-58.5		04	1.8
60	31	19,759	-56.3		07	3.3
50	31	20,923	-54.1		08	5.3
40	31	22,363	-51.6		08	6.8
30	31	24,242	-49.2		09	8.8
25	31	25,442	-47.4		09	10.6
20	31	26,926	-45.1		09	12.1
15	28	28,856	-42.4		08	14.7
10	17	31,613	-39.0		09	16.5
7	7	34,101	-33.9			

*** LIHUE KAUAI, HAWAII 1014 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	24.5	20.3	07	5.0
1000	31	157	23.1	19.0	07	5.6
950	31	603	19.4	17.2	07	7.7
900	31	1,067	15.8	13.8	08	8.3
850	31	1,551	13.1	8.8	08	8.2
800	31	2,060	12.0	-.8	08	8.2
750	31	2,599	10.3	-7.4	09	6.8
700	31	3,171	8.3	-13.0	09	5.2
650	31	3,779	5.1	-18.9	10	3.9
600	31	4,427	1.2	-22.6	10	2.2
550	31	5,121	-3.3	-26.1	16	.4
500	31	5,867	-8.5	-30.1	23	2.0
450	31	6,675	-14.2	-33.3	24	3.8
400	31	7,558	-20.5	-38.2	25	5.6
350	31	8,534	-28.2	-43.2	26	7.7
300	31	9,618	-36.8	-50.8	26	10.6
250	31	10,854	-46.9		26	13.1
200	31	12,295	-57.9		26	16.9
175	31	13,129	-61.7		26	16.8
150	31	14,078	-64.3		25	14.4
125	31	15,184	-68.1		24	9.1
100	31	16,516	-69.6		13	2.4
80	31	17,852	-67.6		09	10.3
70	31	18,661	-65.2		09	12.7
60	31	19,605	-63.1		09	14.6
50	31	20,734	-60.3		09	17.6
40	31	22,135	-57.4		09	18.6
30	31	23,970	-53.7		09	20.5
25	29	25,151	-51.2		09	21.8
20	28	26,611	-49.0		09	22.5
15	27	28,515	-46.1		09	22.8
10	27	31,233	-42.5		09	27.3
7	23	33,664	-39.5		09	33.6
5	14	35,977	-36.0			

LITTLE ROCK, ARK. 1006 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	79	22.0	20.1	24	1.1
1000	31	133	22.5	20.3	24	1.4
950	31	532	22.8	17.4	23	4.4
900	31	1,052	20.2	15.1	24	5.1
850	31	1,544	17.0	12.7	25	4.5
800	31	2,060	14.6	7.5	27	4.0
750	31	2,603	11.5	2.7	29	4.1
700	31	3,177	8.2	-2.0	30	3.5
650	31	3,786	4.4	-5.7	32	3.4
600	31	4,433	.3	-11.6	31	4.5
550	31	5,126	-3.5	-16.9	30	4.2
500	31	5,873	-7.8	-22.4	30	5.0
450	31	6,685	-13.1	-28.6	31	5.8
400	31	7,572	-19.0	-34.4	31	7.2
350	31	8,556	-25.9	-41.1	30	8.2
300	31	9,651	-34.2	-48.0	30	9.2
250	31	10,902	-43.7		30	11.2
200	31	12,366	-54.6		29	12.1
175	31	13,210	-60.1		30	11.4
150	31	14,158	-65.8		30	8.6
125	31	15,257	-69.0		32	5.9
100	31	16,594	-67.4		02	1.9
80	30	17,951	-63.5		07	4.3
70	30	18,777	-60.9		08	6.0
60	30	19,740	-58.8		08	8.7
50	30	20,893	-56.1		09	10.8
40	30	22,319	-54.0		09	12.3
30	30	24,179	-50.9		09	14.9
25	27	25,372	-48.9		09	16.4
20	25	26,847	-46.3		09	18.9
15	22	28,772	-43.3		09	20.2
10	11	31,513	-39.6			

MCGRATH, ALASKA 1003 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	103	11.4	9.3	22	.6
1000	31	129			23	.9
950	31	559	11.1	4.6	22	2.3
900	31	1,008	8.0	2.2	20	3.2
850	31	1,477	4.4	.2	19	4.2
800	31	1,968	1.3	-2.4	19	5.3
750	31	2,485	-1.6	-5.6	19	6.0
700	31	3,032	-4.8	-9.1	20	5.2
650	31	3,612	-8.0	-14.8	20	5.1
600	31	4,230	-11.3	-20.2	21	5.1
550	31	4,892	-15.4	-24.5	21	5.9
500	31	5,605	-20.2	-29.7	21	6.6
450	31	6,378	-25.5	-36.2	22	7.0
400	31	7,222	-31.6	-40.0	22	7.7
350	31	8,156	-38.3	-43.8	22	8.5
300	31	9,198	-44.8	-47.4	23	10.1
250	31	10,406	-49.0		23	11.3
200	31	11,871	-48.5		24	7.9
175	31	12,751	-48.1		23	6.3
150	31	13,768	-47.7		23	3.9
125	31	14,971	-48.2		22	3.2
100	31	16,442	-48.1		19	1.9
80	31	17,913	-47.9		14	1.3
70	31	18,795	-47.7		11	1.8
60	31	19,814	-47.3		11	2.7
50	31	21,023	-46.5		10	3.4
40	31	22,507	-45.6		09	5.1
30	30	24,430	-44.2		09	6.4
25	27	25,656	-42.9		09	7.3
20	24	27,170	-41.0		09	7.3
15	20	29,136	-38.4		09	7.3
10	9	31,976	-32.7			

*** MAJURO, MARSHALL IS. 1011 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	28.1	23.8	09	3.8
1000	31	99	25.9	19.1	09	4.4
950	31	550	22.7	17.5	09	6.5
900	31	1,019	20.0	14.3	10	6.6
850	31	1,511	17.6	10.9	10	7.2
800	31	2,028	15.2	7.3	10	7.3
750	31	2,573	12.3	3.8	10	7.6
700	31	3,148	9.1	.5	10	7.4
650	31	3,759	5.6	-2.8	10	7.7
600	31	4,410	2.0	-6.3	09	7.7
550	31	5,108	-1.6	-11.3	09	7.0
500	31	5,861	-5.8	-16.4	09	6.4
450	31	6,680	-10.5	-22.3	09	5.7
400	31	7,577	-15.7	-29.6	09	4.6
350	31	8,574	-22.6	-36.8	10	4.2
300	31	9,684	-31.0	-44.8	12	3.8
250	31	10,950	-41.3	-51.9	14	2.1
200	31	12,425	-53.8		25	2.4
175	31	13,269	-60.6		27	4.4
150	31	14,212	-68.2		26	6.0
125	31	15,289	-74.5		25	5.4
100	31	16,577	-75.3		11	3.4
80	31	17,886	-69.8		09	5.5
70	31	18,688	-66.4		09	6.5
60	31	19,631	-62.6		09	7.1
50	31	20,764	-59.8		10	6.7
40	30	22,170	-56.2		11	4.8
30	30	24,018	-51.5		12	3.0
25	30	25,206	-49.5		11	3.3
20	30	26,675	-47.6		10	6.0
15	27	28,585	-44.9		10	8.7
10	21	31,320	-42.7		10	11.9
7	8	33,742	-40.1			

*** MEDFORD, OREG. 970 MB**

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	14.5	8.9	33	.3
1000	31	137				
950	31	573	16.6	8.9	29	.9
900	31	1,034	16.4	6.5	30	.9
850	31	1,520	14.8	3.4	05	.2
800	31	2,032	13.4	-2.3	18	.6
750	31	2,573	10.4	-6.6	21	3.3
700	31	3,143	6.6	-10.2	22	5.5
650	31	3,747	2.9	-13.2	22	7.1
600	31	4,390	-1.5	-17.1	22	8.2
550	31	5,077	-6.0	-23.7	23	10.2
500	31	5,816	-11.2	-26.8	23	11.1
450	31	6,617	-16.3	-32.9	24	12.5
400	31	7,493	-22.6	-38.2	24	14.2
350	31	8,462	-29.7	-44.1	24	17.1
300	31	9,540	-37.7	-51.0	24	20.5
250	31	10,774	-46.2		24	23.3
200	31	12,229	-54.4		24	22.5
175	31	13,080	-56.9		24	20.9
150	31	14,050	-59.9		24	17.0
125	31	15,181	-62.7		24	12.0
100	31	16,555	-62.6		24	6.3
80	31	17,941	-60.0		17	1.5
70	31	18,778	-58.5		10	2.5
60	31	19,751	-56.6		09	4.7
50	31	20,914	-54.5		09	5.4
40	31	22,352	-52.0		09	7.2
30	31	24,229	-49.1		09	9.8
25	29	25,430	-47.6		09	10.7
20	28	26,912	-45.3		09	12.9
15	26	28,843	-42.3		09	14.9
10	25	31,610	-37.6		09	17.4
7	23	34,094	-33.7		09	18.8
5	17	36,478	-29.4		09	21.9
[illegible]	8	38,084	-26.7			

MERIDA, MEXICO 1014 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	22.3	21.8	09	1.0
1000	31	131	24.2	23.2	11	4.5
950	31	582	22.9	18.9	12	7.4
900	31	1,053	20.5	13.9	11	7.7
850	31	1,545	17.6	9.4	11	7.5
800	31	2,061	14.6	5.5	11	6.8
750	31	2,604	11.4	1.8	11	6.5
700	31	3,177	7.9	-1.4	11	5.8
650	31	3,785	4.2	-4.7	11	5.4
600	31	4,432	.5	-9.1	10	5.8
550	31	5,126	-3.4	-13.8	09	4.9
500	31	5,873	-7.8	-19.6	08	5.1
450	31	6,686	-12.5	-23.3	08	5.3
400	31	7,576	-18.3	-30.2	07	5.5
350	31	8,562	-25.5	-36.9	06	5.8
300	31	9,658	-33.8	-45.9	06	4.9
250	31	10,910	-43.9		04	3.8
200	31	12,370	-55.4		03	3.3
175	31	13,211	-60.8		02	3.1
150	31	14,156	-66.8		02	4.7
125	29	15,249	-69.6		05	6.2
100	28	16,577	-69.7		07	10.5
80	28	17,911	-67.8		08	13.9
70	28	18,720	-65.2		09	15.8
60	28	19,665	-62.2		09	16.6
50	28	20,802	-59.2		09	18.5
40	27	22,209	-56.2		09	20.8
30	27	24,061	-51.4		09	19.1
25	26	25,255	-48.5		09	19.0
20	25	26,732	-46.4		09	19.3
15	23	28,652	-43.5		08	20.1
10	7	31,421	-39.7			
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MIAMI, FLA. 1017 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	25.6	23.1	08	.8
1000	31	158	26.0	22.0	12	2.6
950	31	609	22.4	19.3	13	5.3
900	31	1,078	19.6	15.5	13	5.3
850	31	1,569	16.8	11.6	12	5.1
800	31	2,094	13.9	7.0	12	4.5
750	31	2,627	11.0	2.6	12	4.0
700	31	3,200	7.8	-1.6	11	4.0
650	31	3,807	4.3	-5.9	12	3.9
600	31	4,455	.6	-10.7	12	3.8
550	31	5,148	-3.6	-16.1	12	3.9
500	31	5,895	-8.1	-22.0	11	4.0
450	31	6,706	-13.2	-27.0	11	4.4
400	31	7,593	-19.0	-32.5	09	4.4
350	31	8,577	-26.0	-38.4	08	5.6
300	31	9,671	-34.4	-46.3	07	7.4
250	31	10,920	-44.4		06	9.4
200	31	12,377	-55.9		06	12.0
175	30	13,217	-60.9		06	12.4
150	30	14,165	-64.9		07	10.2
125	30	15,270	-67.3		07	7.4
100	30	16,609	-68.4		07	8.4
80	30	17,954	-66.3		08	11.3
70	30	18,768	-64.0		08	13.3
60	30	19,719	-61.0		09	16.3
50	30	20,861	-57.7		09	19.4
40	29	22,279	-54.9		10	19.8
30	27	24,132	-51.2		09	21.0
25	23	25,326	-48.6		09	22.9
20	2[illegible]	26,807	-45.0		09	21.9
15	17	28,739	-42.2		09	24.4
10	14	31,499	-40.4		09	28.5
7	9	33,966	-36.6			

MIDLAND, TEXAS 917 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	21.0	14.9	15	1.9
1000	31	119				
950	31	570				
900	31	1,040	21.6	14.6	17	4.6
850	31	1,536	20.2	10.6	18	7.4
800	31	2,057	17.8	6.6	17	4.9
750	31	2,607	14.4	3.5	15	4.0
700	31	3,186	10.2	-.7	12	3.3
650	31	3,798	6.3	-5.1	10	2.7
600	31	4,450	2.2	-10.3	07	2.5
550	31	5,147	-2.0	-15.4	06	3.3
500	31	5,896	-6.6	-21.6	06	2.6
450	31	6,714	-11.3	-27.2	06	2.7
400	31	7,607	-17.5	-32.1	05	3.0
350	31	8,596	-24.6	-38.5	03	2.8
300	31	9,697	-33.3	-45.2	01	2.4
250	31	10,95[illegible]	-43.6		01	3.6
200	31	12,412	-55.2		36	4.7
175	31	13,252	-61.1		36	4.4
150	31	14,196	-66.9		36	4.1
125	31	15,284	-71.2		03	4.8
100	31	16,602	-70.8		05	5.2
80	31	17,943	-65.7		08	7.1
70	29	18,759	-62.8		08	8.2
60	29	19,713	-61.2		09	10.6
50	2[illegible]	20,854	-58.1		09	12.4
40	[illegible]	22,267	-55.7		09	15.3
30	[illegible]	24,118	-51.1		09	17.7
25	27	25,300	-48.8		09	18.9
20	26	26,783	-46.4		09	19.9
15	23	28,709	-43.6		09	21.2
10	20	31,450	-40.1		09	25.9

MONTERREY, MEXICO 963 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	423	22.4	20.2	12	.4
1000	29	123				
950	29	572	21.9	19.7	12	2.3
900	29	1,041	19.5	17.1	13	6.2
850	29	1,534	19.1	11.7	14	8.0
800	29	2,055	16.9	6.0	13	7.5
750	29	2,602	13.6	1.6	14	6.5
700	29	3,100	10.4	-5.5	13	4.5
650	29	3,793	6.5	-9.5	12	2.5
600	29	4,445	2.0	-12.0	09	1.9
550	29	5,141	-2.6	-17.1	08	3.4
500	29	5,890	-7.4	-23.1	08	4.7
450	29	6,704	-12.1	-27.8	08	5.8
400	29	7,595	-17.9	-35.1	08	5.8
350	28	8,584	-24.6	-40.5	07	5.4
300	28	9,684	-33.3	-49.5	06	5.2
250	28	10,939	-43.2		05	5.8
200	26	12,405	-54.7		05	7.0
175	25	13,247	-60.8		05	7.9
150	22	14,186	-67.3		05	8.5
125	22	15,272	-72.0		05	9.2
100	22	16,590	-70.6		07	9.7
80	21	17,925	-67.5		08	11.5
70	21	18,734	-64.7		08	12.9
60	21	19,681	-62.3		08	13.7
50	20	20,818	-59.9		08	15.6
40	19	22,223	-56.6		08	18.4
30	18	24,071	-52.2		08	21.3
25	17	25,255	-49.7		08	21.1
20	17	26,723	-47.0		08	21.2
15	14	28,649	-43.7		08	22.7
10	8	31,368	-40.6			

MONETT, MO. 966 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	438	19.4	17.4	17	1.5
1000	31	137				
950	31	581	21.6	16.2	19	2.2
900	31	1,051	20.4	11.4	24	4.3
850	31	1,543	17.3	7.2	26	4.4
800	31	2,059	14.9	1.1	28	3.9
750	31	2,602	11.6	-2.1	29	4.0
700	31	3,175	8.1	-4.3	29	4.4
650	31	3,783	4.2	-9.5	30	5.1
600	31	4,429	.1	-13.5	30	5.1
550	31	5,121	-4.4	-18.8	30	6.4
500	31	5,865	-9.2	-26.4	29	7.3
450	31	6,673	-14.1	-32.6	29	8.8
400	31	7,557	-20.0	-36.7	30	9.7
350	31	8,537	-26.9	-42.2	30	12.5
300	31	9,627	-35.3	-48.3	30	14.6
250	31	10,872	-44.9		30	17.2
200	31	12,329	-55.1		29	16.7
175	30	13,172	-59.8		29	16.5
150	30	14,125	-64.2		30	14.3
125	30	15,233	-67.2		3[illegible]	10.3
100	30	16,580	-66.5		32	4.3
80	30	17,943	-62.7		04	2.0
70	30	18,771	-60.4		07	3.6
60	29	19,740	-58.1		08	5.7
50	29	20,896	-55.2		09	7.7
40	29	22,328	-53.3		09	10.2
30	29	24,192	-50.7		09	12.8
25	29	25,385	-48.7		09	14.1
20	29	26,862	-46.0		09	16.3
15	27	28,790	-42.8		09	18.2
10	20	31,553	-39.5		09	22.3
7	10	33,990	-35.1			

See reference note at end of table

Columns: Standard pressure surface (mb) | No. of observations | Dynamic height | Temperature | Dew Point † | Resultant Wind: Direction | Speed M.p.s.

MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	57	22.0	20.8	21	.9
1000	31	149	22.8	20.8	24	1.3
950	31	599	22.7	18.8	25	3.4
900	31	1,069	20.3	15.7	25	3.9
850	31	1,562	17.3	11.8	24	3.7
800	31	2,078	14.3	8.0	24	3.6
750	31	2,621	11.2	4.0	25	3.4
700	31	3,194	7.6	-.1	26	3.1
650	31	3,802	4.4	-4.4	27	2.8
600	31	4,449	.7	-8.6	27	3.5
550	31	5,143	-3.3	-12.9	27	3.5
500	31	5,892	-7.2	-19.9	28	4.1
450	31	6,706	-12.2	-25.5	29	3.8
400	31	7,597	-17.9	-31.3	29	4.4
350	31	8,585	-24.9	-38.1	29	4.3
300	31	9,684	-33.1	-46.0	30	4.9
250	31	10,940	-43.2		29	4.8
200	31	12,405	-54.8		31	5.3
175	31	13,247	-60.8		32	5.5
150	31	14,193	-66.4		34	5.1
125	30	15,287	-69.7		02	2.3
100	31	16,620	-67.9		05	3.6
80	30	17,972	-64.4		08	5.9
70	30	18,795	-61.6		08	8.4
60	30	19,755	-59.3		09	11.3
50	29	20,905	-56.4		09	13.3
40	28	22,334	-53.4		09	15.1
30	26	24,197	-50.5		09	16.2
25	26	25,392	-48.6		09	18.8
20	25	26,857	-45.8		09	20.1
15	24	28,798	-43.1		09	22.2
10	17	31,566	-38.0		09	25.7
7	7	34,031	-36.2			

NASHVILLE, TENN. 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	180	20.3	18.9	17	.3
1000	31	141				
950	31	587	21.1	15.7	23	2.6
900	31	1,054	18.3	13.0	25	4.1
850	31	1,542	15.7	8.2	26	4.7
800	31	2,055	12.8	3.8	26	5.0
750	31	2,595	10.0	-3.3	27	5.6
700	31	3,165	6.6	-7.3	27	6.5
650	31	3,770	3.3	-11.9	27	5.9
600	31	4,415	-.3	-16.9	28	6.4
550	31	5,106	-4.0	-20.8	27	7.3
500	31	5,852	-8.5	-25.1	28	8.6
450	31	6,661	-13.7	-29.6	28	9.3
400	31	7,546	-19.7	-35.5	28	10.1
350	31	8,527	-26.6	-42.2	28	12.1
300	31	9,619	-34.9	-50.2	27	14.1
250	31	10,866	-44.3		27	16.5
200	31	12,326	-55.0		28	17.7
175	31	13,169	-60.3		28	16.8
150	31	14,120	-64.6		29	12.9
125	31	15,228	-66.5		28	7.4
100	31	16,578	-66.2		28	3.2
80	31	17,942	-62.7		06	2.3
70	31	18,770	-60.3		08	4.7
60	31	19,737	-58.0		08	7.0
50	31	20,894	-55.2		09	9.6
40	30	22,324	-53.0		09	11.5
30	30	24,191	-50.2		09	13.8
25	30	25,388	-47.9		09	15.7
20	26	26,868	-45.5		09	18.1
15	21	28,795	-42.8		09	18.7
10	13	31,570	-38.5		09	21.9
7	6	34,103	-33.1			

* NOME, ALASKA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	5	8.8	5.9	20	.6
1000	31	112	9.8	5.8	18	1.1
950	31	537	7.5	3.1	16	2.7
900	31	981	5.1	.6	17	3.6
850	31	1,446	2.7	-1.5	18	4.2
800	31	1,934	.5	-4.8	18	4.2
750	31	2,450	-2.2	-9.0	18	4.4
700	31	2,995	-5.0	-12.8	18	4.2
650	31	3,575	-8.1	-18.0	19	3.8
600	31	4,192	-11.7	-21.1	19	3.9
550	31	4,854	-15.8	-25.8	19	3.3
500	31	5,556	-20.4	-29.4	19	3.0
450	31	6,338	-25.7	-34.0	18	2.9
400	31	7,182	-31.8	-40.0	22	1.3
350	31	8,115	-38.6	-43.6	30	.6
300	31	9,154	-46.0		31	1.0
250	31	10,356	-49.4		26	3.2
200	31	11,823	-47.5		26	3.4
175	31	12,707	-47.1		26	2.2
150	31	13,728	-46.8		23	1.0
125	30	14,940	-47.4		19	.8
100	30	16,414	-47.7		12	1.2
80	30	17,889	-47.2		11	1.9
70	30	18,773	-47.1		10	2.4
60	30	19,794	-46.8		10	2.9
50	30	21,005	-46.1		09	4.3
40	30	22,493	-45.1		09	5.5
30	29	24,420	-43.7		09	6.4
25	27	25,648	-42.8		08	7.1
20	26	27,163	-41.0		09	8.1
15	24	29,129	-38.0		09	8.2
10	20	31,953	-32.9		08	10.1
7	13	34,499	-27.8			

NORTH PLATTE, NEBR. 919 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	847	15.1	12.3	12	.5
1000	31	126				
950	31	567				
900	31	1,029	17.5	11.8	17	1.3
850	31	1,520	18.8	6.8	23	3.1
800	31	2,039	16.2	3.9	26	3.5
750	31	2,585	12.7	.4	30	4.6
700	31	3,159	8.4	-3.5	30	5.8
650	31	3,768	4.3	-7.5	30	7.1
600	31	4,414	-.2	-12.7	31	8.7
550	31	5,104	-4.9	-16.1	30	10.8
500	31	5,846	-10.2	-22.9	30	12.6
450	31	6,650	-15.6	-28.8	30	14.3
400	31	7,529	-21.4	-36.6	30	16.7
350	31	8,503	-28.4	-43.1	29	18.7
300	31	9,586	-36.9	-50.0	29	21.4
250	31	10,824	-45.9		29	24.2
200	31	12,279	-54.3		29	26.0
175	31	13,130	-57.5		29	24.7
150	31	14,095	-61.3		30	21.9
125	31	15,221	-63.2		30	15.6
100	31	16,591	-63.6		31	7.4
80	31	17,972	-60.5		34	3.9
70	31	18,808	-58.2		03	2.9
60	30	19,784	-56.4		06	3.8
50	29	20,950	-53.5		08	6.3
40	28	22,392	-51.5		09	7.6
30	27	24,270	-49.0		09	10.4
25	27	25,473	-47.0		09	11.8
20	23	26,958	-45.3		09	13.8
15	22	28,895	-41.6		09	15.7
10	18	31,673	-37.8		08	17.2
7	5	34,139	-34.6			

OAKLAND, CALIF. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	6	12.8	11.1	24	1.5
1000	31	121	12.3	10.6	24	1.7
950	31	553	15.5	5.5	28	3.2
900	31	1,020	22.4	-4.5	30	3.9
850	31	1,514	20.5	-7.3	30	2.6
800	31	2,034	17.7	-9.4	27	2.4
750	31	2,581	14.2	-11.9	23	2.6
700	31	3,158	10.2	-14.2	21	3.5
650	31	3,769	6.0	-16.5	20	4.6
600	31	4,419	1.5	-20.3	21	5.2
550	31	5,112	-3.5	-24.2	21	6.2
500	31	5,858	-8.6	-30.0	22	7.4
450	31	6,666	-14.3	-36.3	22	9.1
400	31	7,548	-20.5	-40.9	23	11.0
350	31	8,526	-27.4	-46.5	23	13.4
300	30	9,617	-35.3	-52.8	23	17.0
250	30	10,863	-44.5		23	19.2
200	30	12,324	-54.2		23	19.9
175	30	13,172	-58.5		23	19.1
150	30	14,131	-63.0		23	14.8
125	30	15,244	-66.4		23	10.2
100	30	16,592	-66.5		23	3.5
80	30	17,955	-63.0		12	2.5
70	30	18,781	-60.9		10	4.4
60	30	19,746	-58.4		09	5.9
50	30	20,900	-55.9		09	8.5
40	30	22,328	-53.7		09	10.3
30	30	24,190	-50.7		09	12.9
25	28	25,384	-48.9		09	14.7
20	28	26,858	-46.4		09	16.6
15	28	28,780	-43.9		09	17.9
10	25	31,532	-39.2		09	19.7
7	5	33,991	-35.1			

OMAHA, NEBR. 968 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	403	17.0	14.6	22	.7
1000	31	126				
950	31	566	19.5	13.5	23	2.0
900	31	1,034	19.2	9.1	24	4.1
850	31	1,524	17.0	4.7	27	5.5
800	31	2,039	14.0	2.0	28	6.8
750	31	2,580	10.1	.2	29	7.8
700	31	3,149	6.0	-3.6	29	8.4
650	31	3,753	2.4	-8.4	29	9.4
600	31	4,396	-1.0	-15.9	29	11.0
550	31	5,085	-5.4	-19.1	29	12.3
500	31	5,626	-10.3	-25.2	29	14.1
450	31	6,629	-15.8	-28.9	29	16.6
400	31	7,506	-21.8	-34.7	29	19.7
350	31	8,479	-28.6	-41.7	29	22.5
300	31	9,562	-36.7	-47.7	28	25.1
250	31	10,800	-45.8		28	27.9
200	31	12,259	-53.9		28	29.8
175	31	13,111	-56.5		29	28.6
150	31	14,082	-59.3		29	22.3
125	30	15,216	-61.6		30	14.5
100	30	16,595	-62.2		29	8.1
80	30	17,980	-59.9		34	3.1
70	30	18,818	-57.9		05	3.1
60	30	19,794	-55.9		08	5.2
50	30	20,962	-53.4		09	6.6
40	30	22,404	-51.8		09	9.0
30	29	24,284	-48.9		09	10.8
25	26	25,486	-47.2		09	12.8
20	25	26,972	-45.2		09	15.3
15	20	28,916	-42.1		09	16.4
10	12	31,686	-37.3			
7						
5						

+ PAGO PAGO, AMERICAN SAMOA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	5	27.8	22.5	10	3.9
1000	31	116	26.4	19.0	09	4.2
950	31	567	22.5	16.8	08	4.8
900	31	1,035	18.8	13.2	08	5.2
850	31	1,524	15.8	8.6	08	5.0
800	31	2,038	14.3	1.8	09	2.9
750	31	2,582	12.4	-2.7	09	2.3
700	31	3,158	9.3	-6.1	07	1.5
650	31	3,769	6.2	-11.9	08	.8
600	31	4,421	2.8	-15.8	09	.9
550	31	5,119	-1.4	-20.0	30	.9
500	31	5,873	-5.7	-25.5	27	2.2
450	31	6,690	-11.0	-30.3	29	3.4
400	31	7,584	-17.2	-35.7	30	4.6
350	31	8,575	-24.0	-41.4	29	6.4
300	31	9,678	-32.7	-48.6	27	7.2
250	31	10,935	-42.9		27	8.1
200	30	12,401	-54.4		26	9.2
175	30	13,244	-60.9		26	9.4
150	30	14,186	-67.6		27	9.7
125	30	15,268	-73.7		27	8.3
100	30	16,558	-76.0		27	4.9
80	30	17,859	-71.9		26	5.1
70	30	18,654	-67.7		27	4.7
60	30	19,592	-63.7		28	5.9
50	30	20,721	-60.0		28	7.3
40	30	22,123	-57.3		28	8.5
30	30	23,963	-52.7		28	11.7
25	29	25,146	-50.8		28	12.4
20	29	26,610	-47.4		28	12.9
15	26	28,527	-44.2		28	12.9
10	17	31,252	-40.9		27	7.5
7						
5						

* PEORIA, ILL. 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	200	16.7	13.6	22	.6
1000	31	133				
950	31	573	18.7	12.3	25	2.8
900	31	1,037	16.2	9.4	28	4.0
850	31	1,521	13.8	4.3	28	4.8
800	31	2,030	11.1	.3	28	6.3
750	31	2,566	8.3	-4.3	29	7.6
700	31	3,133	5.3	-9.5	29	8.8
650	30	3,734	1.8	-12.0	29	9.7
600	30	4,374	-1.9	-16.8	29	11.6
550	30	5,061	-6.2	-21.3	29	12.8
500	30	5,800	-11.1	-26.4	29	13.4
450	30	6,601	-16.2	-33.0	29	14.2
400	30	7,476	-22.8	-39.1	28	15.9
350	30	8,444	-29.8	-45.6	29	17.6
300	30	9,522	-38.1	-50.6	29	19.9
250	30	10,754	-46.8		29	23.9
200	30	12,206	-54.4		28	24.7
175	30	13,056	-57.0		28	22.1
150	30	14,025	-60.2		28	17.8
125	30	15,155	-62.2		28	13.1
100	30	16,535	-61.8		28	6.8
80	30	17,921	-59.7		32	1.9
70	30	18,759	-58.4		05	1.4
60	30	19,734	-56.2		08	3.8
50	29	20,899	-54.0		09	5.8
40	27	22,339	-51.7		09	7.9
30	27	24,217	-48.7		09	11.1
25	27	25,421	-46.9		09	11.9
20	25	26,904	-44.9		09	13.9
15	24	28,837	-42.0		09	16.5
10	22	31,608	-38.0		09	18.9
7	18	34,080	-33.5		09	20.5
5	6	36,463	-28.9			

* PITTSBURGH, PA. 975 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	359	17.0	14.6	19	1.6
1000	31	139				
950	31	579	17.9	11.9	23	2.4
900	31	1,041	15.6	8.9	26	3.9
850	31	1,524	12.5	6.6	27	5.3
800	31	2,031	9.7	.1	27	6.3
750	31	2,565	7.5	-6.1	27	7.8
700	31	3,131	4.9	-12.0	27	8.5
650	31	3,732	1.5	-15.5	27	8.9
600	31	4,373	-1.8	-19.7	27	10.1
550	31	5,059	-5.9	-25.1	26	11.3
500	31	5,798	-10.8	-28.8	27	12.6
450	31	6,601	-15.8	-32.6	26	14.2
400	31	7,479	-21.7	-38.6	26	15.6
350	31	8,451	-28.8	-43.8	27	16.2
300	31	9,533	-37.0	-50.3	27	17.9
250	31	10,770	-46.0		27	20.6
200	31	12,225	-54.5		27	23.9
175	31	13,073	-58.0		27	24.2
150	31	14,041	-59.8		27	17.9
125	31	15,174	-61.9		26	13.2
100	31	16,555	-61.5		27	6.0
80	31	17,942	-59.6		28	2.1
70	31	18,782	-57.7		08	.5
60	30	19,759	-55.7		08	2.9
50	30	20,926	-53.6		09	5.5
40	28	22,369	-51.5		09	7.3
30	28	24,248	-48.9		09	10.5
25	27	25,451	-46.8		09	12.6
20	25	26,937	-44.4		09	14.6
15	24	28,879	-41.1		09	16.6
10	23	31,665	-36.7		09	18.3
7	16	34,173	-31.9		09	20.6
5	7	36,611	-28.0			

+ PONAPE, CAROLINE IS. 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	39	28.0	23.9	08	2.0
1000	31	78	26.5	20.7	08	2.0
950	31	530	23.2	17.9	10	3.7
900	31	1,000	20.3	14.5	10	4.8
850	31	1,492	17.3	10.8	10	5.4
800	31	2,008	15.0	7.8	10	5.1
750	31	2,553	12.3	4.4	10	4.5
700	31	3,128	8.9	.9	10	4.6
650	31	3,739	5.7	-2.7	10	6.2
600	31	4,390	2.1	-6.4	10	6.6
550	31	5,088	-1.8	-10.7	10	6.3
500	31	5,841	-5.9	-15.4	10	5.6
450	31	6,659	-10.6	-21.1	10	5.4
400	31	7,557	-16.0	-27.8	10	5.4
350	31	8,553	-22.8	-35.6	11	5.5
300	31	9,662	-30.9	-44.6	10	4.8
250	31	10,928	-41.6		09	4.0
200	31	12,400	-54.2		04	2.9
175	31	13,243	-60.9		02	2.0
150	30	14,184	-68.5		28	3.0
125	30	15,258	-75.5		24	4.1
100	30	16,539	-75.9		09	4.8
80	30	17,845	-70.8		09	8.1
70	30	18,645	-66.5		09	8.6
60	29	19,586	-63.6		10	7.6
50	29	20,716	-60.1		10	6.1
40	29	22,118	-57.2		10	5.1
30	29	23,955	-53.6		11	4.6
25	29	25,136	-50.7		12	4.9
20	27	26,597	-48.5		10	6.0
15	25	28,506	-46.4		10	8.9
10	17	31,215	-43.2		10	13.3
7	5	33,645	-40.1			

PORTLAND, MAINE 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	20	17.2	12.2	26	1.3
1000	31	127	18.0	10.8	27	2.0
950	31	567	17.9	7.9	28	4.2
900	31	1,029	15.4	5.5	27	5.3
850	31	1,511	12.3	2.6	26	6.2
800	31	2,017	9.5	-2.6	27	7.6
750	31	2,550	6.9	-8.0	27	9.2
700	31	3,114	3.9	-11.3	27	10.7
650	31	3,713	1.0	-15.8	26	12.5
600	31	4,352	-2.5	-20.1	26	14.2
550	31	5,037	-6.8	-23.7	26	15.3
500	31	5,774	-11.4	-28.4	26	16.1
450	31	6,574	-16.9	-33.5	26	17.6
400	31	7,448	-23.0	-38.4	26	19.2
350	31	8,416	-29.8	-44.7	25	21.7
300	31	9,494	-37.7	-50.7	25	24.6
250	31	10,729	-46.0		25	27.3
200	31	12,187	-53.8		26	26.9
175	31	13,041	-55.9		26	24.7
150	31	14,018	-57.5		26	20.4
125	31	15,167	-58.7		26	16.3
100	31	16,570	-57.5		26	9.6
80	31	17,984	-56.0		25	3.4
70	31	18,837	-54.7		21	1.5
60	29	19,831	-53.0		12	2.0
50	29	21,011	-51.2		11	4.1
40	28	22,468	-49.6		09	5.9
30	27	24,358	-47.4		09	10.0
25	27	25,570	-45.3		09	11.0
20	25	27,069	-43.0		09	12.3
15	24	29,016	-40.2		08	14.0
10	14	31,806	-36.2			
7						
5						
4						

* QUILLAYUTE, WASH. 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	58	10.9	9.7	16	.1
1000	31	153	10.9	10.0	20	.2
950	31	583	12.9	6.6	32	.9
900	31	1,039	13.2	2.1	32	1.0
850	31	1,519	11.4	-2.2	27	.9
800	31	2,023	8.9	-5.6	24	1.4
750	31	2,554	5.8	-8.7	23	2.1
700	31	3,115	2.4	-12.9	23	3.1
650	31	3,710	-1.0	-17.0	24	3.8
600	31	4,345	-4.8	-20.9	25	4.4
550	31	5,023	-9.5	-26.2	25	5.3
500	31	5,751	-14.8	-30.5	25	6.3
450	31	6,540	-20.6	-35.3	25	8.3
400	31	7,400	-27.1	-40.8	25	10.0
350	31	8,351	-34.4	-45.7	25	11.6
300	31	9,408	-42.2	-52.2	25	15.9
250	31	10,623	-49.0		24	17.9
200	31	12,078	-51.5		24	20.6
175	30	12,951	-52.7		24	19.6
150	30	13,941	-55.1		25	15.4
125	30	15,100	-57.0		25	10.1
100	29	16,513	-57.8		24	5.1
80	28	17,926	-56.1		20	1.3
70	29	18,777	-55.5		13	1.3
60	28	19,761	-54.7		09	3.1
50	28	20,932	-53.3		09	4.1
40	28	22,374	-51.7		08	5.3
30	28	24,253	-48.8		08	7.6
25	28	25,457	-47.0		08	9.0
20	28	26,943	-44.8		09	10.9
15	26	28,880	-42.4		09	11.4
10	26	31,647	-37.8		08	14.2
7	22	34,126	-33.3		09	15.9
5	9	36,505	-29.2			
4	5	38,079	-27.0			

RAPID CITY, S. DAK. 907 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	966	13.3	7.5	31	2.4
1000	31	128				
950	31	567				
900	31	1,026	15.3	7.1	31	2.3
850	31	1,514	17.2	3.8	29	3.3
800	31	2,030	14.5	1.0	30	4.2
750	31	2,572	11.0	-2.8	30	5.3
700	31	3,143	6.9	-6.6	29	7.0
650	31	3,748	3.0	-11.6	29	8.6
600	31	4,391	-1.4	-16.4	29	10.4
550	31	5,078	-6.3	-20.5	29	12.2
500	31	5,816	-11.6	-26.2	29	14.1
450	31	6,615	-17.1	-31.6	29	15.4
400	31	7,488	-23.1	-37.4	29	17.5
350	31	8,455	-30.4	-44.4	29	18.7
300	31	9,529	-38.9	-50.3	28	21.7
250	31	10,757	-47.6		28	25.5
200	31	12,205	-54.6		29	27.1
175	31	13,057	-56.0		29	25.7
150	31	14,032	-58.7		29	22.5
125	31	15,170	-61.0		29	17.2
100	31	16,557	-61.0		30	9.2
80	31	17,947	-59.4		32	3.9
70	31	18,788	-57.4		35	2.7
60	31	19,767	-55.5		04	2.8
50	31	20,936	-53.2		07	4.4
40	31	22,382	-50.9		08	6.2
30	31	24,268	-48.1		09	8.5
25	30	25,472	-46.7		09	9.4
20	29	26,961	-44.7		09	11.2
15	28	28,897	-42.1		09	13.3
10	16	31,679	-37.9			

ST CLOUD, MINN. 977 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	316	14.2	12.2	20	.8
1000	31	120				
950	31	557	17.0	11.3	26	2.3
900	31	1,018	15.0	7.6	29	4.6
850	31	1,500	12.0	3.8	29	6.4
800	31	2,005	9.3	-.7	29	8.2
750	31	2,536	6.3	-4.7	29	9.9
700	31	3,101	3.4	-9.5	29	10.5
650	31	3,699	.0	-13.5	29	11.9
600	31	4,335	-4.2	-17.9	29	12.6
550	31	5,015	-8.6	-22.4	29	13.7
500	31	5,747	-13.6	-27.7	29	15.1
450	31	6,540	-19.0	-33.1	29	16.7
400	31	7,406	-25.3	-38.6	29	17.3
350	31	8,365	-32.2	-44.9	29	19.5
300	31	9,432	-40.3	-48.0	29	23.1
250	31	10,652	-48.7		28	25.2
200	31	12,103	-53.1		28	25.4
175	31	12,961	-54.0		28	23.4
150	30	13,950	-55.3		29	19.8
125	30	15,110	-56.7		29	15.0
100	30	16,522	-57.6		29	9.5
80	30	17,935	-56.2		31	4.7
70	30	18,786	-55.3		33	2.8
60	30	19,774	-53.8		03	2.3
50	30	20,950	-51.9		07	3.4
40	29	22,404	-50.1		08	5.6
30	28	24,298	-47.1		09	7.3
25	27	25,510	-45.6		09	9.2
20	27	27,005	-43.5		09	10.7
15	27	26,951	-41.1		09	12.8
10	11	31,711	-37.4			

* ST PAUL IS., ALASKA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	10	4.4	4.2	17	1.3
1000	31	100	5.0	4.6	18	2.0
950	31	520	5.2	4.3	20	3.0
900	31	961	4.3	2.9	20	3.3
850	31	1,426	2.9	-1.0	20	2.9
800	31	1,916	1.2	-3.2	21	2.7
750	31	2,434	-.9	-6.3	22	2.5
700	31	2,982	-3.8	-8.0	22	3.0
650	31	3,564	-6.8	-13.0	22	2.8
600	31	4,186	-10.0	-18.2	22	2.7
550	31	4,852	-13.9	-22.6	23	2.8
500	31	5,569	-18.4	-27.7	24	3.5
450	31	6,348	-24.0	-33.1	25	4.1
400	31	7,197	-30.1	-37.9	25	4.7
350	31	8,137	-36.8	-41.6	25	5.5
300	31	9,196	-43.6	-45.3	26	3.8
250	31	10,401	-46.8		25	5.7
200	31	11,877	-48.3		26	6.5
175	31	12,756	-48.6		26	4.9
150	31	13,771	-48.2		26	3.3
125	31	14,971	-48.9		25	1.9
100	31	16,434	-49.3		22	.6
80	31	17,898	-49.1		11	1.2
70	30	18,778	-48.9		11	1.9
60	30	19,791	-48.8		10	2.7
50	29	20,989	-48.3		09	3.7
40	29	22,463	-47.2		09	5.3
30	28	24,372	-45.6		09	6.9
25	28	25,591	-44.5		09	7.2
20	25	27,091	-43.0		09	8.0
15	27	29,040	-40.5		09	8.6
10	26	31,847	-35.1		08	10.7
7	17	34,355	-31.0		09	13.0
5	6	36,799	-27.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Columns for each station: No. of observations; Dynamic height; Temperature; Dew Point *; Resultant Wind — Direction, Speed (M.p.s.)

Standard pressure surface (mb)	SALEM, ILL. 995 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	[illegible]	18.8	17.1	19	.4
1000	31	131				
950	31	[illegible]	20.4	14.5	24	2.7
900	31	1,043	17.9	11.2	27	3.8
850	31	1,530	14.7	7.6	28	4.7
800	31	2,040	12.1	.5	28	4.9
750	31	2,577	9.8	-2.7	28	5.7
700	31	3,149	6.5	-6.9	28	6.8
650	31	3,754	[illegible]	-12.1	29	8.4
600	31	4,398	-.4	-19.0	29	8.8
550	31	5,088	-4.6	-23.1	29	9.7
500	31	5,832	-9.6	-28.[illegible]	29	10.7
450	31	6,637	-14.9	-33.[illegible]	28	12.3
400	31	7,518	-20.8	-38.[illegible]	29	13.2
350	31	8,494	-27.8	-44.[illegible]	29	15.2
300	31	9,551	-36.3	-50.2	29	16.9
250	31	10,821	-45.5		29	20.3
200	31	12,274	-54.6		28	22.9
175	31	13,12[illegible]	-58.3		28	19.7
150	31	14,083	-62.1		29	16.6
125	31	15,202	-64.4		29	11.2
100	31	16,568	-63.8		28	4.6
80	31	17,943	-61.6		33	.9
70	[illegible]	18,776	-59.4		06	2.4
60	[illegible]	19,746	-56.7		08	5.1
50	28	20,909	-54.4		09	7.4
40	27	22,344	-52.5		09	9.0
30	25	24,213	-49.8		09	11.7
25	26	25,411	-48.1		09	12.8
20	24	26,892	-45.1		09	15.7
15	23	28,823	-42.8		09	17.0
10	[illegible]	31,580	-39.1		08	18.9
7	5	34,014	-36.6			

Standard pressure surface (mb)	SALEM, OREG. 1010 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	51	13.0	10.9	25	.5
1000	31	146	14.3	10.7	34	.6
950	31	58[illegible]	14.3	9.6	01	2.3
900	31	1,038	14.5	6.[illegible]	01	1.4
850	31	1,52[illegible]	13.8	-.1	14	.5
800	31	2,031	11.6	-4.8	20	.4
750	31	2,568	8.5	-7.5	23	2.6
700	31	3,134	4.9	-9.5	24	4.5
650	31	3,734	.2	-14.6	24	6.0
600	31	4,373	-2.9	-20.2	24	7.6
550	31	5,057	-7.4	-24.4	24	8.1
500	31	5,792	-12.5	-27.9	24	9.2
450	31	6,588	-18.1	-33.1	24	11.4
400	31	7,457	-24.3	-38.9	24	13.5
350	31	8,419	-31.5	-44.0	24	17.3
300	31	9,490	-39.2	-50.7	24	22.2
250	31	10,717	-47.3		24	27.2
200	31	12,173	-52.9		24	26.2
175	31	13,030	-54.8		24	22.4
150	31	14,010	-57.8		25	19.2
125	31	15,154	-60.1		25	12.4
100	31	16,545	-59.9		24	6.5
80	31	17,946	-57.8		20	1.7
70	31	18,791	-56.7		11	2.0
60	31	19,771	-55.5		10	3.6
50	31	20,938	-53.8		09	4.9
40	30	22,377	-51.8		08	6.7
30	30	24,256	-48.5		09	9.5
25	28	25,457	-46.8		08	10.1
20	27	26,945	-44.7		09	11.7
15	26	28,879	-42.0		09	13.1
10	18	31,647	-37.5		09	15.7

Standard pressure surface (mb)	SALT LAKE CITY, UTAH 871 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	1,288	17.9	6.6	18	2.8
1000	31	91				
950	31	541				
900	31	1,010				
850	31	1,504	22.3	4.3	17	2.4
800	31	2,029	20.5	.4	19	1.3
750	31	2,582	16.5	-2.5	28	1.8
700	31	3,164	12.1	-5.1	27	3.6
650	31	3,779	7.1	-7.2	26	6.2
600	31	4,431	1.8	-10.6	26	7.7
550	31	5,125	-4.0	-14.5	26	9.0
500	31	5,868	-9.8	-19.2	26	9.7
450	31	6,673	-15.2	-26.[illegible]	26	11.6
400	31	7,553	-21.2	-33.4	26	13.9
350	31	8,528	-28.1	-40.9	26	16.2
300	31	9,713	-36.1	-48.[illegible]	27	19.2
250	31	10,856	-45.0		27	22.1
200	31	12,314	-54.6		27	23.1
175	31	13,162	-58.6		27	21.5
150	31	14,121	-63.0		27	17.0
125	31	15,243	-66.3		27	11.2
100	31	16,587	-65.3		28	4.2
80	31	17,953	-62.4		36	1.1
70	31	18,784	-59.3		06	2.4
60	31	19,754	-57.3		07	4.2
50	31	20,914	-54.7		08	6.0
40	31	22,352	-52.0		08	8.0
30	31	24,227	-49.3		08	10.9
25	31	25,428	-47.4		09	12.6
20	30	26,911	-45.0		09	14.2
15	[illegible]	28,844	-42.7		09	14.9
10	23	31,607	-38.3		08	18.0
7	7	34,061	-34.6			

Standard pressure surface (mb)	SAN DIEGO, CALIF. 998 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	124	17.3	15.[illegible]	29	.7
1000	31	107				
950	31	545	19.[illegible]	[illegible]	06	.1
900	31	1,014	23.7	[illegible]	32	1.8
850	31	1,512	23.2	[illegible]	30	2.8
800	31	2,038	20.5	[illegible]	26	2.7
750	31	2,591	16.7	-3.4	21	3.1
700	31	3,173	12.4	-5.5	19	3.7
650	31	[illegible]	7.9	-8.5	18	4.2
600	31	4,443	2.9	-11.3	17	4.6
550	31	5,140	-2.3	-17.4	17	4.5
500	31	5,890	-7.0	-23.7	18	3.4
450	31	6,704	-12.2	-28.8	20	2.4
400	31	7,594	-18.4	-35.[illegible]	19	3.7
350	31	8,581	-25.3	-42.5	22	4.0
300	31	9,678	-33.7	-49.6	23	4.9
250	31	10,931	-43.5		22	6.7
200	31	12,395	-54.6		22	7.7
175	31	13,238	-60.6		22	8.7
150	31	14,183	-66.9		22	7.8
125	31	15,272	-71.2		21	3.2
100	31	16,593	-69.8		08	3.0
80	31	17,931	-66.6		08	6.5
70	31	18,746	-63.8		09	8.6
60	31	19,699	-60.6		09	10.4
50	31	20,842	-57.7		09	12.3
40	30	22,259	-55.1		09	14.2
30	[illegible]	24,111	-51.9		09	17.2
25	[illegible]	25,299	-49.5		09	18.4
20	30	26,768	-47.3		09	19.[illegible]
15	[illegible]	28,686	-44.0		09	21.0
10	14	31,435	-39.6		09	25.9
7	8	33,927	-33.6			

Standard pressure surface (mb)	SAN JUAN, P. R. [illegible] MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	6	26.3	[illegible]	[illegible]	[illegible]
1000	31	153	25.0	19.9	[illegible]	[illegible]
950	31	603	21.8	17.2	[illegible]	8.4
900	31	1,071	18.7	13.3	[illegible]	[illegible]
850	31	1,559	15.6	8.0	[illegible]	[illegible]
800	31	2,072	13.5	1.9	[illegible]	[illegible]
750	31	2,613	10.7	-4.0	[illegible]	8.4
700	31	3,185	7.1	-9.4	[illegible]	7.4
650	31	3,791	3.7	-13.1	[illegible]	6.2
600	31	[illegible]	.3	-17.5	10	6.[illegible]
550	31	5,129	-3.6	-23.[illegible]	09	4.7
500	31	5,875	-8.4	-27.9	10	3.8
450	31	6,684	-13.7	-31.7	10	2.2
400	31	7,569	-20.0	-37.[illegible]	18	[illegible]
350	31	8,547	-27.6	-43.2	23	[illegible]
300	31	9,634	-36.5	[illegible]	25	3.5
250	31	10,871	-46.5		26	6.8
200	31	12,318	-56.8		27	9.0
175	31	13,156	-61.5		26	7.3
150	31	14,101	-65.8		25	[illegible]
125	31	[illegible]	-69.6		15	1.0
100	[illegible]	16,517	-72.3		08	6.4
80	[illegible]	17,837	-69.2		08	13.3
70	31	18,641	-66.1		09	16.4
60	[illegible]	19,583	-63.2		09	17.8
50	31	20,713	-60.2		09	19.0
40	[illegible]	22,115	-56.9		09	18.5
30	29	23,955	-53.0		09	18.0
25	28	25,136	-51.0		09	18.4
20	28	26,598	[illegible]		09	20.7
15	27	28,512	-44.0		09	22.4
10	[illegible]	31,269	-40.4			

Standard pressure surface (mb)	* SAULT STE MARIE, MICH. 987 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	221	12.7	9.6	34	.3
1000	31	111				
950	31	544	13.9	7.4	27	2.6
900	31	1,000	12.1	4.6	28	5.2
850	31	1,476	8.7	1.7	28	7.5
800	31	1,976	5.8	-2.6	26	8.7
750	31	2,502	3.3	-8.2	28	10.4
700	31	3,059	.7	-13.6	27	11.3
650	31	3,651	-2.4	-17.0	27	12.1
600	31	4,282	-6.0	-20.7	28	13.5
550	31	4,958	-10.1	-25.9	28	14.7
500	31	5,686	-15.0	-30.7	28	16.1
450	31	6,474	-20.5	-35.7	27	17.2
400	31	7,335	-26.7	-41.8	27	18.0
350	31	8,288	-33.8	-48.2	27	19.4
300	31	9,348	-41.9	-52.6	28	22.4
250	31	10,563	-49.0		28	25.9
200	31	12,014	-52.3		28	25.3
175	31	12,880	-51.8		28	23.9
150	31	13,875	-53.5		27	20.5
125	31	15,046	-54.5		27	15.6
100	31	16,474	-55.0		28	10.7
80	31	17,903	-54.2		27	4.7
70	31	18,761	-53.5		28	2.1
60	31	19,752	-52.6		35	.8
50	31	20,934	-51.0		08	2.4
40	31	22,392	-49.3		09	4.8
30	[illegible]	24,290	-46.9		09	7.0
25	28	25,498	-45.3		09	8.4
20	28	26,495	-43.2		09	10.8
15	[illegible]	28,939	-41.1		09	11.6
10	[illegible]	31,720	-36.8		09	15.1
7	[illegible]	34,226	-32.1		09	15.7
5	13	36,638	-27.1			

Standard pressure surface (mb)	* SHEMYA, ALASKA 1006 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	38	6.1	5.0	23	1.1
1000	31	88			25	1.3
950	31	508	5.0	4.3	20	1.4
900	31	949	4.5	2.4	21	1.2
850	31	1,414	3.3	-1.6	23	1.2
800	31	1,905	1.9	-3.8	25	1.8
750	31	2,424	-.1	-6.9	27	2.6
700	31	2,975	-2.5	-14.[illegible]	27	3.2
650	31	3,560	-5.3	-16.6	27	3.8
600	31	4,185	-8.7	-20.1	27	4.4
550	31	4,854	-12.6	-25.0	28	5.1
500	31	5,575	-17.4	-30.6	27	6.4
450	31	6,356	-22.6	-36.2	27	7.0
400	31	7,210	-28.7	-40.7	27	9.1
350	31	8,156	-35.6	-46.0	27	10.8
300	31	9,208	-43.6	-47.4	27	12.7
250	31	10,415	-49.8		27	15.3
200	31	11,873	-49.3		27	13.2
175	31	12,750	-49.0		27	11.9
150	31	13,760	-50.1		28	10.4
125	30	14,947	-51.6		28	7.8
100	29	16,392	-52.2		29	4.7
80	[illegible]	17,836	-52.0		30	1.7
70	28	18,699	-51.7		36	1.1
60	28	19,700	-51.2		05	1.5
50	[illegible]	20,868	-50.5		07	3.1
40	27	22,347	-49.4		09	4.2
30	26	24,241	-47.7		09	6.1
25	25	25,449	-46.4		09	7.7
20	25	26,938	-44.6		09	8.3
15	24	28,873	-42.1		09	9.5
10	22	31,640	-38.2		09	10.6
7	18	34,114	-34.1		08	12.4

Standard pressure surface (mb)	* SHREVEPORT, LA. 1006 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	79	23.3	21.2	19	1.9
1000	31	134	22.7	20.6	20	2.4
950	31	583	22.9	18.4	23	7.2
900	31	1,055	20.7	15.2	23	6.4
850	31	1,547	17.2	12.5	23	4.2
800	31	2,064	14.4	9.2	24	3.0
750	31	2,606	11.0	5.2	25	2.5
700	31	3,179	7.5	-.1	27	2.2
650	31	3,786	3.7	-3.6	28	1.8
600	31	4,432	-.2	-7.1	31	1.7
550	31	5,124	-3.8	-14.1	30	1.3
500	31	5,871	-8.1	-19.1	32	2.0
450	31	6,683	-12.7	-26.4	32	2.6
400	31	7,572	-18.7	-31.1	34	3.5
350	31	8,557	-25.5	-38.4	34	5.2
300	31	9,654	-33.9	-46.0	33	5.4
250	31	10,905	-43.7		32	5.0
200	31	12,366	-55.6		31	5.2
175	31	13,205	-61.4		32	5.8
150	31	14,147	-67.0		33	5.1
125	31	15,237	-71.1		01	4.0
100	31	16,559	-69.7		05	3.6
80	31	17,902	-65.5		08	5.7
70	31	18,720	-62.9		08	8.1
60	30	19,676	-60.3		09	10.2
50	30	20,822	-57.3		09	12.1
40	29	22,241	-55.1		09	14.3
30	[illegible]	24,094	-51.5		09	16.5
25	28	25,294	-49.7		09	18.2
20	27	26,755	-46.8		09	20.0
15	26	28,673	-44.5		09	21.2
10	26	31,418	-39.5		09	25.2
7	17	33,868	-35.4		09	29.6
5	8	36,235	-30.1			

Standard pressure surface (mb)	SPOKANE, WASH. 933 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	720	14.2	6.2	15	1.1
1000	31	124				
950	31	563				
900	31	1,023	18.6	5.5	20	1.2
850	31	1,513	16.5	1.8	26	1.6
800	31	2,025	12.6	[illegible]	26	2.[illegible]
750	31	2,563	8.5	-3.8	26	2.7
700	31	3,128	4.2	-7.5	27	4.2
650	31	3,727	.2	-12.2	27	5.8
600	31	4,364	-3.8	-17.3	26	7.5
550	31	5,046	-8.1	-22.1	26	8.9
500	31	5,779	-13.2	-26.9	26	9.8
450	31	6,573	-18.9	-31.0	26	10.7
400	31	7,439	-25.4	-37.2	26	12.9
350	31	8,397	-32.6	-43.3	26	15.9
300	31	9,463	-40.2	-50.6	26	21.2
250	31	10,686	-47.6		26	24.5
200	30	12,154	-52.1		26	26.1
175	30	13,010	-53.2		26	23.8
150	31	14,004	-55.8		27	19.3
125	31	15,158	-57.8		27	13.6
100	31	16,565	-57.4		27	7.1
80	31	17,978	-56.5		28	2.3
70	31	18,827	-55.7		01	1.5
60	30	19,813	-54.2		04	2.7
50	29	20,985	-52.4		07	4.0
40	[illegible]	22,437	-50.5		07	5.0
30	[illegible]	24,326	-47.3		08	7.8
25	[illegible]	25,53[illegible]	-45.8		08	9.3
20	[illegible]	27,028	-43.9		09	9.9
15	[illegible]	28,969	-41.1		09	10.9
10	[illegible]	[illegible]	-36.2		08	13.5
7	[illegible]	34,258	-32.0			

Standard pressure surface (mb)	* SWAN ISLAND, W. I. 1013 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	10	26.5	23.[illegible]	08	5.2
1000	31	123	25.9	22.4	08	6.1
950	30	574	22.4	19.4	09	8.5
900	30	1,043	19.4	14.9	10	10.3
850	30	1,534	16.3	10.0	10	10.6
800	31	2,048	13.[illegible]	4.8	10	10.1
750	30	2,590	10.7	1.8	10	10.2
700	30	3,162	7.3	-2.4	10	9.3
650	30	3,769	4.0	-6.8	11	8.7
600	30	4,415	.3	-11.2	11	7.3
550	30	5,108	-3.6	-16.6	11	6.3
500	30	5,855	-8.2	-20.2	12	5.3
450	30	6,666	-12.9	-23.1	11	3.0
400	30	7,554	-19.0	-28.5	10	1.8
350	31	8,538	-25.8	-35.8	31	.4
300	30	9,633	-34.2	-44.3	28	3.0
250	30	10,883	-44.3		27	4.9
200	[illegible]	12,338	-56.[illegible]		27	7.9
175	31	13,172	-63.0		28	7.4
150	[illegible]	14,106	-68.[illegible]		29	5.7
125	[illegible]	15,190	-71.5		02	3.5
100	28	16,502	-72.[illegible]		08	8.6
80	29	17,820	-69.5		09	13.4
70	28	18,622	-66.4		09	14.5
60	25	19,555	-64.5		09	16.4
50	25	20,678	-61.2		09	17.8
40	25	22,074	-57.8		09	19.2
30	24	23,908	-52.9		10	19.9
25	24	25,092	-50.0		10	19.4
20	23	26,561	-47.4		09	18.0
15	[illegible]	28,477	-44.1		09	21.2
10	17	31,202	-41.6		09	28.3
7	9	33,625	-38.3			

Standard pressure surface (mb)	TAMPA, FLA. 1017 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	6	24.0	22.3	13	2.1
1000	31	156	24.7	20.9	15	2.8
950	31	606	22.9	18.2	17	3.4
900	31	1,076	20.1	14.1	18	2.7
850	31	1,568	17.0	10.2	19	3.0
800	31	[illegible]	14.1	6.5	19	2.5
750	31	[illegible]	10.9	3.4	17	2.2
700	31	3,198	7.5	-1.4	18	2.4
650	31	3,805	4.1	-4.6	18	1.9
600	31	4,452	.3	-9.[illegible]	18	2.[illegible]
550	31	[illegible]	-3.7	-13.8	18	1.1
500	31	5,892	-8.0	-18.[illegible]	11	.7
450	[illegible]	6,703	-13.3	-24.6	09	1.3
400	31	7,590	-19.0	-31.[illegible]	08	2.2
350	31	8,573	-25.9	-39.5	07	3.2
300	31	[illegible]	-34.3	-48.[illegible]	06	4.9
250	31	10,917	-44.5		06	7.2
200	31	12,373	-56.1		06	9.5
175	31	13,210	-61.8		06	10.9
150	31	14,152	-67.1		06	10.0
125	31	15,745	-69.5		06	7.7
100	31	16,576	-69.2		08	6.8
80	31	17,914	-66.9		08	9.4
70	31	18,726	-64.3		08	12.5
60	31	19,676	-61.5		09	15.1
50	30	20,814	-58.4		09	18.2
40	[illegible]	[illegible]	-55.2		10	19.[illegible]
30	[illegible]	24,083	[illegible]		09	18.3
25	28	25,273	-49.0		09	19.3
20	[illegible]	[illegible]	[illegible]		09	21.3
15	[illegible]	28,661	-43.9		09	24.3
10	15	31,413	[illegible]			
7						
5						

Standard pressure surface (mb)	TOPEKA, KANS. 984 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	268	18.6	16.3	18	.4
1000	31	133				
950	31	576	21.2	14.7	20	2.9
900	31	1,045	19.9	11.3	25	3.7
850	31	1,537	17.4	7.9	29	4.3
800	31	2,053	14.4	4.0	29	4.8
750	31	2,596	11.0	1.1	29	5.3
700	31	3,158	7.2	-2.9	30	7.1
650	31	3,773	3.4	-6.2	29	7.9
600	31	4,418	-.5	-11.1	29	9.2
550	31	[illegible]	-4.7	-16.7	28	9.7
500	31	[illegible]	-9.6	-22.1	29	10.5
450	31	6,658	-14.6	-28.6	29	11.9
400	31	[illegible]	-20.3	-34.2	29	14.5
350	30	8,518	-27.6	-39.7	29	16.5
300	31	[illegible]	-35.7	-45.6	29	18.8
250	29	10,846	-45.1		29	20.9
200	29	[illegible]	[illegible]		29	22.1
175	29	13,150	-58.5		29	21.1
150	29	[illegible]	-61.7		30	16.5
125	29	15,233	-64.4		31	11.2
100	29	16,595	-64.6		30	5.1
80	29	17,970	[illegible]		34	2.4
70	29	[illegible]	-59.0		06	2.8
60	29	19,777	-55.7		08	5.5
50	28	[illegible]	-54.3		09	6.9
40	27	22,379	-52.4		09	8.8
30	24	24,251	-49.3		09	11.3
25	24	[illegible]	-47.9		09	13.2
20	22	[illegible]	-45.3		09	15.7
15	21	28,873	-42.9		09	17.2
10	10	31,653	-38.3			

Standard pressure surface (mb)	+ TRUK, CAROLINE IS. 1010 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	30	2	27.7	24.0	08	1.7
1000	31	90	26.8	21.4	09	2.0
950	[illegible]	542	23.5	19.0	10	3.4
900	[illegible]	1,013	20.9	15.5	11	4.0
850	30	1,506	18.1	11.8	11	4.1
800	30	2,024	15.4	9.3	10	4.2
750	30	2,569	12.4	6.3	10	4.2
700	30	3,145	9.1	2.0	10	4.5
650	30	3,757	5.8	-1.2	10	4.9
600	30	4,408	2.1	-4.5	10	5.4
550	[illegible]	5,106	-1.7	-8.9	09	4.9
500	[illegible]	5,860	-5.6	-13.8	09	4.7
450	[illegible]	6,679	[illegible]	-19.9	10	5.0
400	[illegible]	7,577	-15.8	-26.6	10	4.7
350	[illegible]	8,574	-22.6	-34.8	10	5.7
300	[illegible]	9,684	-30.7	-44.2	09	5.3
250	31	10,951	-41.4		07	4.5
200	[illegible]	12,424	-54.2		05	5.3
175	[illegible]	13,267	-61.1		03	4.7
150	29	14,207	-68.6		35	2.8
125	29	15,279	-76.2		29	1.7
100	[illegible]	16,555	[illegible]		08	4.6
80	[illegible]	17,858	[illegible]		09	9.7
70	[illegible]	18,660	-66.2		09	9.4
60	[illegible]	19,601	-63.1		10	7.6
50	[illegible]	20,732	-60.4		10	8.[illegible]
40	[illegible]	22,133	-57.2		10	7.0
30	[illegible]	23,969	-53.6		10	6.9
25	[illegible]	25,148	-51.2		10	7.3
20	[illegible]	26,605	-48.2		10	8.4
15	[illegible]	28,510	-45.1		10	11.5
10	[illegible]	31,227	-43.5		10	14.8

Standard pressure surface (mb)	* TUCSON, ARIZ. 923 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	789	25.1	15.3	16	2.7
1000	31	81				
950	31	537				
900	31	1,015	26.5	13.2	18	1.7
850	31	1,517	23.9	9.9	32	1.1
800	31	2,045	20.5	7.5	35	2.3
750	31	2,598	16.7	5.2	01	2.6
700	31	3,181	12.2	3.2	03	2.5
650	31	3,798	7.6	.2	08	2.7
600	31	4,452	2.5	-3.4	10	3.4
550	31	5,149	-2.6	-9.1	09	4.5
500	31	5,898	-7.3	-16.8	09	4.4
450	31	6,713	-11.7	-24.5	11	3.6
400	31	7,606	-17.4	-32.8	13	2.9
350	31	8,595	-24.5	-39.0	14	2.1
300	31	9,696	-32.9	-45.9	15	2.4
250	31	10,952	-43.0		18	1.3
200	31	12,418	-54.8		25	2.3
175	31	13,260	-60.9		26	3.1
150	31	14,203	-67.3		27	2.9
125	31	15,290	-72.0		02	1.4
100	31	16,605	-69.7		07	4.2
80	31	17,942	-67.2		08	6.3
70	31	18,754	-64.2		08	9.2
60	[illegible]	19,705	-61.0		09	11.5
50	[illegible]	20,848	-57.4		09	13.1
40	[illegible]	22,265	-55.6		09	14.8
30	[illegible]	[illegible]	-52.1		09	17.8
25	[illegible]	25,299	-49.9		09	18.7
20	[illegible]	26,768	-47.0		09	18.4
15	[illegible]	28,687	-44.3		09	20.5
10	[illegible]	31,432	-40.2		09	25.[illegible]
7	[illegible]	33,889	[illegible]		10	27.0
5	[illegible]	36,268	-29.7			

Standard pressure surface (mb)	* VANDENBERG AFB, CALIF. 1002 MB No. obs	Dynamic height	Temp.	Dew Point	Dir.	Speed
SURFACE	31	100	11.3	11.3	31	.5
1000	31	116	11.4	11.3	33	.5
950	31	548	16.3	8.8	01	1.5
900	31	1,015	23.6	-.2	02	1.4
850	31	1,512	[illegible]	-2.1	01	.9
800	31	2,033	18.1	-5.[illegible]	31	.4
750	31	2,581	14.9	-7.[illegible]	26	[illegible]
700	31	3,160	11.2	-11.4	24	1.0
650	31	3,774	7.1	-14.0	22	1.2
600	31	4,426	2.7	-17.3	21	1.5
550	31	5,124	-2.0	-21.5	21	1.9
500	31	5,874	-7.0	-26.7	22	2.4
450	31	6,687	-12.9	-30.8	22	3.0
400	31	7,574	-19.1	-36.2	22	4.1
350	31	8,557	-26.1	-42.6	23	5.0
300	31	9,651	-34.4	-49.5	22	5.6
250	31	10,901	-43.8		23	6.6
200	31	12,364	-54.4		23	6.7
175	31	13,209	-59.9		23	6.3
150	31	14,159	-65.4		23	5.1
125	31	[illegible]	-69.4		22	3.[illegible]
100	31	16,591	-68.3		13	.5
80	31	17,937	-65.6		09	2.0
70	31	[illegible]	-62.7		10	2.8
60	31	19,712	[illegible]		10	3.7
50	31	20,858	-57.2		10	4.8
40	[illegible]	22,277	-54.9		09	5.[illegible]
30	[illegible]	[illegible]	-52.3		09	7.5
25	[illegible]	25,316	-50.2		09	8.[illegible]
20	[illegible]	26,779	-48.0		09	8.8
15	[illegible]	28,693	-44.5		09	9.4
10	[illegible]	31,431	-40.9		09	[illegible]
7	[illegible]	33,886	-35.4		10	13.3
5	[illegible]	36,233	-30.5			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

JULY 1971

Standard pressure surface (mb)	VICTORIA, TEXAS 1011 MB						* WAKE IS., PACIFIC AREA 10.4 MB						* WALLOPS IS., VA. NASA 1016 MB						WASHINGTON DULLES INT. AP 1007 MB						WAYCROSS, GA. 1012 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	31	33	24.5	22.8	18	1.5	31	5	27.5	23.4	09	5.0	31	4	22.2	20.2	21	.9	31	85	18.4	15.4	23	1.1	31	44	21.9	21.2	19	.8
1000	31	130	24.8	24.3	19	3.2	31	125	26.4	22.2	09	6.0	31	143	22.2	18.4	24	1.2	31	143	19.5	15.6	29	1.0	31	147	22.5	21.3	22	1.6
950	31	584	22.5	20.5	19	8.2	31	577	22.6	20.2	09	7.2	31	589	20.7	15.0	26	2.8	31	588	20.3	12.8	29	2.0	31	596	22.2	18.8	24	3.9
900	31	1,052	20.7	14.3	19	8.0	31	1,047	19.5	16.2	09	6.9	31	1,056	18.2	11.3	26	3.1	31	1,053	17.5	10.4	29	2.8	31	1,066	19.8	15.3	23	3.6
850	31	1,546	18.4	9.1	18	6.2	31	1,537	16.4	12.3	09	6.6	31	1,544	15.3	7.8	26	4.1	31	1,539	14.6	5.9	28	4.2	31	1,558	17.0	11.5	23	3.7
800	31	2,064	15.4	5.8	17	5.0	31	2,052	13.6	8.2	09	6.1	31	2,056	12.4	4.4	26	5.2	31	2,050	12.0	1.8	27	5.8	31	2,073	13.9	8.3	23	3.8
750	31	2,608	12.2	2.6	16	4.2	31	2,592	11.0	3.6	09	5.4	31	2,595	9.5	.3	26	6.4	31	2,588	9.0	-2.9	27	6.7	31	2,615	10.6	4.9	23	3.8
700	31	3,183	8.5	-.7	14	3.2	31	3,167	8.3	-1.8	09	5.4	31	3,165	6.5	-4.9	26	8.1	31	3,156	6.0	-8.0	28	8.1	31	3,187	7.2	1.2	24	3.7
650	31	3,792	5.0	-6.1	13	3.0	31	3,776	4.9	-7.9	09	4.8	31	3,770	3.3	-9.2	26	9.2	31	3,760	3.1	-13.1	28	8.7	31	3,794	3.8	-3.1	25	3.7
600	31	4,441	1.1	-9.8	10	2.8	31	4,425	1.1	-12.6	09	4.8	31	4,415	-.1	-12.6	26	9.6	31	4,405	-.4	-16.1	28	9.4	31	4,441	.2	-8.0	25	3.9
550	31	5,136	-3.1	-15.5	09	2.6	31	5,119	-3.1	-17.6	09	4.6	31	5,107	-4.0	-17.6	26	10.0	31	5,095	-4.4	-21.5	28	10.2	31	5,134	-3.3	-13.1	25	3.5
500	31	5,834	-7.4	-21.0	08	3.1	31	5,867	-7.8	-21.9	08	4.6	31	5,853	-8.5	-22.3	26	10.7	31	5,840	-9.0	-27.2	28	11.2	31	5,883	-7.6	-17.9	26	3.6
450	31	6,638	-12.0	-26.3	07	3.9	31	6,680	-12.7	-27.2	08	3.9	31	6,662	-13.6	-28.3	25	11.3	31	6,647	-14.4	-32.1	28	11.6	31	6,695	-12.3	-23.8	26	3.0
400	31	7,590	-17.9	-31.7	07	3.9	31	7,568	-18.7	-33.1	06	3.1	31	7,547	-19.7	-33.0	25	12.5	31	7,529	-20.6	-37.1	28	13.5	31	7,586	-18.1	-30.5	25	2.3
350	31	8,577	-25.0	-39.3	07	4.6	31	8,552	-25.9	-39.6	05	1.6	31	8,528	-26.5	-38.6	25	14.7	31	8,507	-27.4	-43.4	28	15.3	31	8,578	-25.2	-37.0	32	1.8
300	31	9,676	-33.5	-46.2	06	4.8	31	9,647	-34.4	-46.0	34	.7	31	9,621	-34.8	-46.8	25	16.7	31	9,595	-35.5	-51.2	28	18.2	31	9,670	-33.6	-45.4	35	2.0
250	31	10,929	-43.4		06	4.3	31	10,895	-44.5		29	4.6	31	10,869	-44.1		26	18.7	31	10,840	-44.7		28	21.0	31	10,923	-43.7		02	2.5
200	31	12,394	-54.8		06	4.3	31	12,350	-56.5		27	10.1	31	12,331	-57.8		27	18.0	31	12,299	-54.8		27	20.9	31	12,384	-55.3		02	4.9
175	31	13,236	-60.9		05	4.9	31	13,185	-62.9		27	11.2	30	13,176	-59.5		27	16.5	31	13,146	-58.4		27	19.0	31	13,225	-61.4		02	4.9
150	31	14,180	-67.4		05	7.0	31	14,119	-69.5		28	8.9	30	14,140	-63.5		27	12.9	31	14,107	-61.9		28	15.2	31	14,168	-66.8		04	4.7
125	31	15,267	-71.3		06	7.4	28	15,195	-72.4		29	3.5	30	15,244	-65.0		26	9.1	31	15,229	-63.9		28	10.8	31	15,261	-69.3		05	3.7
100	30	16,588	-70.1		07	7.6	28	16,514	-70.0		08	6.2	30	16,608	-63.3		26	4.0	31	16,597	-63.4		27	6.7	31	16,597	-68.0		06	4.4
80	29	17,926	-66.5		08	9.7	29	17,846	-68.3		08	11.2	29	17,990	-60.9		05	1.1	31	17,978	-60.5		30	.4	31	17,946	-65.2		08	6.7
70	29	18,740	-63.8		09	11.3	28	18,651	-66.3		08	14.2	29	18,824	-59.0		09	3.3	31	18,814	-58.5		09	1.5	30	18,765	-63.2		08	9.5
60	27	19,692	-61.0		09	12.5	26	19,590	-63.7		09	16.1	29	19,796	-56.9		09	5.6	31	19,786	-57.0		09	4.3	30	19,719	-60.4		09	12.7
50	27	20,833	-58.2		09	14.7	26	20,717	-60.6		09	17.7	29	20,958	-54.2		09	8.7	31	20,948	-54.2		09	7.3	29	20,864	-57.0		09	15.5
40	27	22,247	-55.7		09	16.2	25	22,116	-57.4		09	19.4	28	22,396	-51.8		09	11.4	31	22,388	-51.7		09	9.8	28	22,286	-54.3		09	16.7
30	27	24,095	-52.1		09	19.6	24	23,954	-53.4		09	18.9	28	24,277	-48.0		09	13.6	31	24,268	-48.5		09	12.2	28	24,147	-50.5		09	17.2
25	26	25,283	-49.6		09	21.6	24	25,134	-51.1		09	20.6	28	25,485	-46.0		09	14.2	31	25,474	-46.6		09	13.1	27	25,340	-48.8		09	18.3
20	26	26,755	-46.6		09	21.1	24	26,595	-48.8		09	23.3	28	26,976	-44.2		09	15.4	29	26,957	-44.7		09	14.5	26	26,817	-46.4		08	19.7
15	24	28,671	-44.0		09	22.5	20	28,493	-45.8		09	26.4	26	28,907	-41.2		09	17.3	26	28,890	-41.9		09	16.8	26	28,738	-43.7		08	22.7
10	16	31,415	-40.1				18	31,213	-42.5		09	27.3	23	31,686	-37.9		09	20.2	17	31,663	-37.6		09	19.3	18	31,492	-39.1		09	26.7
7													14	34,155	-34.2										5	33,935	-35.9			

Standard pressure surface (mb)	WINNEMUCCA, NEV. 871 MB						WINSLOW, ARIZ. 852 MB						YAKUTAT, ALASKA 1019 MB						+ YAP, CAROLINE IS. 1007 MB						YUCCA FLAT, NEV. 880 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	1,312	15.1	4.6	05	1.2	31	1,487	20.4	7.2	21	2.4	31	12	8.9	8.4	10	1.2	31	14	27.5	24.1	21	1.6	31	1,198	17.6	1.1	33	.4
1000	30	120					31	83					31	169	10.2	8.6	12	1.8	31	78	26.3	22.2	21	1.8	31	90				
950	30	565					31	539					31	596	9.3	6.2	14	3.3	31	530	23.0	19.4	22	3.1	31	539				
900	30	1,030					31	1,014					31	1,043	8.1	2.7	16	2.8	31	1,000	20.2	15.9	23	3.0	31	1,007				
850	30	1,518	19.7	3.3	04	2.2	31	1,511	21.1	6.9	22	2.0	31	1,515	6.8	-.1	19	2.6	31	1,492	17.1	12.0	23	2.9	31	1,501	24.9	4.4	27	1.1
800	30	2,040	18.4	1.1	03	1.3	31	2,039	22.1	5.2	27	2.9	31	2,012	4.7	-2.7	20	3.5	31	2,008	14.5	9.3	23	2.1	31	2,030	21.9	1.7	20	5.1
750	30	2,589	14.5	-1.5	32	.7	31	2,596	18.5	2.4	29	3.0	31	2,536	2.3	-5.7	21	4.0	31	2,552	11.7	6.1	22	1.5	31	2,586	17.8	-1.0	20	5.9
700	30	3,167	9.9	-4.3	23	1.9	31	3,182	13.6	-.3	27	2.1	31	3,090	-.8	-8.1	22	5.0	31	3,127	8.8	2.3	19	1.1	31	3,170	13.0	-4.0	20	4.7
650	30	3,778	5.4	-7.0	23	4.7	31	3,801	8.7	-2.6	26	2.1	31	3,679	-4.1	-12.1	23	6.5	31	3,738	5.6	-.8	14	2.0	31	3,788	8.0	-6.7	20	4.6
600	30	4,426	.2	-10.9	23	7.8	31	4,437	3.3	-6.1	24	1.8	31	4,306	-7.8	-15.3	23	7.5	31	4,389	1.9	-4.2	13	2.1	31	4,441	2.8	-10.2	18	4.9
550	30	5,116	-5.1	-15.7	23	11.2	31	5,155	-2.5	-9.7	21	1.9	31	4,978	-11.8	-20.6	24	7.6	31	5,087	-1.8	-8.9	12	2.8	31	5,139	-2.4	-15.1	20	6.0
500	29	5,856	-10.4	-23.8	24	11.0	30	5,903	-8.0	-17.2	24	1.6	31	5,702	-16.4	-26.1	23	8.1	31	5,839	-5.9	-15.2	11	3.5	31	5,888	-7.6	-21.0	21	7.2
450	29	6,660	-15.5	-29.1	24	10.3	30	6,715	-12.6	-24.4	25	2.8	31	6,485	-22.2	-31.4	23	8.1	31	6,658	-10.5	-21.1	12	4.9	31	6,700	-12.6	-27.7	23	8.7
400	29	7,539	-21.8	-34.9	25	11.9	31	7,605	-18.1	-31.5	26	3.9	31	7,341	-28.5	-39.1	23	8.1	31	7,555	-16.2	-27.6	11	4.7	31	7,589	-18.8	-34.2	24	9.4
350	29	8,511	-28.8	-41.4	25	14.8	30	8,592	-25.0	-39.1	26	5.2	31	8,286	-35.8	-43.8	23	9.1	31	8,551	-23.0	-34.5	10	5.3	31	8,573	-25.7	-39.8	24	10.5
300	28	9,592	-37.0	-46.1	25	17.0	30	9,690	-33.6	-46.5	26	6.8	31	9,336	-44.2	-49.8	24	9.6	30	9,658	-31.3	-43.8	09	6.5	31	9,668	-34.4	-46.6	24	11.9
250	28	10,829	-46.0		25	20.2	30	10,943	-43.5		26	6.9	31	10,538	-51.7		24	8.8	30	10,922	-41.7		08	7.0	31	10,918	-43.8		24	14.0
200	28	12,283	-55.1		25	21.7	29	12,408	-54.8		25	7.7	31	11,981	-52.9		25	8.4	30	12,393	-54.4		05	8.0	31	12,383	-54.1		24	15.3
175	28	13,130	-58.2		25	20.3	29	13,251	-60.5		26	8.3	31	12,843	-52.3		24	7.6	30	13,236	-61.4		04	9.9	31	13,229	-59.6		24	14.3
150	27	14,088	-62.1		25	18.9	28	14,198	-66.3		26	7.9	31	13,843	-51.4		24	6.6	30	14,174	-69.2		04	11.3	31	14,181	-64.9		25	11.4
125	26	15,205	-64.7		25	12.5	27	15,289	-70.6		28	4.9	30	15,034	-51.0		24	5.2	30	15,243	-76.6		05	10.4	30	15,282	-68.4		25	7.5
100	26	16,565	-64.6		26	4.7	26	16,608	-69.9		02	2.0	30	16,487	-50.8		23	2.6	30	16,517	-77.7		07	9.6	30	16,621	-67.8		30	.9
80	26	17,937	-62.0		15	1.0	24	17,957	-65.0		08	3.7	29	17,941	-50.1		19	1.0	30	17,816	-71.3		08	13.6	30	17,973	-64.2		09	2.7
70	25	18,768	-59.4		10	1.4	24	18,776	-62.5		08	6.2	29	18,815	-49.6		15	.8	30	18,614	-67.3		08	14.5	30	18,795	-61.4		08	5.3
60	25	19,737	-57.6		08	4.2	24	19,734	-59.8		09	8.5	29	19,826	-49.0		12	1.9	30	19,551	-64.2		09	13.6	30	19,757	-59.0		09	7.4
50	24	20,895	-54.7		08	6.0	23	20,883	-57.0		09	10.5	28	21,025	-48.3		10	3.0	30	20,674	-61.4		09	12.7	30	20,909	-56.2		09	9.6
40	24	22,329	-52.8		09	7.4	21	22,300	-54.3		09	13.8	27	22,498	-47.1		09	4.8	29	22,067	-58.7		09	12.3	29	22,336	-53.9		09	11.2
30	22	24,201	-49.8		08	10.1	19	24,166	-50.8		09	15.0	27	24,411	-45.3		09	6.5	29	23,891	-54.4		09	12.3	28	24,195	-50.7		09	14.2
25	22	25,398	-48.0		08	11.7	19	25,358	-49.2		09	16.3	27	25,631	-44.1		09	7.2	27	25,071	-51.7		10	12.3	28	25,388	-49.1		09	15.6
20	22	26,877	-46.0		09	13.5	18	26,833	-46.5		09	17.1	27	27,134	-42.4		09	7.8	27	26,528	-49.0		10	13.4	27	26,856	-46.7		09	16.7
15	20	28,795	-43.3		08	14.9	14	28,767	-43.9		09	18.6	23	29,086	-39.6		08	9.7	23	28,430	-45.7		10	15.6	24	28,777	-44.2		09	18.6
10	9	31,566	-38.2				8	31,517	-39.6				21	31,892	-35.0		09	10.8	17	31,161	-43.2		10	21.2	19	31,515	-40.7		09	20.7
7													9	34,404	-30.4				4	33,579	-41.8									

Standard pressure surface (mb)	YUMA, ARIZ. 993 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	18	131	29.0	15.1	13	.2
1000	18	68				
950	18	527	30.5	13.4	21	1.8
900	18	1,010	28.7	10.5	23	2.5
850	18	1,515	25.5	7.6	22	2.3
800	18	2,045	21.9	4.9	20	2.2
750	18	2,600	17.7	2.4	18	3.0
700	18	3,184	12.6	.5	17	4.3
650	18	3,802	7.9	-3.3	17	4.5
600	18	4,456	2.9	-6.3	16	4.4
550	18	5,154	-2.2	-11.1	16	4.8
500	18	5,903	-7.5	-16.2	16	4.4
450	18	6,717	-12.3	-23.4	18	3.1
400	18	7,607	-18.2	-30.4	17	2.7
350	18	8,593	-25.3	-37.3	18	3.0
300	18	9,690	-33.6	-44.7	18	4.1
250	18	10,945	-43.1		19	6.5
200	15	12,408	-54.3		21	9.4
175	8	13,249	-60.2			
150	8	14,198	-65.8			

Note: All observations are taken at 1200 G.c.t. Pressures and station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
July									
2	----	----	----	1.02	----	----	----	----	0.67
3	0.65	0.71	0.87	1.04	1.33	----	0.90	----	.68
4	.77	.83	.99	1.12	1.38	1.16	.97	0.85	.78
5	.83	.90	1.02	----	1.30	1.18	.97	----	.77
7	----	----	----	----	1.34	----	----	----	----
9	----	----	----	----	1.29	1.16	.99	----	----
10	.75	----	----	----	1.33	----	----	----	----
11	----	----	.89	1.08	1.32	1.15	.98	.90	.81
12	.80	.87	.99	1.12	1.34	1.08	.92	----	.71
13	.82	.88	1.00	1.15	1.36	1.17	1.03	.92	.85
15	.82	.90	1.00	----	1.31	----	.98	----	----
16	----	----	----	----	1.27	----	----	----	----
17	.79	.88	.98	1.14	1.31	1.10	----	----	----
18	.77	.84	----	1.11	1.30	----	----	----	----
19	----	----	----	----	1.29	----	----	----	----
20	----	----	----	----	1.29	----	----	----	----
21	.63	----	.86	1.03	1.27	----	----	----	----
22	----	.86	.98	1.10	1.30	----	----	----	----
23	----	.87	.96	1.11	----	----	----	----	----
24	.74	.83	.96	1.11	1.26	1.08	.91	.81	.73
25	----	----	----	----	1.30	----	----	----	----
26	----	----	.92	1.08	1.28	----	----	----	----
27	----	.80	.90	1.06	1.26	1.10	----	----	.83
28	.76	.83	.95	1.12	1.32	1.14	.96	.85	.74
29	.64	.76	.90	1.07	1.28	----	----	----	----
30	----	----	----	1.06	----	----	----	----	----
31	----	----	----	----	----	----	.94	.82	.70
Averages	0.75	0.84	0.95	1.09	1.31	1.13	0.96	0.86	0.75

TUCSON, ARIZ.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
July									
1	0.69	0.78	0.92	1.10	1.28	1.01	0.84	0.68	0.60
2	.48	.60	.71	.94	1.22	1.05	.85	.74	.64
3	.47	.58	.71	.92	1.18	1.00	.72	----	----
4	.60	.70	.79	.98	1.22	1.02	.86	.71	.56
6	----	----	----	----	----	----	.88	.78	.71
7	.74	.83	.94	1.08	1.28	----	----	----	----
8	.72	.82	.94	1.08	1.28	----	----	----	----
9	.64	.75	.87	1.03	1.22	----	.76	.66	----
10	.59	.72	----	1.03	1.25	.99	.79	.68	.58
11	.58	.71	.86	.99	1.23	1.01	.83	----	----
12	.64	.74	.85	1.01	1.25	1.00	.84	.70	.61
13	.57	----	.85	1.02	1.24	.97	.81	.71	.61
14	.63	----	.85	1.03	1.21	----	----	----	----
15	.53	.62	.76	.92	1.21	1.00	.82	.67	.56
16	.56	.65	.76	.95	1.19	----	----	----	----
17	.75	.83	.93	1.06	1.19	.98	----	----	----
18	.70	.79	.89	1.03	1.22	----	----	----	----
19	----	----	----	----	----	1.04	----	.68	----
20	.44	.61	.76	.88	1.19	----	----	----	----
21	.47	----	.68	.85	1.18	----	----	----	----
22	.53	.64	----	.95	1.19	----	.74	.66	.56
23	.49	.64	.82	1.00	1.20	.99	.86	----	----
24	.53	.64	.76	.95	1.19	.96	----	----	----
25	.64	.73	.87	1.03	1.26	1.04	.83	.71	----
26	.64	.73	.86	1.00	1.24	.99	----	----	----
27	.59	.70	.83	.99	1.21	.97	.81	.69	.59
28	.61	.69	.81	1.00	1.20	.90	.73	.59	.50
29	.55	.66	.79	.95	1.19	.89	----	----	----
30	.48	.62	----	.95	1.16	----	----	----	----
31	----	----	----	1.00	1.23	1.06	.90	.76	.67
Averages	0.59	0.70	0.83	0.99	1.22	0.99	0.82	0.69	0.60

MADISON, WISC.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
July									
1	S 0.60	S 0.85	S 0.98	----	----	----	----	----	----
2	S .72	S .82	S .96	S 1.14	----	----	----	----	----
3	S .61	S .71	S .82	S 1.02	----	----	----	----	----
13	S .83	S .93	S 1.04	----	S 1.85	----	----	----	----
16	----	----	----	----	S 1.32	----	----	----	----
17	S .84	S .89	----	----	----	----	----	----	----
27	S .71	S .80	S .94	----	----	----	----	----	----
29	S .70	S .78	----	----	----	----	----	----	----
31	----	----	S .90	S 1.08	----	----	----	----	----
Averages	0.72	0.83	0.94	1.08	1.60	----	----	----	----

OMAHA, NEBR.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
July									
1	----	----	----	----	----	1.06	0.91	0.80	0.68
2	HS0.78	HS0.84	HS0.97	----	HS1.35	1.00	----	----	----
5	----	----	----	----	----	----	.96	.84	.72
12	----	----	----	----	HS1.21	----	HM .70	HM .54	----
15	HS .72	HS .84	HS .98	HS1.14	1.31	HS1.07	HS .93	HS .82	HS .73
16	HS .67	----	----	HS1.04	1.22	----	HS .80	HS .62	HS .52
17	HS .68	HS .80	HM .92	HM1.08	1.29	----	----	----	----
19	----	----	----	----	----	HS1.14	HS1.00	HS .87	HS .75
21	----	----	----	----	HS1.20	----	----	----	----
23	----	----	----	----	HS1.36	----	----	.80	.52
24	HS .63	HS .75	HS .89	HS1.08	----	HS .98	HS .84	HS .68	HS .56
26	HS .80	HS .92	HS1.04	HS1.18	----	----	----	----	----
27	----	----	----	HS1.04	----	----	----	----	----
30	.80	.97	1.02	1.20	----	----	----	----	----
Averages	0.73	0.85	0.97	1.11	1.29	1.05	0.88	0.75	0.64

( ) Clouds Present
* Values corresponding to true solar noon
BD Blowing Dust
BN Blowing Sand
D Dust
DI Intense Dust
DM Moderate Dust
DS Slight Dust
F Fog
GF Ground Fog
H Haze
HI Intense Haze
HM Moderate Haze
HS Slight
I Intense Haze-indeterminable
K Smoke
KI Intense Smoke
KM Moderate Smoke
KS Slight Smoke
M Moderate Haze-indeterminable
N Sand
S Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JULY 1971

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	654	574	777	798	787	550	733	305	---	764	768	770	776	719	767	730	754	699	705	614	568	537	579	740	733	653	679	732	722	635	555	679
AMES IOWA	649	742	441	270	346	651	523	552	391	329	597	604	693	650	750	652	675	598	726	647	619	455	566	670	413	691	301	728	442	586	692	569
ANNETTE ALASKA	709	215	174	301	441	278	513	724	695	609	409	349	420	164	456	379	691	496	635	308	656	622	658	677	674	658	657	660	657	651	369	513
ARGONNE NAT. LAB.	626	698	636	538	496	672	549	354	283	496	578	571	668	641	543	671	683	545	320	460	546	592	186	384	490	555	628	359	398	552	577	526
ASTORIA OREGON	500	756	687	301	321	629	---	352	301	245	585	692	613	669	645	707	679	581	538	---	512	221	223	498	500	463	186	227	258	210	177	458
APALACHICOLA FLORIDA	696	496	220	199	338	660	607	609	617	659	535	201	279	385	---	409	643	442	468	451	473	521	612	542	583	430	340	662	431	---	370	478
ATLANTA GEORGIA	524	444	550	629	371	326	458	421	625	414	577	672	417	461	279	273	543	626	372	283	661	528	456	392	279	358	547	526	362	249	140	444
BARROW ALASKA	782	687	789	698	769	731	713	558	349	388	600	743	534	375	406	770	660	729	585	477	677	468	586	595	594	257	170	218	300	185	371	541
BETHEL ALASKA	458	640	723	674	623	---	107	196	480	334	222	455	144	280	198	144	223	306	459	330	459	180	323	340	385	---	238	409	292	265	494	358
BISMARCK N.DAK.	742	773	650	784	760	735	753	772	738	676	393	754	805	785	774	730	506	526	715	756	698	608	695	606	704	600*	637	643	701	750	574	688
BLUE HILL MASS.	545	598	813	740	765	712	716	727	564	590	376	761	---	560	645	563	403	735	209	448	664	587	617	503	256	374	339	706	389	134	477	551
BOISE IDAHO	746	506	816	773	783	774	796	751	730	766	784	769	766	757	657	656	714	304	445	703	626	649	716	732	737	740	742	711	698	672	696	700
BROOKINGS SOUTH DAK.	655	647	465	597	514	515	268	565	504	490	316	327	634	619	620	642	398	544	545	652	580	526	638	626	570	621	328	431	444	610	568	531
BROWNSVILLE TEXAS	647	732	763	757	715	737	556	713	701	143	664	657	524	642	761	732	---	---	453	542	724	710	---	---	---	---	---	---	---	---	614	---
BURLINGTON VERMONT	192	765	747	743	630	252	721	702	566	768	631	781	383	462	607	427	309	723	306	596	721	674	524	335	600	646	586	717	150	553	308	552
CAPE HATTERAS N.C.	629	502	191	144	661	634	269	554	656	557	590	372	529	642	604	356	605	645	562	201	172	331	301	613	552	394	477	332	658	638	661	485
CARIBOU MAINE	141	676	704	168	---	249	416	622	207	536	670	631	532	107	433	563	448	463	421	323	603	657	448	271	644	551	110	635	352	468	257	443
CHARLESTON S.C.	501	398	221	530	280	498	247	353	495	364	590	410	361	593	513	511	549	608	541	361	278	253	425	426	529	378	561	544	335	538	513	442
CLEVELAND OHIO	524	656	---	621	440	641	675	---	514	397	365	696	410	643	466	626	527	647	204	662	604	659	508	140	586	279	525	558	609	132	508	511
COLUMBIA MISSOURI	514	763	707	264	385	723	589	---	397	373	319	694	610	206	736	736	673	430	446	667	702	562	215	552	698	556	694	499	149	722	724	543
DAVIS CALIFORNIA	726	734	728	737	730	738	729	742	742	753	756	739	732	707	712	685	515	680	682	675	694	727	721	702	706	696	702	696	691	635	682	706
EL CENTRO CALIF. NPF	672	700	664	673	649	592	731	673	675	673	638	625	586	555	555	408	602	621	598	602	569	557	619	622	616	611	584	---	605	579	575	614
EL PASO TEXAS	644	327	720	714	722*	704	721	680	724	726	722	720	747	729	645	639*	729	716*	730	688	610	552	615	653	667	392	680	669	694	669	666	665
ELY NEVADA	622	830	791	701	834	813	814	834	836	828	847	806	649	809	516	534	487	566	595	523	547	592	785	497	606	612	775	636	708	541	775	687
EPPLEY NEWPORT R.I.	220	449	733	713	723	662	641	685	540	504	307	702	707	541	629	611	511	712	183	461	644	526	573	412	284	217	419	612	397	277	352	514
FAIRBANKS ALASKA	529	678	598	471	662	682	579	502	569	526	319	129	150	291	584	561	618	584	619	321	592	620	626	508	353	522	308	492	542	308	294	488
FLAMING GORGE UTAH	624	---	---	527	678	630	664	504	676	763	728	---	545	485	783	727	523	389	---	---	625	489	701	660	640	700	---	---	---	---	---	---
FORT WORTH TEXAS	652	348	680	677	706	690	629	629	657	651	678	691	658	682	674	664	683	687	524	197	267	653	184	347	583	385	240	111	369	362	677	537
FRESNO CALIFORNIA	745	751	746	753	751	744	738	762	759	764	761	731	735	718	700	678	226	689	703	699	697	696	722	720	710	699	681	688	622	671	676	701
GAINESVILLE FLORIDA	---	---	---	---	537	480	540	382	461	630	533	602	520	593	536	456	468	412	450	186	168	350	574	461	612	440	439	273	442	613	571	471
GENEVA NEW YORK	136	621	628	591	512	393	579	518	525	566	308	620	291	434	545	476	349	610	152	555	574	459	480	128	354	417	576	561	178	384	417	450
GLASGOW MONTANA	734	612	593	697	745	701	722	717	714	504	674	680	691	673	722	718	700	586	601	663	359	674	650	644	585	647	626	511	679	685	617	649
GLOUCESTER POINT VA	566	491	689	782	730	396	630	678	467	335	582	540	719	635	623	385	642	575	412	511	296	569	510	668	440	377	334	571	349	532	359	529
GREAT FALLS MONTANA	745	398	801	704	791	571	762	745	637	706	785	796	786	782	777	615	748	753	748	621	582	633	723	319	548	760	310	366	730	713	638	664
GREENSBORO N.C.	420	276	571	739	573	145	499	532	591	603	570	248	515	506	560	547	700	668	295	598	315	654	557	451	333	276	384	389	399	264	450	472
INDIANAPOLIS INDIANA	644	644	701	605	277	593	593	440	426	240	520	676	596	588	517	699	529	232	521	540	656	647	441	442	469	452	685	231	602	348	673	523
INYOKERN CALIFORNIA	707	702	695	721	727	713	709	714	720	716	714	700	683	672	360	627	---	669	625	637	361	609	618	668	662	662	665	649	621	632	632	653
ITHACA NEW YORK	186	568	724	685	604	398	694	613	611	502	293	717	498	354	660	436	347	660	112	557	689	613	555	247	348	519	648	658	136	394	394	497
LAKE CHARLES LA.	513	446	551	577	596	602	361	544	546	455	678	592	642	---	563	549	388	---	308	590	353	316	589	438	531	483	290	588	356	300	328	485
LAKELAND FLORIDA	628	465	372	457	611	537	629	462	504	582	561	356	462	572	502	422	489	463	496	319	319	403	499	477	578	586	595	499	551	552	528	499
LANDER WYOMING	751	549	537	398	661	716	602	554	551	712	742	737	718	691	726	652	361	510	630	477	537	524	425	494	476	671	684	571	541	666	673	598
LARAMIE WYOMING	746	559	538	512	640	522	467	579	503	671	780	767	579	615	682	748	569	590	580	746	413	602	745	486	508	608	671	508	343	733	669	603
LEXINGTON KENTUCKY	405	640	676	569	557	359	575	515	406	528	573	680	537	245	576	599	611	237	328	485	575	557	407	230	413	429	608	486	541	168	451	483
LITTLE ROCK ARKANSAS	381	582	665	461	544	557	653	631	633	642	632	648	623	623	565	520	599	603	188	410	660	562	158	181	469	416	437	166	556	456	626	511
LOS ANGELES CALIF.	654	703	720	693	659	694	673	721	749	764	764	732	725	622	612	538	662	727	663	634	550	538	606	618	596	520	652	599	664	639	683	657
LOS ANGELES CALIF. U	632	668	679	692	614	670	674	687	691	717	722	681	666	578	569	517	556	697	715	672	---	615	690	655	695	672	721	689	710	745	804	670
MADISON WISCONSIN	688	616	656	278	476	674	471	352	512	408	717	367	730	703	713	687	755	465	658	690	692	450	277	471	394	591	577	---	559	384	694	557
MANHATTAN KANSAS	380	648	518	700	516	704	437	559	456	537	258	655	586	637	718	680	665	281	725	716	694	225	584	660	592	656	336	627	317	724	695	564
MATANUSKA ALASKA	387	---	459	677	540	---	---	616	689	684	---	244	---	336	478	443	413	260	287	231	---	---	360	167	166	513	82	---	518	159	247	389
MEDFORD OREGON	717	646	721	727	722	710	714	711	392	641	701	714	737	716	697	689	554	219	676	640	645	693	648	698	703	606	673	660	666	611	504	650
MIAMI FLORIDA	616	553	574	599	577	421	312	579	333	514	447	639	580	515	640	543	569	616	610	590	569	505	468	554	640	632	582	---	495	566	326	539
MIDLAND TEXAS	466	714	652	705	704	738	728	536	624	680	697	727	734	733	772	---	---	---	---	611	694	468	513	615	652	566	602	652	607	402	643	638
NASHVILLE TENNESSEE	487	631	689	632	594	467	537	573	484	623	469	457	442	355	142	597	692	586	337	548	601	635	555	241	178	367	659	412	514	189	620	494
NEW YORK CENTRAL PK	392	488	813	769	776	555	760	750	492	574	148	744	714	644	633	483	446	783	114	395	628	536	554	531	389	200	561	664	426	94	383	530
NORTH OMAHA NEBRASKA	620	726	300	533	634	692	562	711	438	630	547	673	612	356	731	691	648	685	745	716	658	370	623	698	253	732	546	701	568	676	650	604

SOLAR RADIATION TOTALS - Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

JULY 1971

Station	Day of month																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	386	328	610	543	377	360	507	493	464	404	518	506	471	285	341	539	562	558	216	415	603	519	556	255	85	194	466	518	258	213	207	412
OKLAHOMA CITY OKLA.	516	550	604	544	640	669	672	656	511	641	664	680	672	653	637	597	446	620	298	569	648	310	248	485	535	384	606	464	435	586	651	555
PALMER ALASKA	254	446	427	609	554	594	486	587	616	600	376	193	125	277	497	468	341	239	207	195	340	280	334	141	162	359	134	405	466	135	198	356
PHOENIX ARIZONA	---	---	---	---	---	---	---	---	674	626	675	615	620	646	661	650	658	670	658	663	615	587	610	649	642	639	631	634	636	478	584	631
PORTLAND MAINE	435	533	656	682	690	634	655	710	359	624	457	698	601	377	556	520	435	603	390	412	691	602	589	546	471	280	239	622	381	220	357	514
RAPID CITY S.DAK.	662	605	582	470	594	540	582	557	529	663	582	685	634	683	678	688	352	657	649	655	338	638	647	419	249	642	277	243	646	660	530	559
RENO NEVADA	605	665	599	666	663	662	625	647	667	674	673	663	643	605	604	471	454	384	610	501	602	615	632	609	616	561	573	491	589	478	479	591
RICHLAND 25 NW WASH.	733	802	793	751	509	627	731	617	253	470	681	773	770	764	702	737	749	694	707	613	733	723	725	732	724	710	687	702	689	679	669	686
RUSTON LOUISIANA	296	233	469	581	612	---	---	---	527	693	669	674	616	668	644	662	265	662	668	438	682	257	581	101	204	473	311	274	364	148	596	478
SAINT CLOUD MINN.	688	721	568	596	752	567	250	725	540	392	610	234	718	560	736	655	681	291	685	621	661	454	677	707	490	512	276	589	212	557	636	560
SALT LAKE CITY	546	780	767	664	732	788	749	745	781	781	782	770	666	749	750	714	713	674	646	709	672	629	724	717	730	669	751	726	715	706	718	718
SAN ANTONIO TEXAS	542	621	669	653	666	652	617	378	607	559	581	607	678	653	712	709	660	688	692	711	702	697	608	361	400	593	590	629	678	610	591	617
SANTA MARIA CALIF.	662	716	642	702	685	700	610	708	701	731	746	719	710	672	591	645	634	668	681	592	590	640	628	601	520	533	589	622	574	537	652	645
SAULT STE MARIE MICH	314	783	777	401	552	776	536	336	790	709	787	671	570	796	650	477	780	546	732	719	579	164	186	741	587	417	402	416	680	695	503	583
SEATTLE-TACOMA WASH.	523	768	754	593	364	654	693	264	342	249	657	692	752	743	731	742	726	717	583	688	700	474	369	518	683	671	637	559	646	590	254	585
SPOKANE WASHINGTON	568	748	737	627	247	525	715	535	---	463	663	665	750	726	696	695	712	706	678	570	653	674	693	685	647	678	652	619	676	616	645	642
STERLING VIRGINIA	556	433	797	772	786	---	720*	689*	512	---	255	697	669	718	694	519	680	499	257	564	---	655	543	494	421	532	483	444	264	308	358	547
SWAN ISLAND W.I.	474	562	536	582	471	605	540	374	518	578	453	544	422	596	85	287	595	509	542	249	572	539	506	590	287	528	586	530	504	351	124	472
TALLAHASSEE FLA	397	290	220	348	210	582	482	401	595	508	408	316	585	555	358	209	342	354	325	233	375	547	554	407	316	274	354	515	463	272	239	388
TAMPA FLORIDA	627	667	342	374	618	485	469	496	493	469	577	283	531	592	666	706	696	579	672	291	235	341	637	481	658	589	495	455	559	629	497	523
UPPER MARBORO MD.	505	490	766	764	764	584	684	656	522	635	262	667	630	689	659	446	612	583	278	484	569	689	568	550	515	568	482	535	336	317	396	555
WAKE ISLAND PACIFIC	716	633	691	694	694	688	693	693	671	624	675	695	699	623	557	633	551	705	675	622	497	692	603	---	653	243	565	652	691	630	672	638

Note.- Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

- Indicates Data Lost

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

MAY 1971

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	91	181	185	270	194	251	199	254	275	277	201	112	62	148	269	263	138	87	130	122	189	167	167	58	57	185	49	221	252	53	118	168

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (· 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	18.94	22.14	14.08	9.70	12.55	19.89	17.52	16.81	13.14	11.12	18.82	19.77	21.54	19.41	23.32	20.12	20.83	17.99	22.61	19.53	18.94	13.97	18.35	20.12	13.49	22.49	10.18	22.49	14.20	16.45	16.45	17.64

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code ₛ Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															Mean O_3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
AMUNDSEN-SCOTT, ANTARCTIC		DATA NOT RECEIVED																														
BEDFORD, MASS.		DATA NOT RECEIVED																														
BISMARCK, N. DAK.	00329	00340	00329	00327	00359	00328	00337	00331	00342	00330	04348	00333	00322	00357	00326	00333	00330	00327	02332	00326	00329	05341	00289	00317	00336	00362	00362	06376	00378	00341	05324	337
BOULDER, COLO.	00324	00319	-	-	-	03332	04330	00325	00321	-	-	00312	00315	00324	00332	00336	-	-	05347	00328	04333	00331	00343	-	-	05340	00330	00352	05347	00348	-	332
CARIBOU, MAINE		DATA NOT RECEIVED																														
FAIRBANKS, ALASKA	04387	00376	00366	07366	03358	03331	03355	-	-	-	-	-	-	-	-	05371	04356	00330	00343	-	06349	00372	00350	00332	04313	05345	04350	04349	00336	04314	05360	350
GREEN BAY, WIS.	05345	00345	00350	04350	00353	00363	04356	00350	00333	00345	00349	03341	00351	00375	05357	35350	00367	-	00368	00381	00363	00355	04357	00351	05342	00389	00371	00401	00380	-	00378	359
HUANCAYO, PERU	00270	00257	00256	00264	00261	00266	00266	00265	00266	00261	00266	00266	00267	00270	00264	00268	00267	00280	00275	00281	00274	00265	00266	00273	00270	00264	00267	00264	00267	00270	00273	267
MAUNA LOA, HAWAII	-	00272	-	-	-	00289	00303	-	00290	-	-	06268	-	05269	-	00285	-	-	00283	-	-	-	-	-	-	00305	-	00302	-	-	-	287
WALLOPS ISLAND, VA.	34384	34356	00291	00347	05342	00323	00346	00283	00334	05255	-	00321	00328	00319	00281	00291	00312	00327	00288	00287	05275	00277	33377	00323	00312	06361	35371	03316	00312	00338	00316	320

The spectrophotometer measures the total amount of ozone in the atmosphere, i. e., the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e. g., 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code ₛ designates the type of measurement made

DESCRIPTION OF CHARTS

CHART I. A. NORMAL DAILY AVERAGE TEMPERATURE (°F. 1931-60) FOR MONTH. B. TEMPERATURE DEPARTURE FROM 30-YEAR MEAN (°F. 1931-60) FOR MONTH. Chart I-A is reproduced from Environmental Data Service Publication "Climatic Maps of the United States." Chart I-B is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin," a publication of Environmental Data Service.

CHART II. TOTAL PRECIPITATION. Chart II is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

CHART III. PERCENTAGE OF NORMAL PRECIPITATION. Chart III is a reproduction of monthly chart appearing in "Weekly Weather and Crop Bulletin."

CHART IV. TOTAL SNOWFALL. CHART V. A. PERCENTAGE OF MEAN MONTHLY SNOWFALL. B. DEPTH OF SNOW ON GROUND. Chart IV gives the total depth in inches of unmelted snowfall as reported during the month by Weather Service and selected cooperative stations. This is converted in Chart V-A into a percentage of the mean monthly total amount computed for each Weather Service station having at least 10 years of record. The depth of snow on ground is that reported by both Weather Service and selected cooperative stations as of 7:00 a.m., e.s.t., on the Monday nearest the end of the month. This is reported only for the months December through March. The snowfall charts are presented each month November through April.

Isolines for Charts I, II, III, IV, and V are drawn through points of approximately equal value. Caution should be used in interpolating on these charts, particularly in mountainous areas.

CHART VI. A. PERCENTAGE OF POSSIBLE SUNSHINE. B. PERCENTAGE OF MEAN MONTHLY SUNSHINE. Chart VI-A shows the amount of sunshine received in terms of percentage of the total hours of sunshine possible during the month. In Chart VI-B this is shown as a percentage of the mean number of hours of sunshine received. Means are computed for Weather Service stations having at least 10 years of record.

CHART VII . A. AVERAGE DAILY VALUES OF SOLAR RADIATION LANGLEYS. B. PERCENTAGE OF MEAN DAILY SOLAR RADIATION. Shown on Chart VII-A are the monthly averages of daily total solar radiation, both direct and diffuse, in langleys (gm. cal. cm.-2) for all Weather Service and selected cooperative stations which record this element. The analyses include adjustments required to bring station records to approximately the same level of calibration. Adjusted numbers are in parentheses. Chart VII-B shows the percentages of the mean based on at least 5 years of record during the period 1950-1960, and corrected to the International Pyrheliometer Scale of 1956.

CHART VIII. TRACKS OF CENTERS OF ANTICYCLONES AT SEA LEVEL.

CHART IX. TRACKS OF CENTERS OF CYCLONES AT SEA LEVEL. Centers which can be identified for 24 hours or more are tracked in these charts. Semipermanent features such as the Great Basin and Pacific Highs and Colorado and Mexico Lows are not shown. The 7:00 a.m., e.s.t., positions are shown by open circles, with the intermediate positions at 6-hour intervals shown by solid dots. The date is given above the circle and the central pressure to whole millibars below. A dashed track indicates a regeneration rather than actual movement to the next position. Solid squares indicate position of stationary center for period shown beside it.

CHART X. AVERAGE SEA LEVEL PRESSURE (mb.) AND RESULTANT SURFACE WIND. The average monthly sea level pressures are obtained from eight daily 3-hourly observations reported at Weather Service stations. Resultant surface wind directions (to 36 points of the compass) for the month are shown by arrows. Resultant speeds are in miles per hour and are indicated by the length of arrow shafts. Constancy ratios (resultant surface wind divided by average surface wind for month) are shown to two decimal places. The inset shows the departure of the average pressure based on 30-year normals for first-order Weather Service stations, other stations having at least 10 years of record; and for each 10° intersection in a diamond grid over the oceans.

CHARTS XI-XVI. AVERAGE HEIGHT, TEMPERATURE, AND RESULTANT WINDS, 850, 700, 500, 300, 200, and 100 mbs. Height is given in geopotential meters and temperature in degrees Celsius. These are the averages of the 1200 G.m.t. radiosonde reports. Wind speeds are given in meters per second; flag represents 25 m.p.s., full feather 5 m.p.s., and half feather 2-1/2 m.p.s. Directions are shown to 360° of the compass. Winds are based on rawins at the indicated pressure surface and at 1200 G.m.t.

CHART XVII. A. 50-MB. RESULTANT WINDS. B. 30-MB. RESULTANT WINDS. Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. Winds are based on rawins at the indicated pressure surface and at 1200 G.m.t.

Exact values of most of these charted elements for Weather Service stations are printed each month in tabular form in CLIMATOLOGICAL DATA, NATIONAL SUMMARY. Extreme values of temperature and precipitation for each State are included in the tables, Condensed Climatological Summary. Annual averages for surface elements are presented in the CDNS Annual Issue each year.

Chart 1. A. Normal Daily Average Temperature (°F 1931-60), July.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), July 1971.

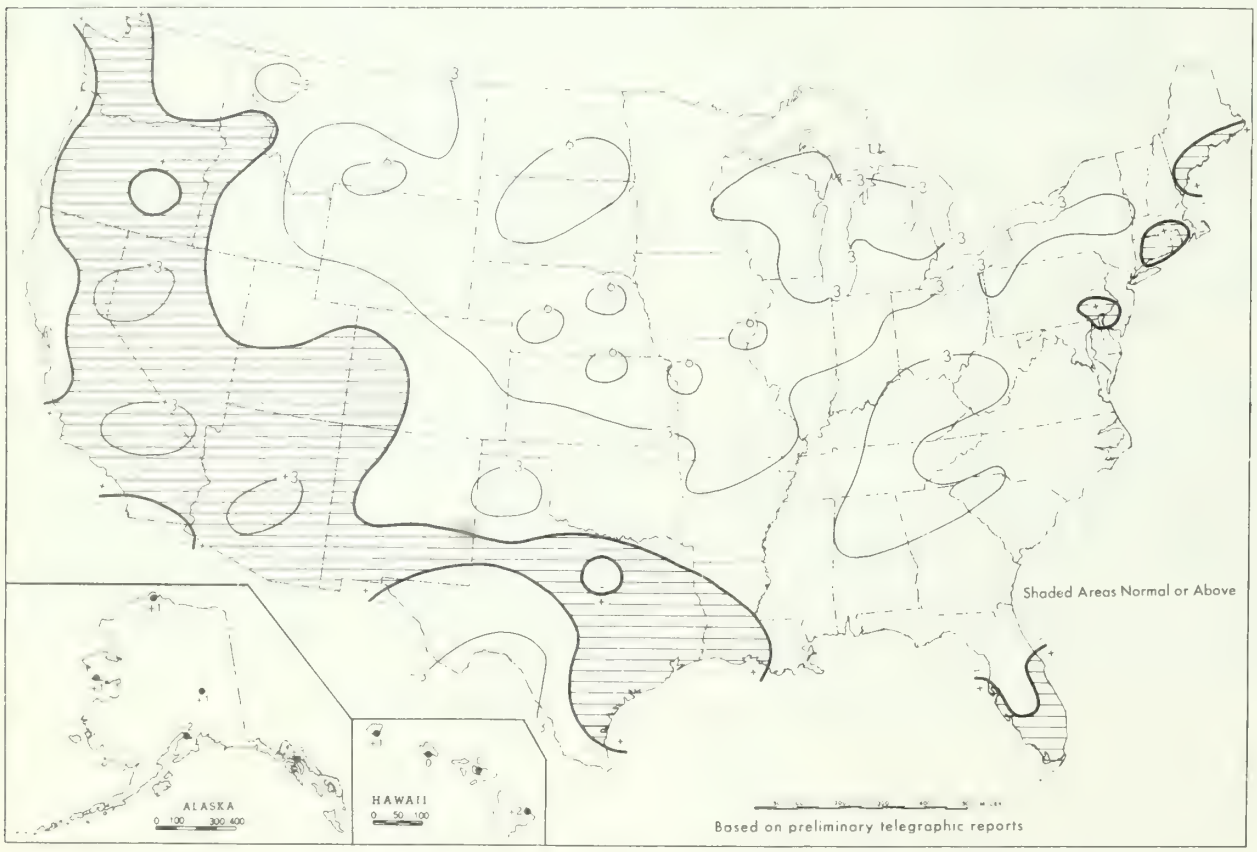


Chart II Total Precipitation (Inches), July 1971.

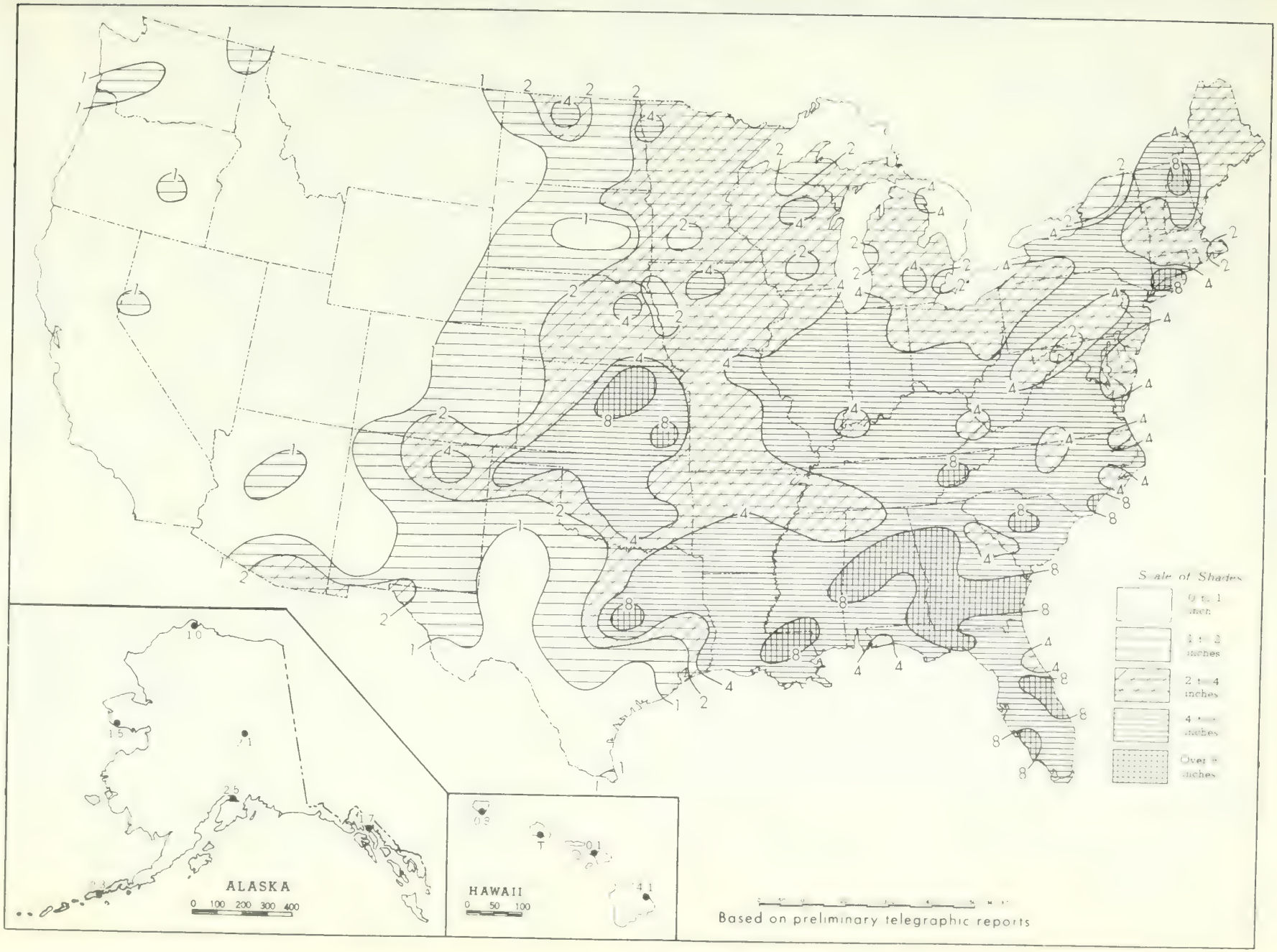


Chart III. Percentage of Normal Precipitation, July 1971.

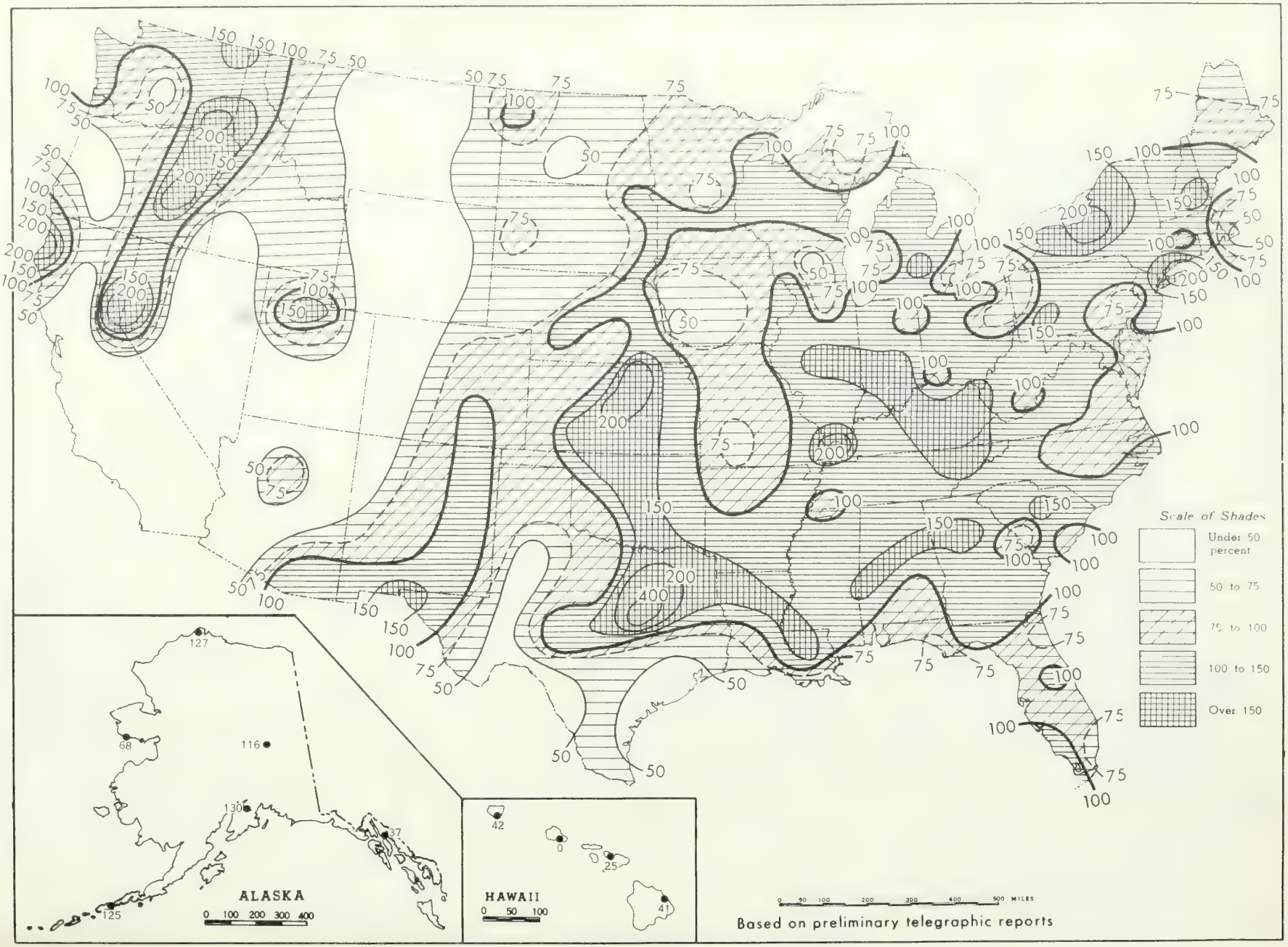
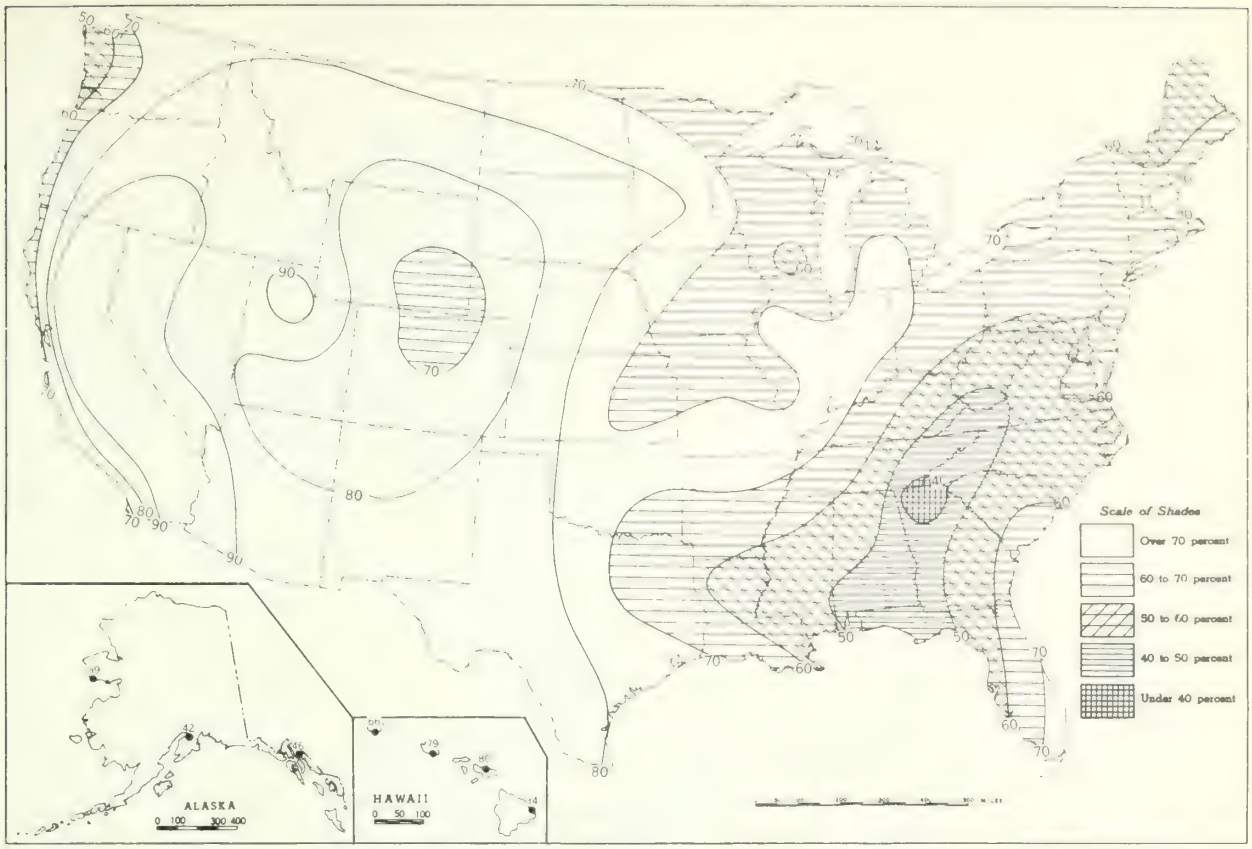
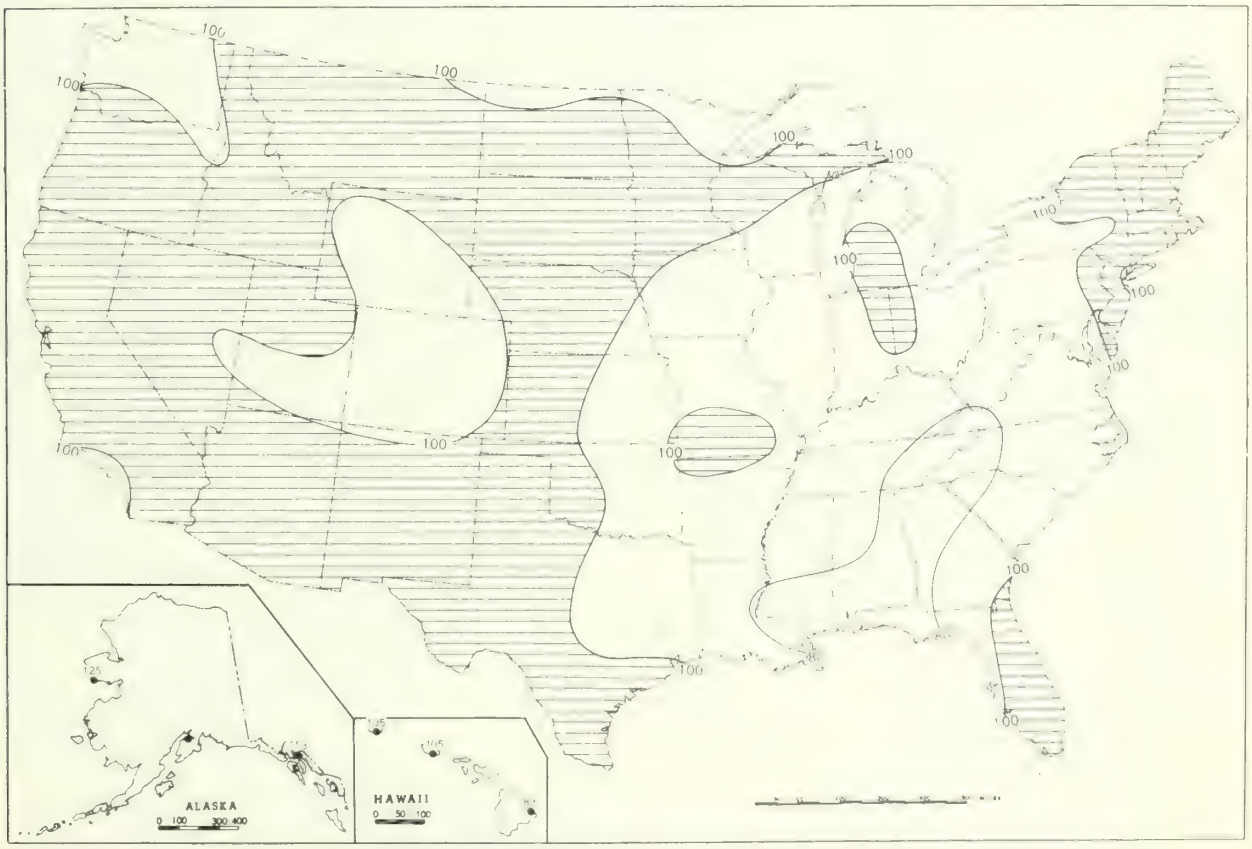


Chart VI. A. Percentage of Possible Sunshine, July 1971.

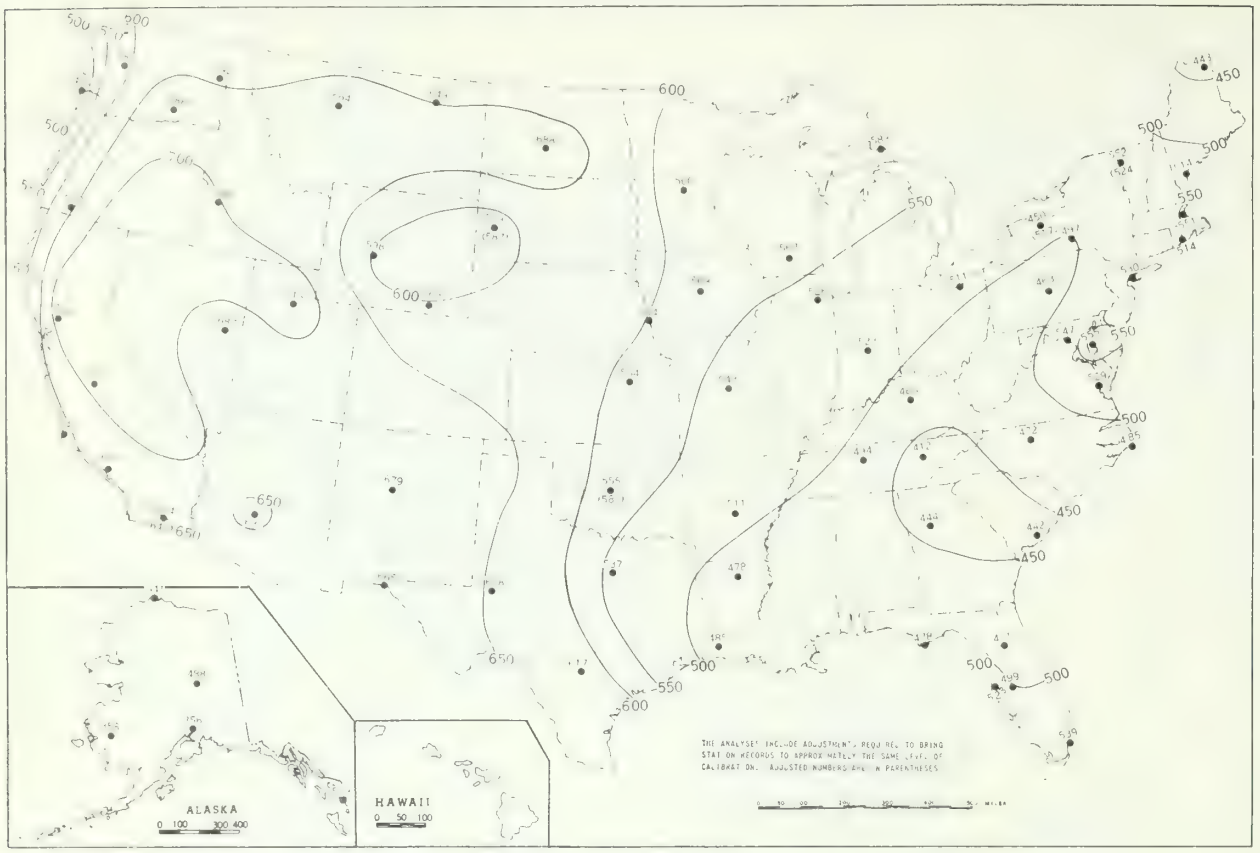


B. Percentage of Mean Monthly Sunshine, July 1971.

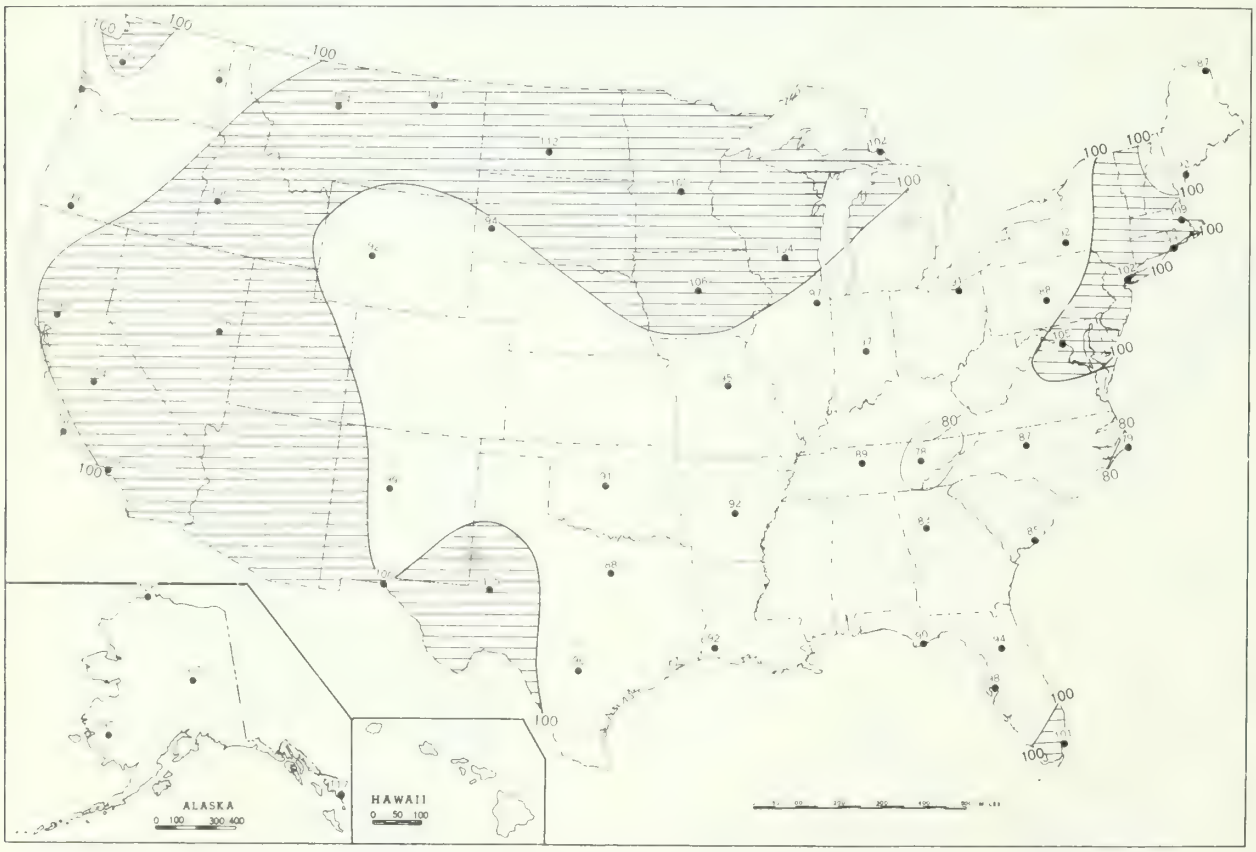


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, July 1971.

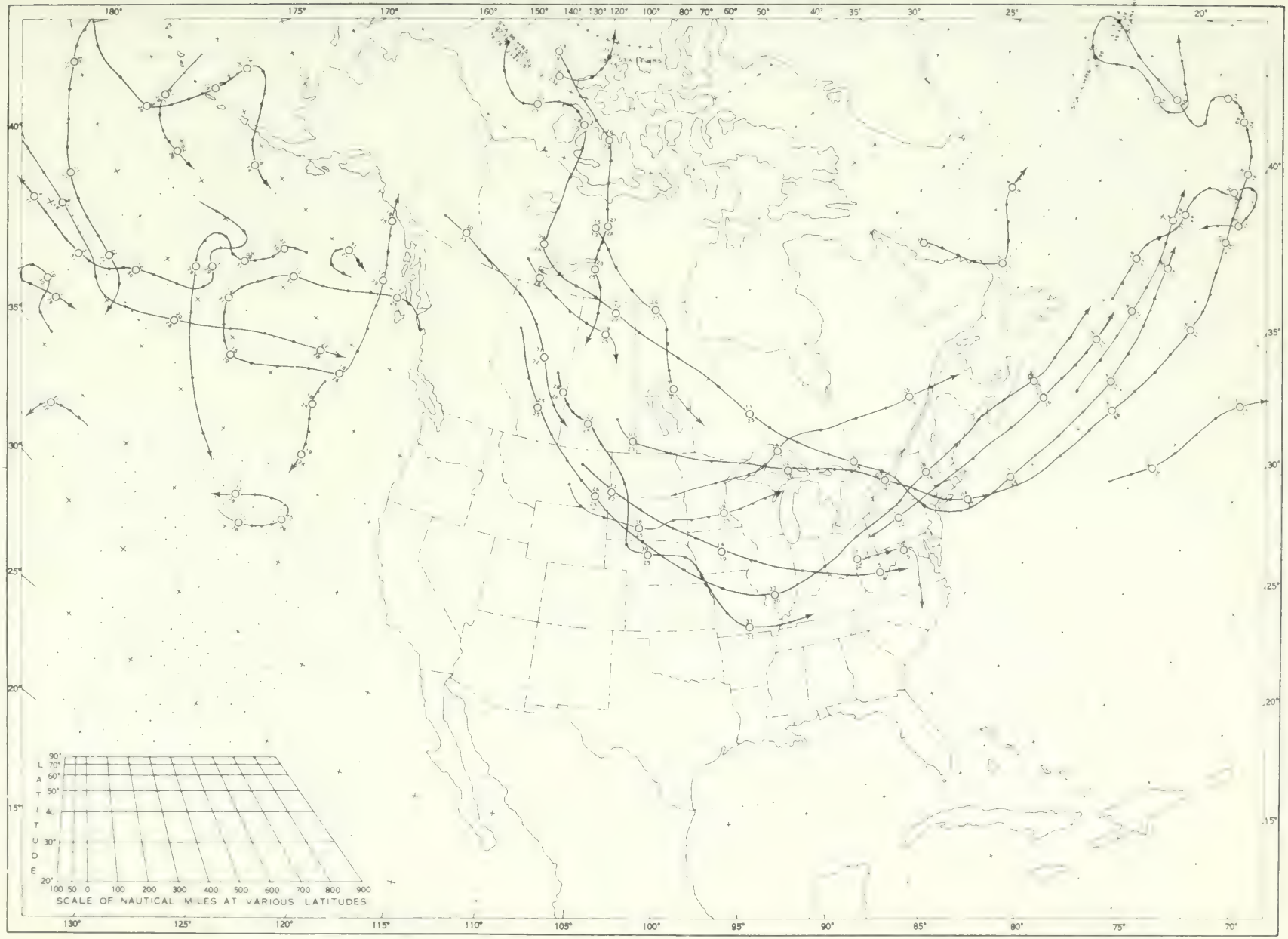


B. Percentage of Mean Daily Solar Radiation, July 1971.



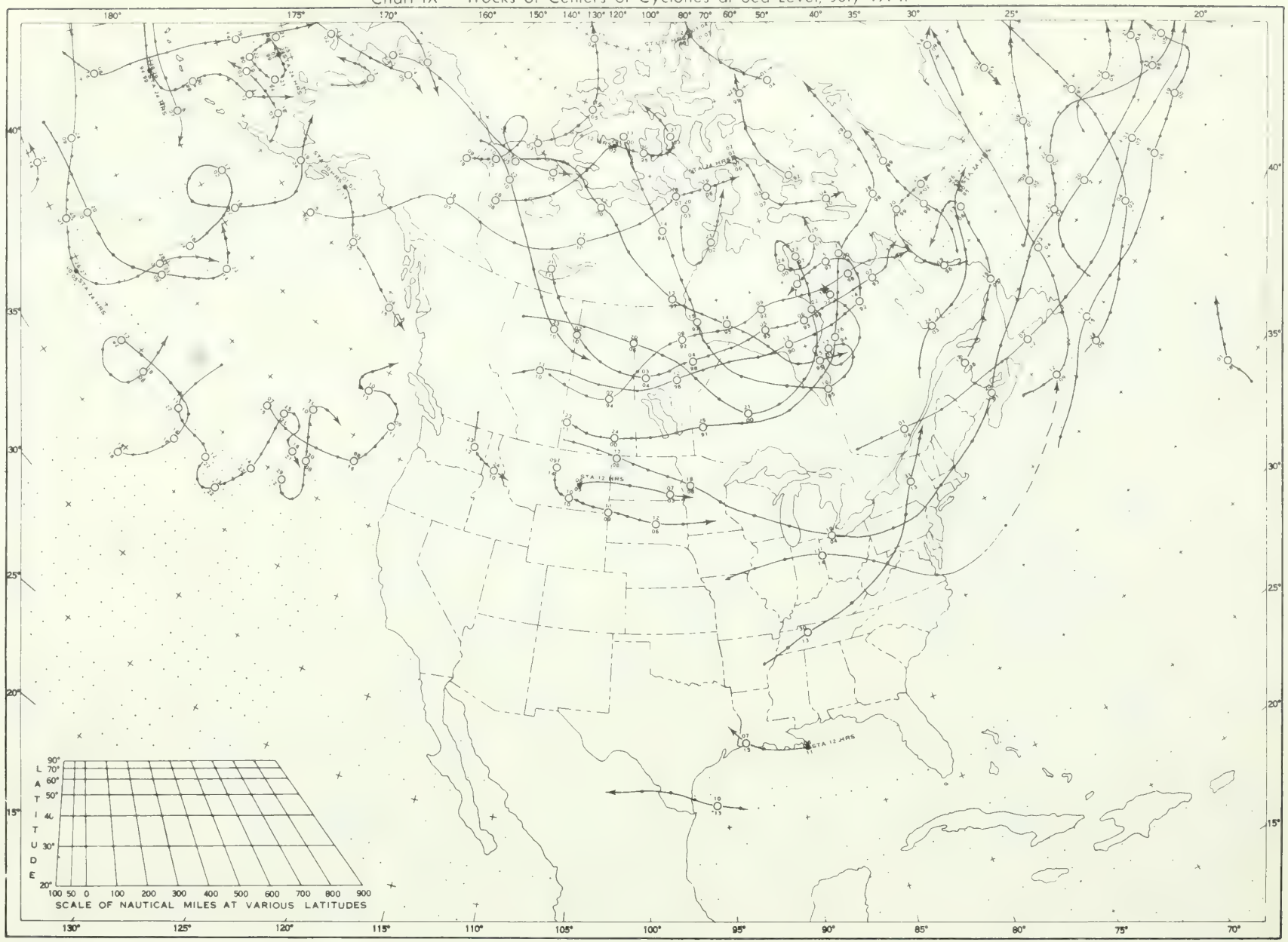
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, July 1971



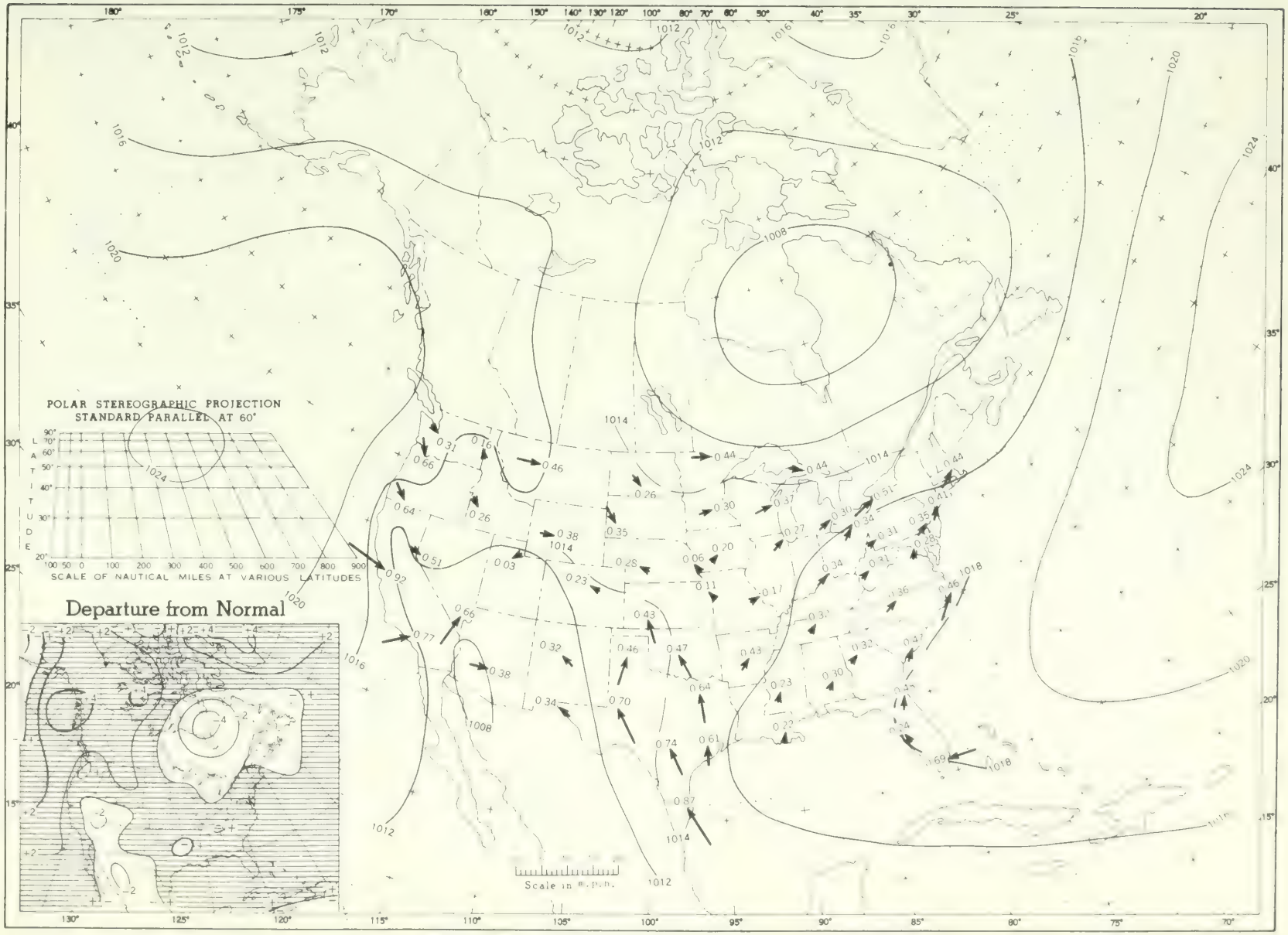
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, July 1971.



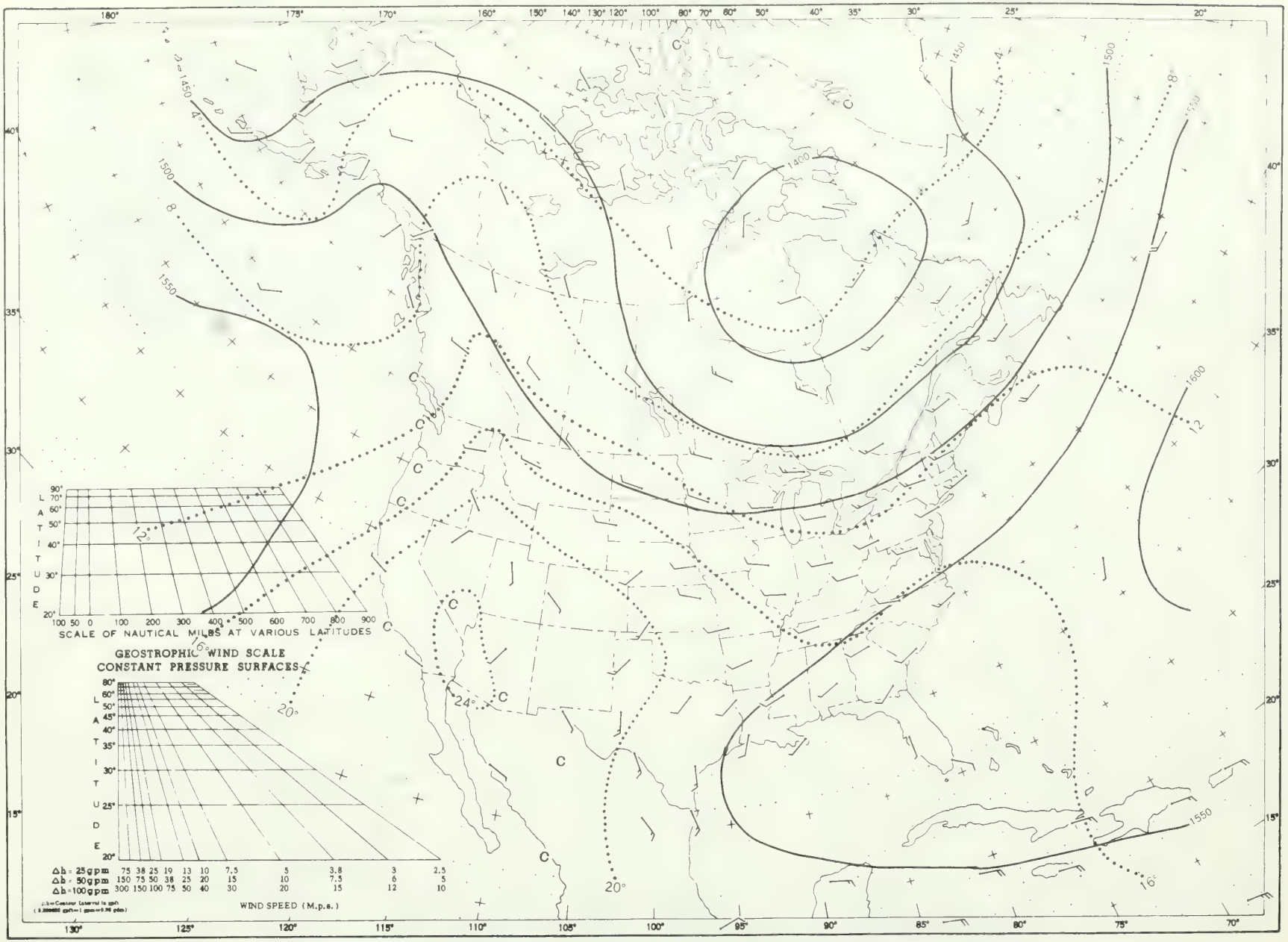
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, July 1971. Inset Departure of Average Pressure (mb) from Normal, July 1971.



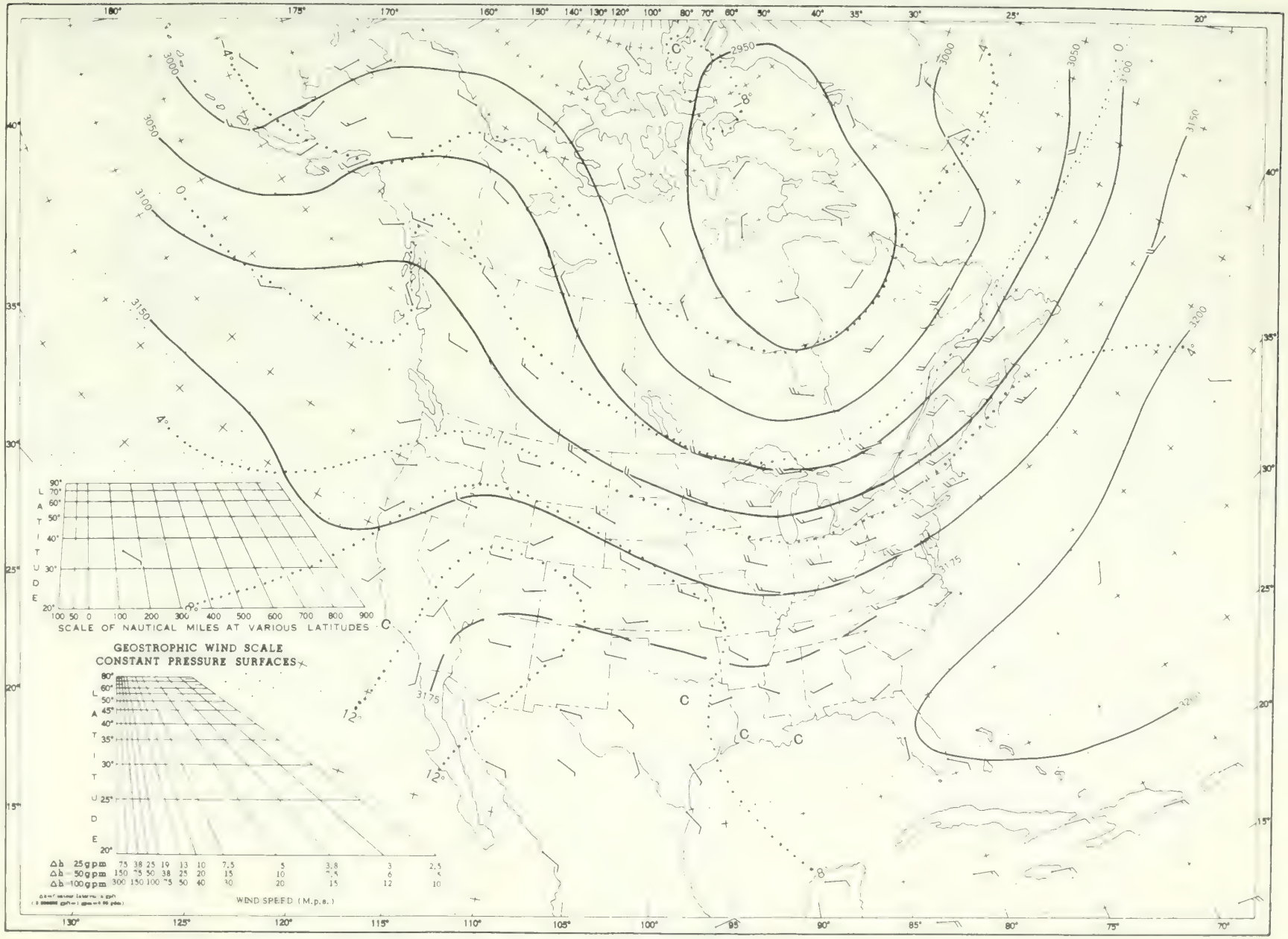
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed/average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI 850-mb Surface, 1200 G.m.t., July 1971. Average Height and Temperature, and Resultant Winds



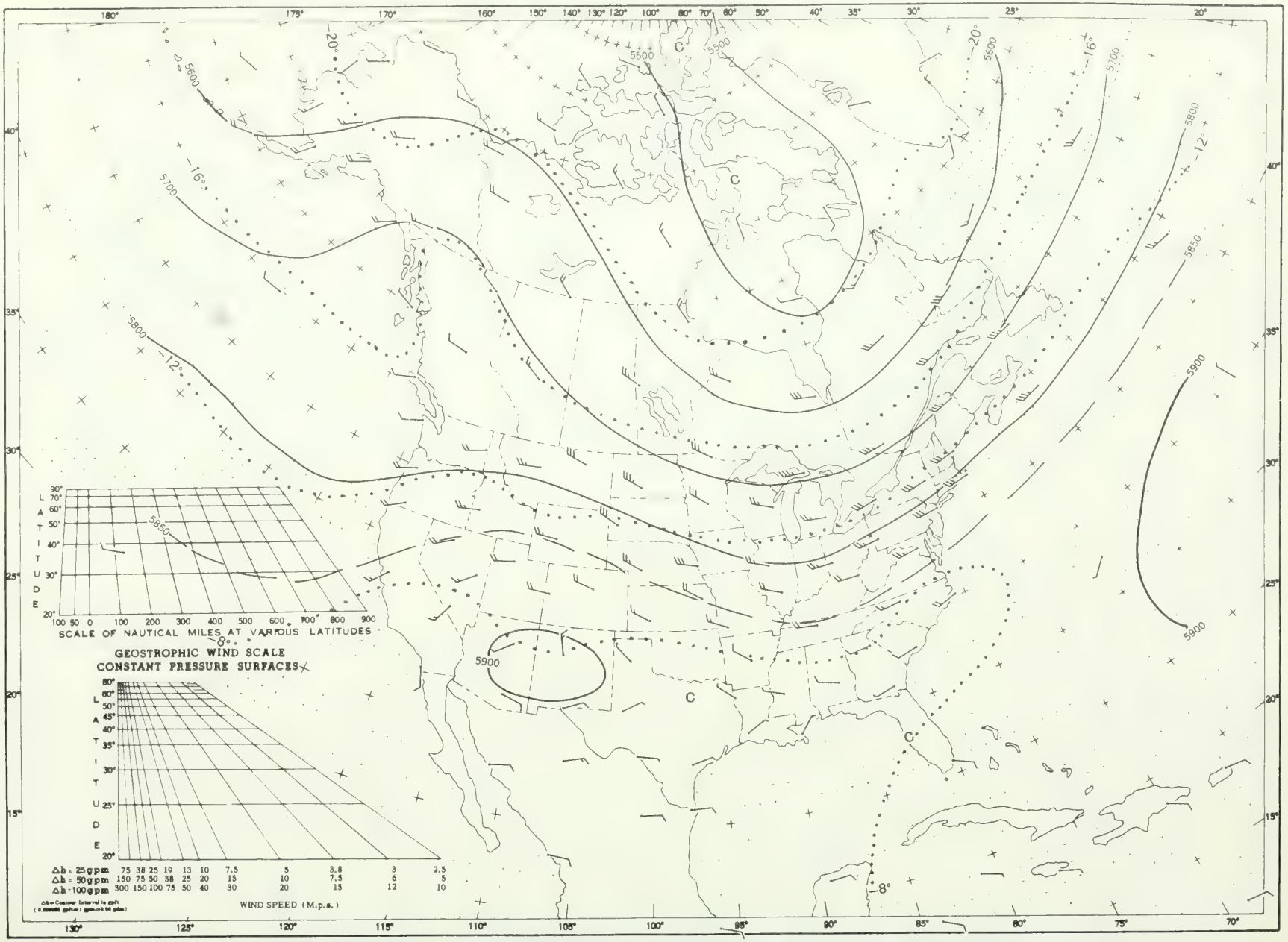
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII 700-mb Surface, 1200 G.m.t., July 1971. Average Height and Temperature and Resultant Winds



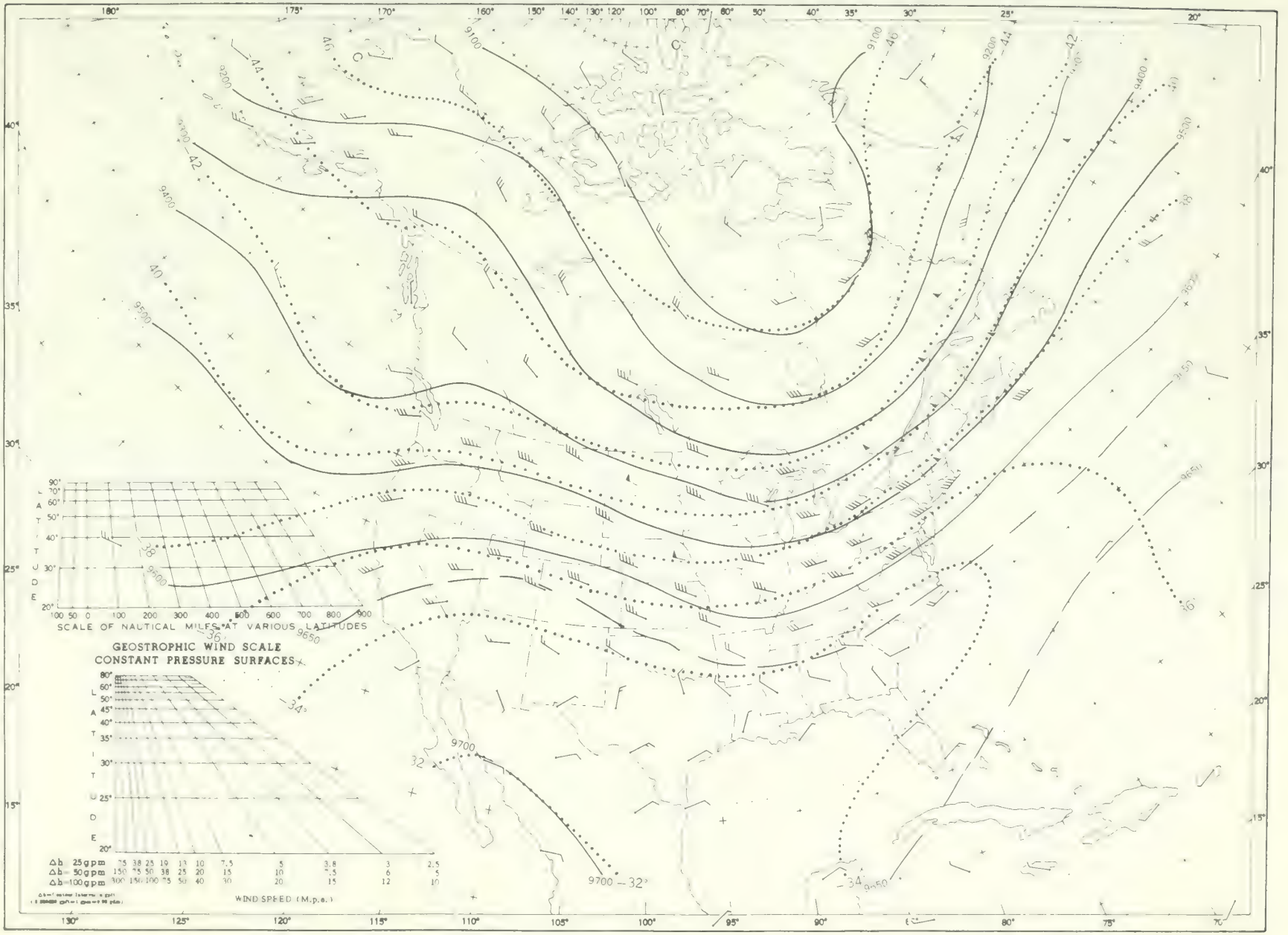
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 G.m.t., July 1971. Average Height and Temperature, and Resultant Winds



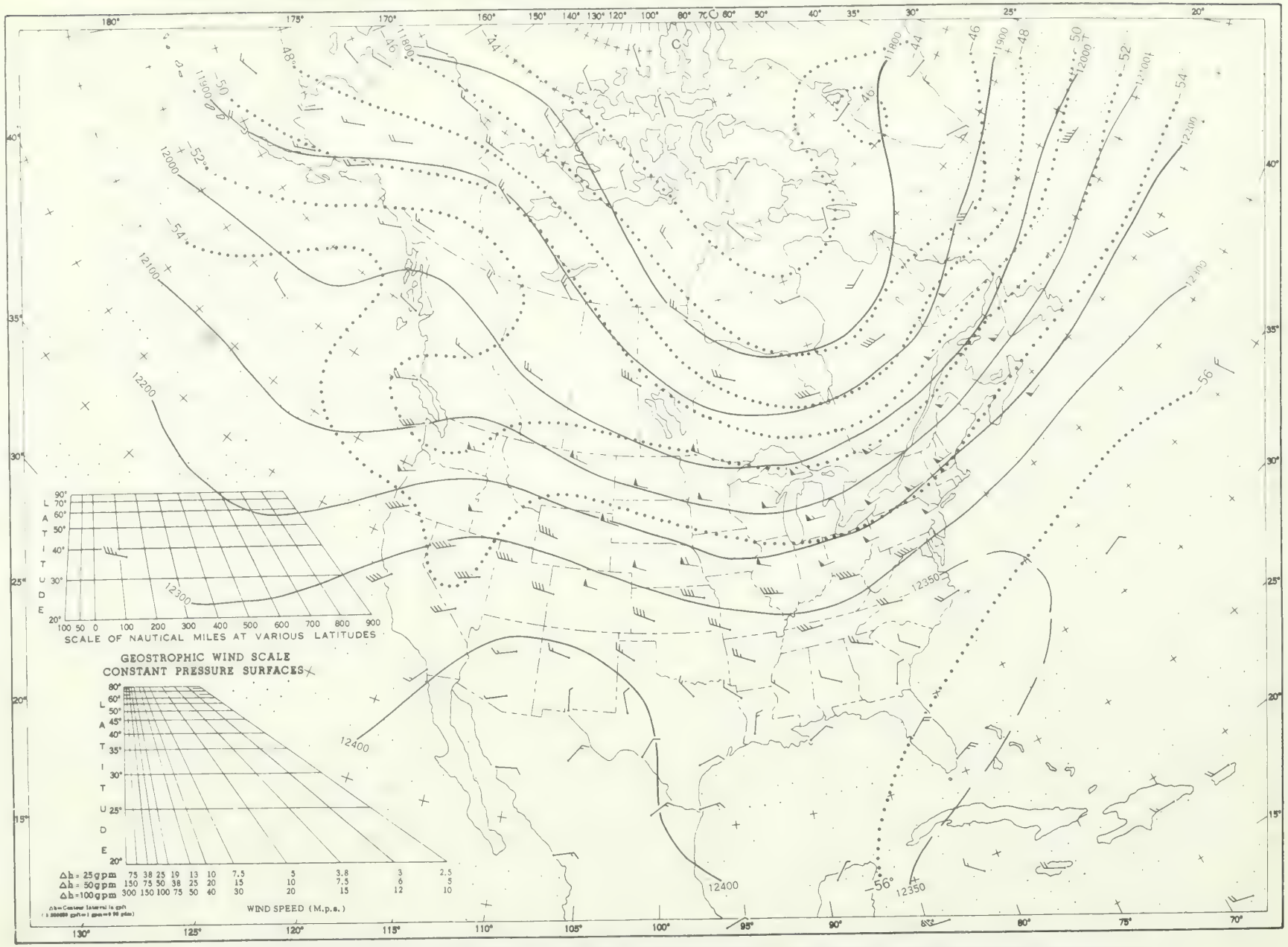
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300-mb Surface, 1200 G.m.t., July 1971. Average Height and Temperature, and Resultant Winds



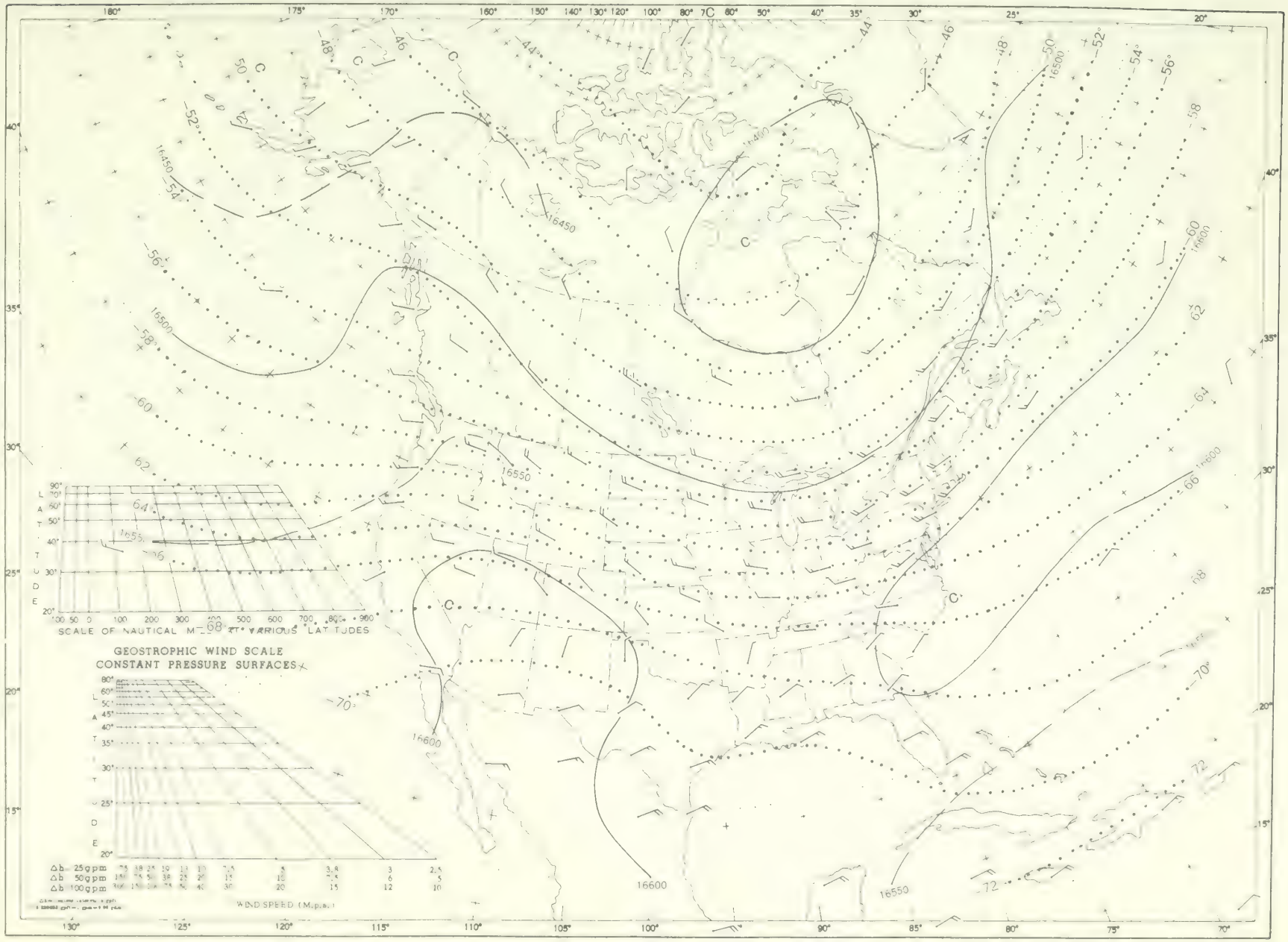
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb Surface, 1200 G.m.t., July 1971. Average Height and Temperature, and Resultant Winds

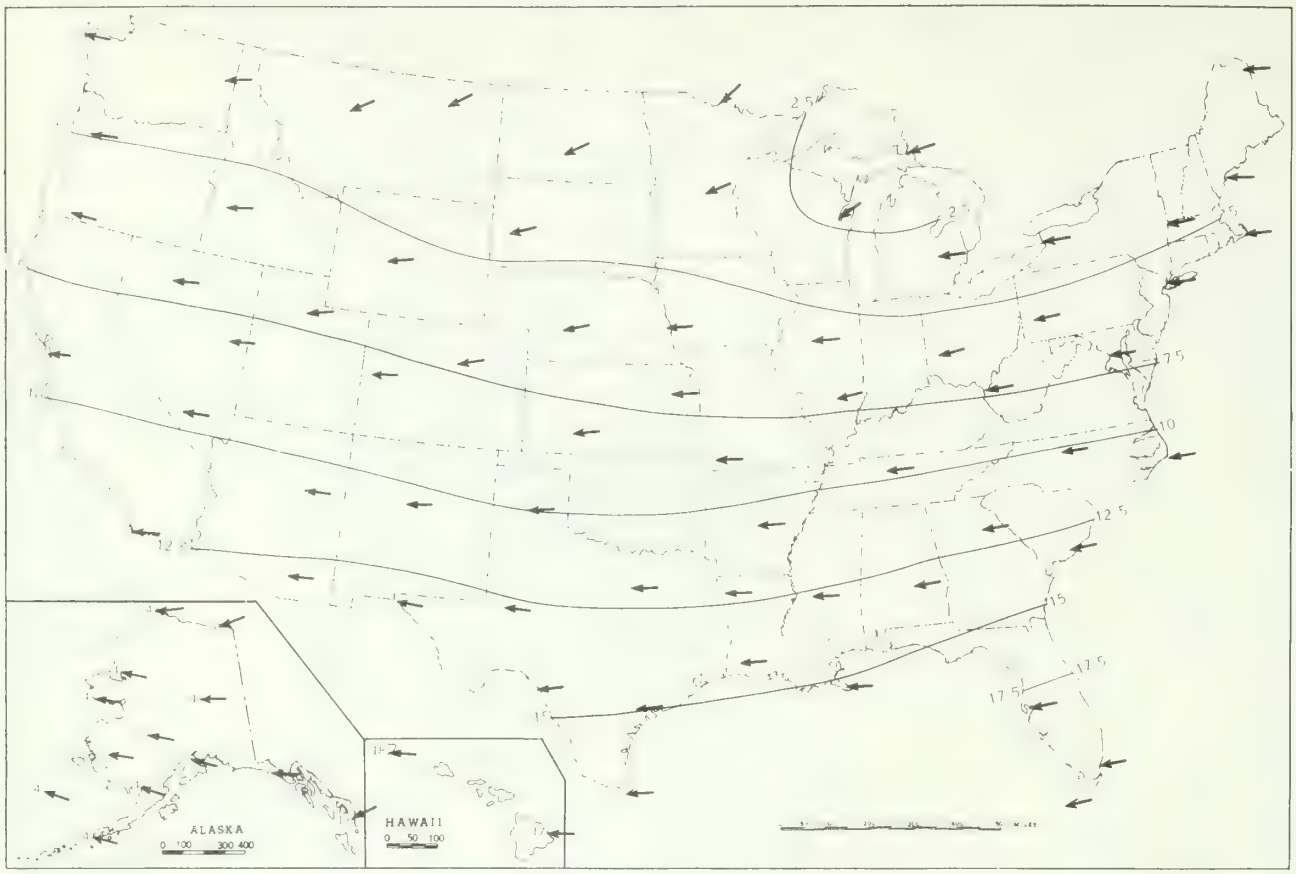


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

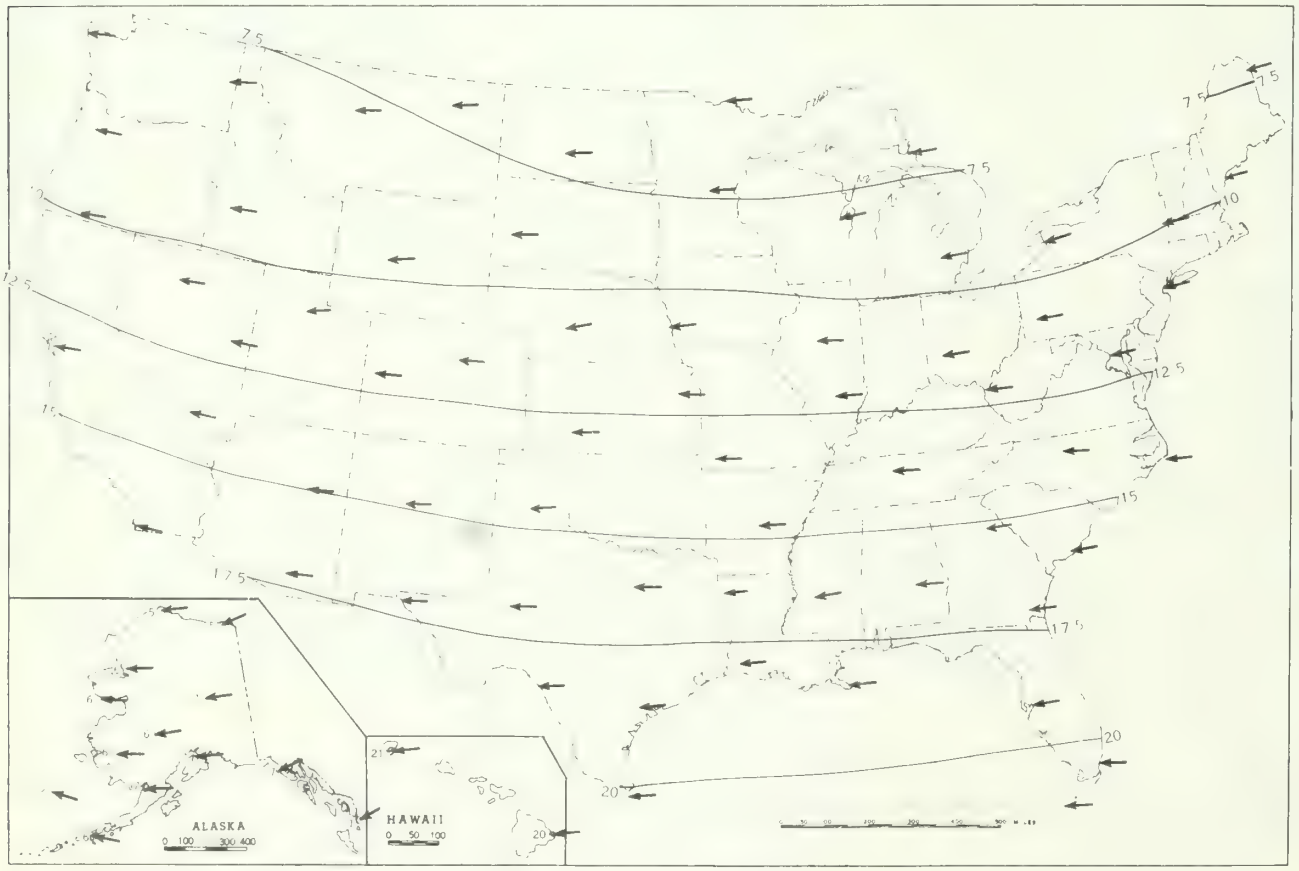
Chart XVI 100-mb Surface, 1200 G.m.t., July 1971. Average Height and Temperature, and Resultant Winds



Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.



B. 30-mb. Surface, 1200 G.m.t., July 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

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National Oceanic and Atmospheric Administration
Environmental Data Service



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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 8

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

AUGUST 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. August 1971 was a month of sharp weather contrasts. The temperature at some localities in the Far Northwest reached 90° frequently while some southern areas experienced the coolest August of record.
2. Some areas saw the driest August in 100 years. Much of central Texas received more than four times the normal rainfall.

TEMPERATURE--A large HIGH moved slowly from Canada to the Upper Mississippi River Valley bringing autumn chill to the North Central and Northeast in the first few days of August. Maximums in the seventies were common from the Red River of the North to New England. By August 5, the cool air had spread southward to Kentucky and Virginia and the temperatures over much of the Northeast resembled those expected in mid-September. Summer heat continued over the West with maximums reaching 100° to 110° in the Southwestern Deserts almost every day and reaching 100° to 105° on several consecutive days at Havre, Mont. Death Valley, Calif., warmed to 124° on August 10. Clear skies and mild temperatures prevailed over most of the Nation at midmonth. The northern Great Plains, however, were somewhat warmer than normal. Among the higher temperatures in the northern Great Plains by midmonth were 105° on the 5th and 6th at Havre, Mont., and 99° at Mobridge, S. Dak., on the 23d. Maximums ranged from the seventies in the Great Lakes Region and New England to the eighties and low nineties in the Deep South. The last week of August brought continued warm weather over the West while a large HIGH over the Great Lakes spread early autumn temperatures over the Northeast. Temperatures over the Southeast continued within a few degrees of normal. Freezing temperatures occurred in the high Rockies, 26° at Big Piney, Wyo., on the 24th, and at some northern locations, 32° at Pellston, Mich., also on the 24th.

Temperatures averaged above normal northwest of a line from Arizona to the Dakotas and below normal over most of the area southeast of that line. A few spots averaged 3° or more below normal. At Nashville, Tenn., the temperature reached 90° on only a few days. The 5-year average is 17 days in August with 90° or higher. At Winston-Salem, N. C., the temperature failed to reach 90°, the first such occurrence in their entire weather record.

PRECIPITATION--Generous showers and thunderstorms occurred from southern New England to the Lower Rio Grande Valley along the front marking the leading edge of a large HIGH which pushed from south-central Canada into the United States. Especially heavy showers fell in southern Texas. Camp Bullis, near San Antonio, received 13.10 inches of rain in the 48-hour period ending on the morning of August 3. Much of the Northeast received moderate to heavy rain in the first few days of August from the slow-moving system. From 6.00 to 12.50 inches of rain in eastern and northeastern Baltimore, Md., caused 16 deaths and millions of dollars' property damage.

Some severe weather, thunderstorms accompanied by hurricane-force winds and hail, occurred over the northern Great Plains early in the second week of August. Generous showers covered much of the Corn Belt from northern Missouri to Lower Michigan. On the 11th, showers fell from Texas to New England. The heaviest showers fell in Texas where up to 8.00 inches fell in the Hondo and Seco Creek Watersheds west of San Antonio and up to 5.25 inches fell in the Upper Guadalupe Basin northwest of San Antonio. Widespread flooding occurred on August 12 in parts of Alaska. Floods and washouts closed roads and highways between Fairbanks and Anchorage and isolated Palmer, Alaska.

Heavy rains fell shortly after mid-August in connection with a tropical depression that moved along the Carolina coast. Sullivans Island, S. C., received over 8.00 inches in 24 hours ending on the morning of the 17th and Pee Dee, S. C., received 9.11 inches in 48 hours ending at that same time. Tropical Storm Doria moved northward along the Atlantic Coast in the last week of August, soaking most areas with 4.00 to more than 6.00 inches of rain. Winds associated with Tropical Storm Doria were generally about 60 m.p.h., but gusts occasionally reached hurricane speed. Flooding and wind damage were widespread. Doria lost most of her energy as she crossed New England August 28 and pleasant weather returned to most of the Northeast by the 29th.

Monthly rainfall totals were especially small over North Dakota and much of the western Corn Belt. Only .03 inch fell at Bismarck, N. Dak., during the entire month. At Moline, Ill., August 1971 was the driest August in a hundred years. At numerous locations, it was the driest August in several decades. In contrast, rain in much of central Texas ranged from 200 percent to more than 600 percent of normal.

For further details regarding Hurricane Doria, see this month's issue of Storm Data.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Red Bay	99	7	Valley Head	51	28	Mobile WSO	10.46	Bessemer 3 SSW	.79
Alaska	Beaver Falls	84	2	2 Stations	20	31	Little Port Walter	25.67	Galbraith Lake Camp	D .01
Arizona	Willow Beach	117	2	Alpine	39	5	Kitt Peak	11.33	Yuma Proving Ground	.22
Arkansas	Lead Hill	100	25	2 Stations	47	28+	Fort Smith Water Plant	8.72	Berryville 4 NW	.38
California	Death Valley	124	10	2 Stations	27	30	White Mountain 2	3.15	229 Stations	.00
Colorado	Wray	102	22	Fraser	24	7	Trinidad	5.63	Longmont 2 ESE	T
Connecticut	Hartford WSO	95	10	Coventry	33	25	Putnam Lake	9.98	Mansfield Hollow Dam	2.46
Delaware	Dover	92	10	Newark University Farm	46	24	2 Stations	10.93	Lewes 1 SW	5.15
Florida	Fellsmere 7 SSW	98	28+	2 Stations	62	2	Usher Tower	20.44	Melbourne	1.14
Georgia	7 Stations	97	23+	Blue Ridge	50	29	Savannah Beach	16.56	Ringgold	1.03
Hawaii	2 Stations	92	18+	Mauna Loa Slope Obs,Hawaii	29	8	Mount Waialeale 1047,Kauai	10.86	10 Stations	.00
Idaho	Riggins Ranger Station	111	9	Three Creek	23	24	Preston 3 NE	2.74	Ola 4 S	.00
Illinois	Ottawa	98	22	Freeport	43	29	Makanda 1 NW	9.51	Mount Olive 1 E	T
Indiana	2 Stations	95	21+	Warsaw	41	1	Vevay	7.81	Vincennes 1 NW	.64
Iowa	7 Stations	98	23+	Carroll 2 SSW	35	27	Clarinda	6.51	Sioux City WSO	.12
Kansas	Anthony	102	22	Troy 3 SW	46	27	Caldwell	6.52	5 Stations	.00
Kentucky	Fords Ferry Dam 50	98	26	Falmouth 5 WNW	44	24	Warsaw Markland Dam	8.38	Midway	.54
Louisiana	3 Stations	98	24+	Winnfield 2 W	56	29	Diamond 4 NW	12.92	Oak Grove	.37
Maine	3 Stations	92	10+	2 Stations	32	26	Fort Kent	7.74	Rockland	1.43
Maryland	2 Stations	96	22+	Oakland 1 SE	37	24	Towson	19.99	Cumberland	2.54
Massachusetts	New Bedford	96	9	Barre Falls Dam	30	25	Chester 2	10.84	South Wellfleet	1.28
Michigan	Detroit M Wayne C WSO	95	10	2 Stations	28	24+	Mackinaw City No 2	6.05	Adrian 2 NNE	.40
Minnesota	Redwood Falls FAA AP	104	22	Bigfork	30	3	Cloquet For Res Center	5.64	Grand Meadow	.26
Mississippi	2 Stations	97	14	2 Stations	54	28+	Gulfport Naval Center	9.81	Collinsville 7 SE	.12
Missouri	11 Stations	100	25+	2 Stations	42	28+	Mountain Grove 2 N	8.30	Butler	T
Montana	4 Stations	107	22+	Wisdom	20	24	Kirby 1 S	5.68	Plentywood	.00
Nebraska	Springview	105	23	Agate 3 E	41	7	Beaver City	3.86	2 Stations	T
Nevada	Sunrise Manr Las Vegas	114	10	Sheldon	26	23	Caliente	3.35	3 Stations	.00
New Hampshire	2 Stations	93	11+	Mount Washington	26	24+	Mount Washington	9.29	Durham	1.57
New Jersey	2 Stations	95	9	2 Stations	39	25	Rahway	14.39	Long Branch 2 S	4.98
New Mexico	2 Stations	102	17+	Eagle Nest	30	5	Hobbs	8.49	Villanueva	.28
New York	New York Laurel Hill	96	9	Old Forge	30	25+	NY Westerleigh Stat Is	16.73	Canaseraga	.92
North Carolina	Statesville 2 NNE	99	21	3 Stations	44	29+	Willard 4 SW	14.59	Lincolnton 4 W	.90
North Dakota	Washburn	107	21	2 Stations	34	2	McLeod 3 E	4.73	3 Stations	.00
Ohio	2 Stations	95	11+	Millport 2 NW	35	24	Ripley Exp Farm	8.88	Marshallville 1 SSW	.38
Oklahoma	Kingfisher	105	22	3 Stations	50	29+	Marlow 1 WSW	10.07	Beaver 1 SW	.34
Oregon	Pilot Rock 1 SE	111	1	2 Stations	22	23	Port Orford 5 E	4.74	6 Stations	.00
Pennsylvania	Lawrenceville	97	19	Clermont 4 NW	28	24	Neshaminy Falls	14.25	Stevenson Dam	1.00
Puerto Rico	2 Stations	95	11+	Adjuntas Substation, P.R.	56	3	Humacao, P.R.	18.30	Central San Francisco,P.R.	2.03
Rhode Island	Providence WSO	92	9	Kingston	37	25	Kingston	3.28	Block Island WSO	1.24
South Carolina	Sullivans Island	98	5	Union 8 SW	54	14	Brookgreen Gardens	20.70	2 Stations	2.44
South Dakota	2 Stations	109	23	2 Stations	34	24+	Watertown FAA Airport	5.08	Ardmore 2 N	.10
Tennessee	2 Stations	95	24+	2 Stations	47	29+	Waverly 4 W	14.12	Kingston	.92
Texas	Quanah 5 SE	104	23	Mount Locke	40	29+	Medina	20.14	Shamrock Radio KBYP	.42
Utah	Saint George	108	2	Ibapah	32	24	Blowhard Mtn. Radar	6.80	2 Stations	T
Vermont	Morrisville 2	92	19	Mount Mansfield	31	24	Waitsfield 2 WSW	10.11	South Hero	4.15
Virginia	Chase City	95	3	Floyd 2 NE	42	14	Halifax 2 SSE	12.25	Craigsville	.87
Washington	3 Stations	110	10+	2 Stations	31	27+	Forks 1 E	4.21	2 Stations	.00
West Virginia	Moorefield	93	10	Canaan Valley	32	24	Rowlesburg 1	7.46	Huntington Sew Trmt Pl	.83
Wisconsin	Dodge	97	22	Drummond 6 W	30	27	Foxboro	7.13	Alma Dam 4	.30
Wyoming	Arvada 3 N	105	22	Lamar Ranger Station	20	24	Moose	2.86	2 Stations	.00

+ And also on an earlier date or dates.

NOTE - Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, ice pellets				Fastest mile								
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	994.9	1017.0	87	68	77.8	- 3.3	92	8	57	29	6	0	69	79	3.68	- 1.17	1.26	12	14	0.0	0	1.7	8	29	N	21	6	15	10	5.7	66
HUNTSVILLE	624	994.2	1017.0	86	67	76.6	- 3.6	90	21+	59	28	3	0	68	79	2.97	- 0.32	1.27	8	9	0.0	0	1.4	8	28	31	11	6	15	10	5.7	
MOBILE	211	1008.1	1016.1	90	74	82.1	0.0	94	5	71	14+	22	0	74	81	10.46	4.02	2.11	17	14	0.0	0	2.3	5	24	16	24	2	13	16	7.0	
MONTGOMERY	183	1009.1	1016.5	89	70	79.5	- 2.2	92	21+	63	28	15	0	71	82	3.22	- 0.88	1.75	11	10	0.0	0	1.1	7	21	S	31	4	12	15	6.5	50
ALASKA												B																			
ANCHORAGE	114	1003.1	1007.8	61	49	55.0	- 0.9	68	15	42	28	0	0	49	82	2.58	0.01	0.84	12	0	0.0	0	3.0	16	26	16	9	1	3	27	8.8	34
ANNETTE	110	1008.8	1012.7	63	52	57.7	- 0.7	77	9	42	27	7	0	53	88	8.57	1.06	3.12	18	0	0.0	0	6.9	14	37	15	19	2	4	25	8.7	
BARROW	31	1012.9	1013.5	37	30	33.5	- 4.4	60	16	25	30+	0	25	32	93	0.35	- 0.55	0.26	6	0	2.4	2	3.0	35	23	6	31	1	6	24	8.7	
BARTER ISLAND	39	1010.2	1012.0	40	31	35.6	- 4.4	61	17	24	12	0	19	34	91	0.42	- 0.63	0.18	9	0	T	T	3.4	30	26	27	4	4	2	25	8.3	
BETHEL	125	1003.1	1008.8	58	46	51.9	- 0.4	70	11	38	21	1	0	47	85	3.12	- 1.08	1.00	16	0	0.0	0	2.2	26	30	34	19	0	2	29	9.5	
BETTLES	644	984.1	1009.0	63	41	52.2		73	18	32	4	2	1	44	75	1.80		0.65	9	0	0.0	0	1.3	32	20	36	30	6	11	14	6.9	
BIG DELTA	1268			63	44	53.6		74	18	35	15	4	0			2.50		0.51	17	0	0.0	0			22	19	17	2	7	22	8.2	
COLD BAY	96	1006.4	1010.3	53	44	48.5	- 2.8	71	5	40	16	1	0	45	91	2.76	- 1.49	0.76	22	0	0.0	0	5.5	23	42	32	19	0	0	31	9.8	
FAIRBANKS	436	991.5	1007.8	65	47	56.1	1.8	74	18	39	30+	5	0	45	69	2.32	0.12	0.60	14	1	0.0	0	1.4	29	21	22	20+	1	6	24	8.1	
GULKANA	1572	951.9	1008.6	63	43	52.5		74	12	30	28+	4	2	45	76	3.92		2.01	15	0	0.0		3.7	19	23	18	8+	2	7	22	8.0	
HOMER	67	1005.4	1007.9	59	47	53.2		71	9	40	31+	1	0	49	85	1.95	- 0.87	0.75	15	0	0.0	0	1.3	25	21	13	29	1	3	27	9.1	
JUNEAU	12	1010.2	1010.9	62	49	55.4	1.3	74	1	35	28	3	0	51	89	6.89	1.87	1.78	20	0	0.0	0	3.9	9	25	12	23+	0	3	28	9.5	13
KING SALMON	49	1005.4	1007.4	62	48	54.9	0.3	72	18+	32	21	4	1	47	77	4.30	0.87	0.71	18	1	0.0	0	2.5	21	28	4	28	1	3	27	9.1	
KOTZEBUE	10	1008.8	1009.4	54	44	48.7	- 1.9	63	15	34	31	0	0	43	80	0.38	- 1.78	0.18	7	0	0.0	0	7.3	31	35	33	19	8	10	13	6.1	
MC GRATH	344	995.3	1007.9	65	47	55.9	1.8	74	29	35	22	7	0	49	81	2.07	- 1.72	0.83	12	1	0.0	0	1.0	30	18	8	14+	2	5	24	8.3	
NOME	13	1008.1	1009.0	56	41	48.5	- 0.5	65	28	33	21	0	0	40	72	0.40	- 3.40	0.20	4	0	0.0	0	1.9	33	23	31	20+	8	5	18	6.9	54
ST. PAUL ISLAND	22	1009.5	1010.2	48	41	44.5	- 3.1	59	2	37	2	0	0	43	97	2.78	- 0.51	1.07	17	0	0.0	0	6.2	32	35	31	22+	1	0	30	9.7	
SHEMYA	122	1008.5	1012.1	49	44	46.6	- 3.1	52	21+	41	24+	0	0	44	90	3.96	1.84	1.75	20	0	0.0	0	1.4	5	39	20	20	0	0	31	9.9	
SUMMIT	2401	923.5	1008.1	58	41	49.5		69	11	32	30+	0	2	42	77	2.58		0.53	15	0	0.0	0	0.8	26	21	23	1	3	5	23	8.2	
TALKEETNA	345			65	47	55.9	1.2	72	12+	36	15	9	0			7.77	2.44	1.58	17	0	0.0	0			20	36	14					
UNALAKLEET	15			57	46	51.7		69	14	36	20	0	0			1.45		0.44	12	0	0.0	0			26	34	19	4	7	20	7.8	
YAKUTAT	28	1008.8	1009.9	60	47	53.4	- 0.4	71	28	33	28	1	0	51	94	6.36	- 4.56	1.29	21	0	0.0	0	3.1	12	28	12	19	0	1	30	9.5	
ARIZONA																																
FLAGSTAFF	7006	791.7	1016.4	77	51	64.0	0.1	84	1	47	29+	0	0	52	72	4.48	1.64	0.85	17	26	0.0	0	1.3	24	28	35	13	3	15	13	6.6	
PHOENIX	1117	971.9	1009.6	101	79	89.6	2.1	106	31+	72	13+	30	0	64	45	0.99	- 0.13	0.30	7	12	0.0	0	1.4	19	46Y	5SE	12	6	24	1	4.4	75
TUCSON	2584	924.8	1010.8	92	71	81.3	- 1.8	97	29+	67	12+	23	0	63	60	3.29	0.41	1.00	15	23	0.0	0	2.4	18	40	SE	3	7	16	8	5.5	74
WINSLOW	4895	852.7	1012.6	92	64	78.0	0.2	99	3+	60	31+	23	0	54	51	1.40	- 0.03	0.53	8	15	0.0	0	2.5	23	32	8	10+	8	16	7	5.4	
YUMA	194	1001.7	1008.9	101	80	90.6	- 1.0	108	1	75	21	31	0	68	51	0.80	0.30	0.55	5	5	0.0	0	6.7	16	36	E	4	15	12	4	3.9	85
ARKANSAS																																
FORT SMITH	447	1000.3	1016.6	88	68	77.9	- 4.4	94	11	59	30+	16	0	68	76	6.57	3.65	5.09	8	5	0.0	0	2.5	8	23	N	27	7	9	15	6.2	55
LITTLE ROCK	257	1007.1	1016.4	88	69	78.0	- 3.3	94	26+	57	1	9	0	70	80	8.62	5.80	3.80	8	6	0.0	0	1.6	9	29	NW	23	6	12	13	6.4	78
CALIFORNIA																																
BAKERSFIELD	475	993.9	1011.1	99	73	86.0	4.3	109	11+	60	30	28	0	55	39	0.12	0.12	0.12	1	1	0.0	0	4.6	33	21	31	18	27	4	0	1.3	
BISHOP	4108	873.7		98	58	78.1	3.8	105	11+	45	31	31	0			0.13	0.01	0.10	2		0.0	0						15	14	2	3.6	
BLUE CANYON	5280			80	62	70.7	4.0	94	10	48	31	3	0			0.26	0.20	0.26	2		0.0	0			17	22	17	27	3	1	1.3	
EUREKA U	43			65	55	60.0	3.3	73	21	51	14+	0	0			0.55	0.45	0.26	7		0.0	0			27	NW	22	6	9	16	7.0	65
FRESNO	328	999.7	1011.2	98	64	81.1	2.2	108	2	57	30+	29	0	56	46	T	- 0.01	T	0	0	0.0	0	5.7	29	19	NW	31	25	5	1	1.5	94
LONG BEACH	25	1011.2	1012.4	90	69	79.4	7.1	100	4	62	31+	15	0	62	61	0.00	- 0.03	0.00	0	0	0.0	0	3.0	22	16	26	29+	23	7	1	2.6	
LOS ANGELES	97	1008.1	1011.9	81	68	74.3	5.2	90	10	62	31+	1	0	64	76	0.00	- 0.02	0.00	0	0	0.0	0	6.3	25	28Y	W	29	20	10	1	2.7	
LOS ANGELES U	270			88	70	78.9	5.8	97	6	65	31	14	0			0.00	- 0.04	0.00	0		0.0	0			15	SW	29+	27	4	0	1.7	91
MT SHASTA R	3544			86	53	69.2	2.5	101	11	44	29	10	0			0.10	- 0.08	0.08	2		0.0	0										
OAKLAND	6	1014.2	1014.4	72	59	65.3	1.1	83	23	57	23+	0	0	56	77	T	- 0.03	T	0	1	0.0	0	7.2	28	21	31	25+	18	11	2	3.4	
RED BLUFF	342	998.6	1010.9	98	65	81.8	0.8	118	10	57	30+	28	0	51	38	T	- 0.06	T	0	0	0.0	0	3.2	17	22	N	23	26	2	3	1.5	97
SACRAMENTO	17	1010.8	1011.6	94	60	76.8	2.7	108	10	54	18	25	0	54	52	0.00	- 0.02	0.00	0	0	0.0	0	6.9	20	26	NW	12	27	3	1	1.4	99
SANDBERG R	4517	863.5		85	64	74.4	1.1	94	10	49	31	4	0			0.00	- 0.09	0.00	0		0.0	0			30	34	9	25	5	1	1.4	
SAN DIEGO	13	1011.2	1012.2	81	70	75.4	3.6	88	1	66	31	0	0	65	73	0.03	- 0.05	0.03	1	1	0.0	0	4.2	27	19	W	26	15	8	8	4.3	76
SAN FRANCISCO	8	1013.9	1014.5	74	56	65.2	2.4	87	23	52	19	0	0	55	75	T	- 0.02	T	0	0	0.0	0	10.7	29	25	28	31+	23	7	1	2.4	
SAN FRANCISCO U	52			67	56	61.1	1.7	81	23	53	15+	0	0			0.01	- 0.03	0.01	1		0.0	0			25	W	10+					71
SANTA MARIA	236			75	55	65.1	2.7	90	8	51	28	1	0			0.00	- 0.03	0.00	0		0.0	0						19	11	1	2.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

AUGUST 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets				Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							°°
CALIFORNIA																																
STOCKTON	22	1011.5	1012.5	95	64	79.6	3.4	109	10	57	30	27	0	54	47	0.00	0.00	0.00	0	0	0.0	0	7.6	30	20	30	31+	28	0	3	1.4	
COLORADO																																
ALAMOSA	7536	776.8		79	47	63.0	0.0	85	18	39	1	0	0			1.21	0.23	0.42	13		0.0	0						12	17	2	4.4	
COLORADO SPRINGS	6145	815.1	1015.0	82	57	69.1	- 0.1	87	22+	49	8+	0	0	49	54	1.99	- 0.17	0.74	8	11	0.0	0	3.0	7	32	35	18	13	16	2	4.1	
DENVER	5283	838.8	1013.0	89	57	72.8	1.3	94	22+	50	7	11	0	50	50	0.85	- 0.43	0.71	5	6	0.0	0	2.8	13	30	N	4	13	14	4	4.3	75
GRAND JUNCTION	4843	853.0	1011.2	93	64	78.5	3.0	98	10+	53	31	23	0	49	42	1.02	- 0.05	0.37	7	7	0.0	0	2.4	14	38	W	30	15	12	4	4.4	81
PUEBLO	4684	857.4	1013.2	90	59	74.6	0.0	96	22	52	8	19	0	50	48	0.85	- 1.00	0.73	4	5	0.0	0	2.3	7	40	N	18	13	14	4	4.4	84
CONNECTICUT																																
BRIDGEPORT	7	1016.6	1017.5	81	63	72.2	- 0.1	91	9	51	24	1	0	63	74	4.98	0.53	3.40	7	3	0.0	0	3.1	26	55	12	28	15	8	8	4.4	
HARTFORD	169	1009.8	1016.2	85	60	72.2	1.0	95	10	43	24	7	0	59	66	5.31	1.30	3.01	9	4	0.0	0	2.9	26	37	SE	28	9	11	11	5.5	71
DELAWARE																																
WILMINGTON	74	1014.2	1017.3	83	65	74.0	- 0.3	90	21+	51	24	3	0	63	71	8.38	2.79	4.11	10	6	0.0	0	1.9	29	46	35	28	12	8	11	5.1	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	290	1006.1	1017.5	85	61	72.9		90	21+	46	24	6	0	64	77	4.45		1.98	7	4	0.0	0	1.2	30	29	20	1	14	5	12	5.0	
WASHINGTON NATIONAL	10	1015.2	1017.5	86	67	76.7	0.2	93	21+	58	25	6	0	64	67	7.18	2.28	3.79	8	4	0.0	0	0.8	29	26	W	3	14	7	10	4.8	72
FLORIDA																																
APALACHICOLA U	13			88	74	81.3	- 0.2	92	9	72	30+	9	0			7.24	- 0.50	1.29	19	17	0.0	0			23	E	13	0	20	11	6.7	55
DAYTONA BEACH	31	1015.2	1016.5	89	72	80.7	0.0	94	17	69	10	12	0	72	80	3.97	- 2.40	1.19	10	9	0.0	0	3.2	10	23	14	27	4	19	8	5.9	
FORT MYERS	15	1015.6	1016.0	89	74	81.5	- 1.2	92	22+	71	11	14	0	72	78	8.06	0.68	2.42	19	20	0.0	0	1.5	15	23	18	30+	2	18	11	6.5	
JACKSONVILLE	26	1015.6	1016.5	89	73	81.0	- 1.3	94	8	70	10	16	0	73	81	12.83	5.98	3.48	14	17	0.0	0	2.1	11	34	W	23	5	14	12	6.5	63
KEY WEST	4	1014.9	1015.6	88	78	83.2	- 0.4	91	9	71	1	3	0	73	72	9.03	4.70	2.42	16	16	0.0	0	4.3	13	32	S	9	2	18	11	6.4	76
LAKELAND U	214			90	73	81.2	- 0.7	95	22	69	10+	18	0			7.36	0.28	1.90	21		0.0	0						3	23	5	5.6	64
MIAMI	7	1015.6	1015.9	87	77	81.9	- 0.4	90	24+	72	11+	2	0	74	80	6.02	- 0.95	1.84	20	12	0.0	0	3.4	10	32	31	9	1	17	13	6.7	
ORLANDO	108	1011.9	1016.2	92	75	83.3	0.5	95	8	70	6	26	0	73	76	7.51	0.57	2.87	19	16	0.0	0	2.5	12	23	23	15+	1	23	7	6.5	
PENSACOLA	112	1012.2	1016.2	88	74	81.0	- 0.5	92	20+	70	2+	14	0	70	74	7.27	0.30	2.18	15	14	0.0	0	1.7	5	21	24	23	3	15	13	6.4	
TALLAHASSEE	55	1013.5	1015.9	90	70	80.1	- 1.0	94	22+	67	3	21	0	71	80	10.75	3.82	2.99	21	24	0.0	0	2.4	6	24	8	6	2	22	7	6.6	
TAMPA	19	1015.6	1015.7	90	74	81.8	- 0.2	94	30	70	6	18	0	72	77	7.46	- 0.78	2.78	16	26	0.0	0	1.2	13	23	34	2	0	19	12	7.3	47
WEST PALM BEACH	15	1015.2	1016.0	91	76	83.1	0.1	94	11+	71	11+	26	0	73	76	4.38	- 2.36	1.05	17	11	0.0	0	3.7	13	40	1	9	2	17	12	6.8	
GEORGIA																																
ATHENS	802	988.5	1017.1	86	68	77.1	- 1.9	90	21+	61	28	4	0	70	84	4.56	0.93	0.98	12	7	0.0	0	1.7	5	17	18	19+	6	11	14	6.3	
ATLANTA	1010	980.7	1016.7	85	69	76.7	- 1.5	89	20+	63	29	0	0	68	79	2.76	- 0.84	0.73	11	8	0.0	0	2.3	9	24	SW	22	5	13	13	6.4	52
AUGUSTA	136	1011.2	1016.6	88	69	78.6	- 1.6	92	20	65	14	8	0	71	82	6.69	2.80	2.46	11	10	0.0	0	1.4	4	25	6	5	3	15	13	6.7	
COLUMBUS	385	1002.7		89	71	79.8	- 0.9	93	8	66	15	12	0	72	80	5.11	0.47	2.46	11	12	0.0	0	2.4	6	22	17	3	8	12	11	6.2	
MACON	354	1004.1	1016.9	91	72	81.2	- 0.1	95	21	67	18	20	0	72	78	3.81	- 0.37	1.25	14	11	0.0	0	2.9	4	22	E	5	2	12	17	7.1	59
ROME	637			88	67	77.8	- 0.6	92	9	56	29	10	0			3.76	0.00	0.83	14		0.0	0										
SAVANNAH	46	1014.9	1016.6	89	73	80.8	- 0.2	94	22+	69	14	14	0	72	81	14.94	8.32	7.04	14	13	0.0	0	1.0	8	30	NW	23	1	12	18	7.4	64
HAWAII																																
HILO	27	1015.6	1016.9	86	68	76.6	0.8	91	14	64	31+	1	0	67	75	2.66	- 8.79	0.97	16	0	0.0	0	0.5	2	17	NE	13	6	17	8	5.9	53
HONOLULU	7	1015.9	1016.4	87	73	79.5	0.1	89	28	68	27	0	0	65	63	0.26	- 0.63	0.10	7	0	0.0	0	12.1	6	29	NE	25+	8	20	3	4.9	80
KAHULUI	48	1013.5	1016.0	88	67	77.7	- 1.3	92	14	61	31	2	0	66	69	0.54	0.19	0.40	5	0	0.0	0	12.9	4	31	E	18+	21	8	2	3.0	84
LIHUE	103	1012.9	1017.8	86	74	79.9	1.5	87	30+	70	9+	0	0	69	72	0.87	- 1.59	0.22	13	0	0.0	0	9.5	6	24	E	2	5	21	5	5.3	72
IDAHO																																
BOISE	2838	914.0	1011.4	94	63	78.6	6.5	104	1	44	23	26	0	44	31	0.18	0.02	0.18	2	4	0.0	0	0.6	36	34	NW	22	15	12	4	3.5	84
LEWISTON	1413			94	62	78.1	6.4	106	1	46	23	24	0			0.96	0.53	0.54	2		0.0	0			45Y		7	20	7	4	2.8	
POCATELLO	4454	863.2	1012.5	90	53	71.1	1.0	98	14	37	24	22	0	43	40	0.58	0.03	0.48	5	4	0.0	0	2.5	24	30	NW	30+	15	9	7	3.9	79
ILLINOIS																																
CAIRO U	314			85	69	76.9	- 3.0	91	20	59	1	8	0			4.03	0.93	1.79	9		0.0	0			29	NW	21+	14	10	7	4.5	66
CHICAGO O HARE	658	993.6	1017.4	83	61	72.0	0.7	94	20	53	29+	7	0	59	67	3.97	0.76	2.30	7	4	0.0	0	1.2	29	41	36	24+	10	13	8	5.2	
CHICAGO MIDWAY	607	995.6	1018.0	82	63	72.4	- 1.8	96	20	54	17	8	0	61	69	1.96	- 1.20	1.00	6	4	0.0	0	0.6	20	39	N	22	12	13	6	4.6	73

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)				Possible sunshine
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	No. of days: Max. 90 F. or above	No. of days: Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	No. of days: .01 inch or more	No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile: Speed	Fastest mile: Direction	Fastest mile: Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	
ILLINOIS	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MOLINE	582	996.6	1017.8	85	59	71.9	- 1.7	95	24+	50	28+	7	0	60	68	0.35	- 3.18	0.23	4	4	0.0	0	0.9	18	31	NW	10	10	11	10	4.9	78
PEORIA	652	994.2	1018.0	83	60	71.6	- 2.7	94	10	50	27	4	0	60	71	2.19	- 0.69	1.44	6	7	0.0	0	0.7	14	46	NW	14	11	10	10	5.3	70
ROCKFORD	724	991.2	1017.8	83	58	70.7	- 1.8	94	10	50	28+	7	0	58	69	1.48	- 2.66	0.40	6	6	0.0	0	0.1	25	33	6	22	10	11	10	5.3	
SPRINGFIELD	588	995.6	1017.5	84	62	72.5	- 2.7	92	10	51	28	5	0	61	70	1.06	- 1.68	0.70	6	6	0.0	0	0.7	13	29	NE	23	11	10	10	5.2	77
INDIANA																																
EVANSVILLE	381	1003.7	1017.6	87	66	76.6	- 0.7	95	21	54	1	11	0	65	70	2.17	- 0.90	0.80	7	3	0.0	0	0.9	5	19	NW	21	17	6	8	4.4	76
FORT WAYNE	791	989.2	1018.8	82	57	69.6	- 2.9	91	10	48	12	1	0	59	71	2.02	- 1.02	1.08	7	7	0.0	0	1.7	24	29	NW	10	10	13	8	5.0	80
INDIANAPOLIS	792	989.5	1018.2	82	61	71.3	- 2.4	89	10	50	12	0	0	61	72	1.93	- 1.10	0.72	6	5	0.0	0	1.0	31	29	SW	23	14	7	10	5.4	75
SOUTH BEND	773	990.2	1018.0	79	58	68.1	- 3.9	88	10	47	7	0	0	59	78	2.80	- 0.75	1.60	8	5	0.0	0	2.4	27	32	32	10	10	14	7	4.9	
IOWA																																
BURLINGTON	692			84	61	72.3	- 2.3	96	10	50	27	7	0	61	69	0.58	- 3.03	0.40	4	6	0.0	0	1.2	17	29	33	24	12	11	8	5.0	
DES MOINES	938	983.1	1017.4	85	62	73.2	- 0.9	97	23+	48	27	7	0	59	65	1.83	- 1.84	1.09	5	5	0.0	0	2.7	15	23	SW	21	14	5	12	4.8	64
DUBUQUE	1056	979.7		78	56	67.1	- 3.4	88	13	48	28+	0	0			2.60	- 1.13	0.93	7		0.0	0						10	9	12	5.2	
SIOUX CITY	1095	977.3	1016.6	86	61	73.6	- 1.5	97	22	45	27	10	0	61	67	0.12	- 2.54	0.07	3	3	0.0	0	4.2	14	23	S	13	13	13	5	4.3	80
WATERLOO	868	986.5	1018.0	80	53	66.7	- 5.0	93	13	41	27	2	0	57	73	0.43	- 2.99	0.41	3	1	0.0	0	1.5	18	24	32	10	13	9	9	4.7	
KANSAS																																
CONCORDIA	1470	963.4	1015.2	89	64	76.3	- 2.7	96	23	57	7+	16	0	61	63	0.38	- 2.77	0.21	3	3	0.0	0	8.1	16	23	SW	20	13	11	7	4.5	83
DODGE CITY	2582	925.8	1014.6	89	64	76.6	- 2.6	97	31	61	25+	13	0	58	59	0.99	- 1.37	0.64	5	7	0.0	0	8.5	17	27	SE	13+	8	16	7	5.5	78
GOODLAND	3654	889.9	1013.7	89	60	74.2	- 0.5	99	21	53	25+	18	0	55	56	0.65	- 1.63	0.58	4	5	0.0	0	7.8	15	31	9	4	11	14	6	4.6	
TOPEKA	877	985.4	1016.6	89	63	75.9	- 2.5	98	24	51	29	17	0	61	64	0.26	- 4.03	0.15	3	1	0.0	0	3.4	16	29	NE	4	15	10	6	4.5	70
WICHITA	1321	968.8	1015.6	89	65	76.8	- 4.0	96	26+	58	3	18	0	61	63	1.49	- 1.38	0.93	3	6	0.0	0	6.5	16	34	NW	21	13	13	5	4.5	63
KENTUCKY																																
COVINGTON	869	987.1	1018.2	83	62	72.4	- 1.7	90	18	54	24+	1	0	62	73	3.45	0.85	1.58	7	5	0.0	0	0.1	24	20	29	22+	9	12	10	5.7	
LEXINGTON	966	983.4	1018.3	85	63	73.9	- 2.1	92	20	54	28	3	0	62	70	0.88	- 2.33	0.36	5	2	0.0	0	1.0	10	15	25	26+	9	10	12	5.5	
LOUISVILLE	477	1000.0	1017.4	84	64	74.1	- 2.1	91	25	55	1	3	0	64	72	1.83	- 1.14	0.90	8	2	0.0	0	0.9	9	27	SW	10	9	15	7	5.2	60
LOUISIANA																																
ALEXANDRIA	92	1011.9	1016.4	89	69	79.2	- 2.9	93	27+	64	29	17	0	72	84	3.73	0.25	1.12	12	10	0.0	0	0.3	1	23	4	23	11	12	8	5.1	
BATON ROUGE	64	1013.2	1015.8	91	73	81.7	- 0.7	97	27	69	29	25	0	72	77	5.13	- 0.13	1.54	13	9	0.0	0	1.2	3	22	16	19	10	13	8	5.7	
LAKE CHARLES	9	1014.6	1015.7	91	73	81.7	- 0.5	94	27+	70	29+	24	0	73	81	6.31	1.51	2.33	11	15	0.0	0	1.7	6	21	4	25+	7	15	9	5.9	
NEW ORLEANS	4	1014.9	1015.8	90	73	81.1	- 0.8	92	22+	67	28	17	0	72	78	5.75	0.41	1.45	15	11	0.0	0	0.9	1	23	31	11	9	13	9	5.6	
SHREVEPORT	254	1006.8	1015.9	90	71	80.6	- 3.2	97	27	64	29	22	0	70	75	2.99	0.44	1.47	7	6	0.0	0	0.5	7	21	8	23	12	9	10	5.6	56
MAINE																																
CARIBOU	624	990.5		72	51	61.3	- 1.3	84	9	38	26	0	0			3.39	- 0.28	0.77	15		0.0	0						2	8	21	7.8	
PORTLAND	43	1012.9	1015.2	80	58	68.9	2.1	90	10+	42	25	2	0	59	73	3.24	0.82	1.37	10	5	0.0	0	3.6	25	31	SE	28	10	12	9	5.3	70
MARYLAND																																
BALTIMORE	148	1012.5	1018.1	84	65	74.2	- 0.8	91	10	53	24	3	0	64	72	10.91	5.72	4.33	10	5	0.0	0	2.4	28	23	W	28	15	9	7	4.6	68
MASSACHUSETTS																																
BLUE HILL OBS R	629			81	61	70.9	1.5	91	10	43	24	2	0			1.84	- 2.21	0.67	7		0.0	0			67	SSW	28					73
BOSTON	15	1014.9	1015.7	82	65	73.4	1.7	93	10+	52	24	3	0	59	65	1.59	- 2.07	0.83	7	2	0.0	0	3.9	26	45	SW	28	12	12	7	4.7	76
WORCESTER	986	980.7	1017.4	78	58	68.2	- 0.1	87	18+	43	25	0	0	56	67	4.67	0.43	1.98	9	6	0.0	0	5.4	27	25	16	28	10	13	8	4.8	
MICHIGAN																																
ALPENA	689	992.2	1017.4	75	50	62.3	- 2.2	86	10+	37	16	0	0	53	72	4.08	1.05	1.53	13	7	0.0	0	1.6	29	20	N	22	12	9	10	5.0	62
DETROIT	619			82	62	71.9	- 0.9	93	22	49	24	7	0	57	62	3.84	0.98	2.85	7	6	0.0		2.0	26	23	24	10					
DETROIT METRO	633	993.2	1017.2	84	57	70.3	- 0.5	95	10	43	24	8	0	56	63	1.62	- 1.22	1.08	3	5	0.0	0	2.3	26	36	NW	22	13	12	6	4.5	72
FLINT	771	989.8	1017.3	79	56	67.4	- 2.2	91	10	44	24+	1	0	55	67	1.62	- 1.55	0.58	9	8	0.0	0	2.7	27	26	25	10	14	10	7	4.3	
GRAND RAPIDS	784	988.8	1017.6	82	55	68.6	- 1.8	90	22+	45	24	3	0	55	64	0.92	- 1.78	0.65	6	2	0.0	0	3.0	23	38	SW	10	13	11	7	4.5	76
HOUGHTON LAKE	1149	976.0	1017.9	76	50	63.4	- 2.1	86	7	35	24	0	0	55	76	1.76	- 0.91	1.14	10	7	0.0	0	1.9	29	23	26	10	12	12	7	4.8	
LANSING	841	986.5	1017.8	80	54	66.9	- 3.3	94	10	41	5	1	0	59	76	2.50	- 0.55	0.90	9	6	0.0	0	3.0	26	47	NW	10	13	11	7	4.6	81
MARQUETTE U	677			72	55	63.4	- 2.4	90	9	41	24	1	0			1.45	- 1.58	0.40	11		0.0	0			28	W	12	11	10	10	4.9	68

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days								Snow, Ice pellets				Fastest mile								
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	994.9	1017.8	78	55	66.7	- 3.6	85	10+	46	24	0	0	57	73	1.33	- 1.58	0.92	7	6	0.0	0	2.9	24	26	19	10	13	12	6	4.2	
SAULT STE MARIE	721	990.2	1016.8	71	48	59.1	- 4.9	81	9+	39	24+	0	0	53	80	4.03	1.14	1.24	12	5	0.0	0	2.2	29	28	W	10	7	9	15	6.1	63
MINNESOTA																																
DULUTH	1428	966.8	1017.8	74	51	62.4	- 1.4	90	9	38	27	1	0	53	74	4.50	0.69	2.61	11	8	0.0	0	1.4	22	49	W	9	15	7	9	4.8	67
INTERNATIONAL FALLS	1179	973.6	1016.3	77	49	63.3	0.2	93	16	37	26	2	0	54	73	1.39	- 2.25	0.41	10	6	0.0	0	1.6	21	21	11	31+	12	8	11	5.3	
MINNEAPOLIS	834	987.1	1017.3	82	58	69.6	- 0.4	97	22	44	27	4	0	54	60	1.78	- 1.40	1.25	5	5	0.0	0	1.6	17	29	SE	31	13	12	6	4.5	78
ROCHESTER	1297	970.5	1017.7	80	56	67.7	- 2.1	93	13	43	27	2	0	57	70	1.99	- 1.80	1.16	5	4	0.0	0	3.6	19	25	31	25+	12	9	10	4.9	
ST CLOUD	1034	979.7	1017.4	80	54	67.4	- 1.2	97	22	42	27+	4	0			2.79	- 0.94	1.89	7		0.0	0						18	8	5	3.8	
MISSISSIPPI																																
JACKSON	310	1004.7	1016.4	90	71	80.5	- 1.5	93	27+	65	29+	21	0	73	84	2.64	- 0.69	0.80	10	9	0.0	0	1.0	6	22	NW	23	9	9	13	5.8	68
MERIDIAN	290	1005.4	1016.4	90	69	79.7	- 1.5	93	20+	63	29	19	0	70	77	1.99	- 1.55	0.84	9	7	0.0	0	0.7	2	18	8	16	2	18	11	6.4	
MISSOURI																																
COLUMBIA REGIONAL	887	986.1	1017.8	86	63	74.7	- 2.5	96	24+	51	27	11	0	61	66	1.16	- 2.65	0.34	6	5	0.0	0	2.3	12	25	NW	10	10	14	7	5.1	73
KANSAS CITY	742	990.2	1016.4	89	67	78.3	- 1.5	100	23	55	27	14	0	61	59	1.04	- 2.73	1.02	2	0	0.0	0	2.6	15	31	S	21	16	9	6	3.9	83
ST JOSEPH	811			85	58	71.4	- 6.1	93	22	43	28	6	0			1.74	- 2.47		4				1.7	15	18	10	21	15	7	9	4.3	
ST LOUIS	535	997.3	1017.4	87	64	75.7	- 1.1	97	24+	53	27	9	0	64	71	0.08	- 2.94	0.04	2	4	0.0	0	0.3	26	29	SW	10	8	12	11	5.6	64
SPRINGFIELD	1268	972.9	1017.4	90	63	76.2	- 1.8	98	25+	50	28	18	0	60	61	2.30	- 1.02	1.60	5	4	0.0	0	3.1	14	18	NE	4	15	11	5	3.9	84
MONTANA																																
BILLINGS	3567	891.3	1012.1	92	61	76.7	4.8	102	14	45	24	25	0	44	36	0.43	- 0.47	0.37	4	4	0.0	0	1.9	26	38	NW	3	16	10	5	3.7	78
GLASGOW	2284	932.3	1011.9	93	62	77.2	9.4	106	14	50	24	21	0	43	34	0.78	- 0.71	0.76	3	4	0.0	0	5.1	10	35	30	23	18	9	4	3.5	
GREAT FALLS	3662	888.6	1012.0	93	59	76.0	9.2	101	14+	45	24	24	0	42	34	1.16	- 0.10	0.70	6	8	0.0	0	4.0	24	35	S	22	16	9	6	4.1	80
HAVRE	2584	921.8	1011.4	94	57	75.5	8.5	105	6+	43	24	24	0	42	34	0.70	- 0.40	0.42	4	3	0.0	0	0.2	3	50	NW	22	15	13	3	3.7	87
HELENA	3828	881.5	1014.0	87	51	69.0	2.8	94	14+	36	24	16	0	40	40	1.22	0.33	0.69	5	7	0.0	0	2.2	27	41	W	16	15	9	7	4.1	76
KALISPELL	2965	911.3	1013.9	89	49	68.8	5.7	98	11+	36	24	19	0	47	53	1.47	0.38	0.54	5	5	0.0	0	1.0	23	25	3	29	20	7	4	3.1	
MILES CITY	2629	920.8	1011.3	94	64	79.2	6.6	104	14+	48	24	22	0	48	36	1.61	0.37		3	3	0.0		4.0	8								
MISSOULA	3190	904.5	1014.3	92	51	71.5	6.7	101	4+	36	24	22	0	45	45	0.91	0.19	0.49	6	7	0.0	0	2.1	31	36	NW	22	19	7	5	3.1	87
NEBRASKA																																
GRAND ISLAND	1841	950.6	1015.4	88	62	75.4	0.1	97	22+	55	25	14	0	58	59	0.66	- 1.69	0.47	4	4	0.0	0	5.8	15	23	21	18	13	12	6	4.5	
LINCOLN U	1150			87	66	76.2	- 1.5	96	23	55	27	14	0			0.95	- 2.43	0.47	7		0.0	0			28	S	30	11	9	11	5.0	69
NORFOLK	1544			86	61	73.7	- 1.5	98	22	51	27	12	0			0.53	- 2.08	0.20	6		0.0	0						13	10	8	4.4	
NORTH PLATTE	2775	919.4	1015.2	86	58	72.2	- 2.3	94	22	50	25+	8	0	58	67	0.91	- 1.22	0.37	6	8	0.0	0	6.0	13	40	SE	14	8	15	8	5.0	75
OMAHA	977	981.7	1016.3	87	63	74.7	- 1.5	95	23+	49	28+	10	0	61	67	1.60	- 2.38	0.91	7	8	0.0	0	3.5	16	19	S	13	11	10	10	4.8	73
SCOTTSBLUFF	3957	880.8	1013.6	89	57	72.9	0.3	96	26+	51	7	14	0	54	59	1.47	0.46	0.74	2	3	0.0	0	4.1	11	40	33	9	18	9	4	3.5	
VALENTINE	2587			91	60	75.4	2.5	103	22	50	25+	18	0			3.45	1.16	3.38	4		0.0	0			42	W	20	18	10	3	3.5	81
NEVADA																																
ELKO	5050	846.3	1013.6	89	52	70.8	3.9	95	13	38	24	18	0	40	37	0.98	0.68	0.75	6	10	0.0	0	0.2	1	24	19	14	13	15	3	4.0	
ELY	6253	811.7	1012.6	86	51	68.4	2.2	94	13	42	24	6	0	42	44	0.25	- 0.24	0.16	6	12	0.0	0	3.6	20	35	SW	17	5	18	8	5.8	75
LAS VEGAS	2162	936.0	1010.2	101	77	89.0	1.8	109	2+	71	14	31	0	54	34	0.90	0.42	0.50	5	10	0.0	0	2.4	18	55	NE	8	15	8	8	4.4	78
RENO	4404	866.9	1013.4	93	49	70.7	5.2	100	10	37	22	26	0	40	38	0.09	- 0.08	0.07	2	3	0.0	0	2.4	28	34	SW	28	22	7	2	2.5	93
WINNEMUCCA	4301	868.9	1012.4	97	53	74.8	7.2	103	12+	39	18	29	0	36	28	0.23	0.08	0.14	3	5	0.0	0	1.2	30	34	SE	1	17	11	3	3.5	84
NEW HAMPSHIRE																																
CONCORD	342	1003.7	1016.1	80	54	67.0	- 0.4	89	9	36	25	0	0	58	75	2.79	- 0.17	1.03	9	4	0.0	0	2.8	27	30	SE	28+	11	11	9	5.3	69
MT WASHINGTON OBS	6262			53	41	46.9	- 0.8	66	19	26	24+	0	5			9.29	2.64	3.41	13	4	0.2	T	1		109Y	SE	28	3	5	23	8.0	34
NEW JERSEY																																
ATLANTIC CITY	64	1014.9	1017.4	80	61	70.4	- 3.3	87	10	46	24	0	0	65	83	10.40	5.50	3.48	9	4	0.0	0	2.3	25	35	12	28	12	9	10	5.0	67
ATLANTIC CITY U	11			78	65	71.0	- 2.7	87	9	55	24	0	0			10.37	5.23	3.59	8						63	SE	28					
NEWARK	7	1015.9	1016.8	85	67	76.0	1.6	93	10	53	24	7	0	62	64	10.63	6.20	7.84	9	5	0.0	0	2.9	25	23	31	28	11	11	9	5.1	
TRENTON U	56			82	65	73.6	- 0.3	91	9	52	25	2	0			9.66	4.89	7.55	9		0.0	0			43	NE	28	12	10	9	4.7	68
NEW MEXICO																																
ALBUQUERQUE	5311	840.2	1013.1	87	60	73.9	- 2.3	91	31+	53	8	7	0	50	50	0.87	- 0.46	0.35	9	11	0.0	0	1.7	13	44	E	14	15	13	3	3.9	74

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In	In.	In.			In.	In.	M.p.h.		M.p.h.							%
NEW MEXICO																																
CLAYTON	4969			81	57	69.3	- 4.0	90	21	50	1	1	0			2.49	0.40	1.15	7		0.0	0						14	12	5	4.4	
ROSWELL	3612			88	62	74.9	- 1.7	96	22	58	20+	11	0			3.62	2.00	1.27	11		0.0	0			34	NW	9					73
NEW YORK																																
ALBANY	275	1006.1	1016.8	79	54	66.8	- 3.2	88	9	39	25	0	0	57	74	7.04	3.97	4.52	11	4	0.0	0	2.6	27	37	W	23	9	10	12	5.8	63
BINGHAMTON	1590	959.7	1018.1	74	54	64.1	- 2.4	82	30+	38	24	0	0	57	80	2.10	- 1.47	1.06	8	3	0.0	0	3.5	26	29	NW	22	8	8	15	5.8	63
BUFFALO	705	991.9	1017.4	77	58	67.8	- 0.6	88	18+	43	24	0	0	57	71	4.43	1.38	1.42	12	9	0.0	0	4.8	24	29	N	23+	8	10	13	6.0	68
NEW YORK U	132	1013.5	1016.7	84	68	75.9	0.8	92	9	55	24	5	0	62	66	9.37	4.93	5.78	7	4	0.0	0	2.7	26	32	SE	28					70
NEW YORK KENNEDY	13	1016.3	1017.0	85	68	76.5	2.0	94	9	55	25	7	0	63	65	4.35	- 0.62	3.39	6	2	0.0	0	3.4	24	32	31	28	13	11	7	4.5	
NEW YORK LA GUARDIA	11	1016.3	1017.2	82	67	74.8	- 0.6	91	10	55	24	2	0	62	66	8.38	3.30	5.49	8	6	0.0	0	2.7	27	40	SE	28	12	12	7	4.5	
ROCHESTER	547	997.0	1016.9	81	57	68.8	- 0.9	92	10	42	24	3	0	60	74	3.18	0.46	1.36	11	5	0.0	0	4.3	26	45	W	22	10	10	11	5.4	65
SYRACUSE	410	1002.0	1016.8	78	56	67.1	- 3.1	89	19	42	24	0	0	59	77	4.01	0.76	1.11	11	7	0.0	0	2.5	26	34	NW	23	10	7	14	6.2	63
NORTH CAROLINA																																
ASHEVILLE	2140	943.4	1018.5	83	62	72.2	0.7	88	11	52	14	0	0	65	85	3.03	- 1.91	0.66	13	9	0.0	0	1.0	36	18	36	23+	2	17	12	6.6	66
CAPE HATTERAS R	7	1016.9	1017.4	84	72	77.7	0.1	90	21	64	31+	1	0	72	82	9.74	3.32	2.46	15	11	0.0	0	1.0	13	41	16	27	7	8	16	6.6	57
CHARLOTTE	736	990.5	1017.3	84	68	75.8	- 2.9	90	4	60	25	1	0	67	78	2.89	- 1.33	1.00	9	6	0.0	0	1.8	6	23	N	11	7	12	12	6.2	73
GREENSBORO	897	986.8	1018.0	83	64	73.3	- 2.9	88	9+	54	25	0	0	67	84	4.22	- 0.39	1.40	12	6	0.0	0	1.1	3	21	NE	12+	8	10	13	6.4	61
RALEIGH	434	1002.4	1017.9	85	66	75.3	- 1.6	90	21	58	25+	1	0	68	82	6.26	1.06	1.34	10	7	0.0	0	0.9	8	29	13	15	7	11	13	6.2	57
WILMINGTON	28	1015.9	1017.4	87	71	78.8	- 0.6	94	21	66	13	7	0	72	85	10.42	3.56	3.52	13	9	0.0	0	1.7	8	24	E	17	3	13	15	7.1	58
NORTH DAKOTA																																
BISMARCK	1647	955.3	1014.1	88	55	71.6	2.3	102	21	40	2	15	0	52	55	0.03	- 1.70	0.03	1	3	0.0	0	4.0	13	31	NW	23	19	8	4	3.1	87
FARGO	896	983.1	1015.5	82	55	68.3	- 1.2	96	16+	40	3	7	0	57	69	0.92	- 2.03	0.34	7	6	0.0	0	3.6	16	42	W	9	16	9	6	3.7	90
WILLISTON	1899	946.2	1013.1	89	57	73.1	4.9	101	7	42	1	16	0	49	46	0.07	- 1.41	0.05	3	2	0.0	0	2.1	11	37	NW	23	15	12	4	3.8	81
OHIO																																
AKRON	1208	973.9	1018.0	81	56	68.3	- 3.2	86	21+	46	24	0	0	57	71	2.86	- 0.25	2.40	11	5	0.0	0	1.9	27	18	1	23+	9	11	11	5.6	
CINCINNATI ABBE OB	761			84	62	72.9	- 2.8	90	20+	53	24	2	0			3.15	- 0.13	0.98	6		0.0	0			13	W	22					37
CLEVELAND	777	989.5	1018.3	80	58	68.9	- 1.5	88	19+	45	24	0	0	58	71	0.91	- 2.37	0.33	6	4	0.0	0	1.6	25	36	NW	10	13	8	10	5.0	68
COLUMBUS	812	988.5	1018.2	80	58	68.9	- 4.3	87	19	47	24	0	0	59	72	2.81	- 0.05	1.02	7	5	0.0	0	0.7	19	25	S	10	11	7	13	5.6	59
DAYTON	1002	982.4	1018.1	81	61	71.1	- 2.6	88	21	53	24+	0	0	60	69	3.11	0.23	1.54	6	3	0.0	0	2.5	30	19	W	22	10	9	12	5.2	71
MANSFIELD	1295			80	58	68.6	- 1.6	85	21+	47	24	0	0	59	74	2.18	- 1.05	1.06	7	4	0.0	0	2.8	24	20	17	10	12	10	9	5.1	
TOLEDO	669	992.6	1017.5	83	55	69.0	- 1.9	92	10	43	24	4	0	56	66	1.10	- 2.23	0.62	6	4	0.0	0	2.2	26	33	NW	10	10	14	7	4.8	75
YOUNGSTOWN	1178	976.0	1018.2	80	55	67.5	- 2.5	88	18	42	24	0	0	57	71	2.78	- 0.72	1.58	11	5	0.0	0	1.6	28	25	33	22	12	6	13	5.2	
OKLAHOMA																																
OKLAHOMA CITY	1285	970.2	1015.8	88	66	77.2	- 5.6	96	11	57	2	12	0	64	68	2.13	- 0.39	1.45	8	6	0.0	0	5.7	16	33	SE	12	12	11	8	5.4	68
TULSA	650	992.2	1016.0	90	68	79.0	- 2.6	98	21	57	2	20	0	65	67	1.86	- 1.18	1.15	7	5	0.0	0	4.0	17	22	SW	21	12	11	8	5.1	72
OREGON																																
ASTORIA	8	1015.6	1016.2	71	54	62.4	1.4	83	8	45	26	0	0	57	84	1.14	- 0.35	0.57	5	2	0.0	0	3.6	25	21	31	26+	10	11	10	5.5	
BURNS U	4151	873.7	1013.7	88	53	70.8	3.6	97	12+	37	23	16	0	45	41	T	- 0.29	T	0		0.0	0	1.9	28				19	12	0	3.0	
EUGENE	359	1002.0	1015.4	84	53	68.2	2.3	101	11	43	16	6	0	54	68	1.33	0.93	0.82	5	0	0.0	0	2.4	25	20	34	23	16	6	9	4.1	
MEACHAM	4050	878.1	1013.4	82	55	68.6	6.9	92	11+	39	23	6	0			0.31	- 0.22	0.22	2		0.0	0			16	30	22	22	5	4	2.3	
MEDFORD	1298	966.8	1013.6	92	56	74.1	3.4	109	11	44	23	22	0	51	49	0.28	0.10	0.24	3	1	0.0	0	3.7	31	17	29	19	23	5	3	2.0	
PENDLETON	1482	960.7	1013.1	92	61	76.8	4.9	106	9	49	31+	18	0	45	35	0.14	- 0.14	0.07	3	4	0.0	0	3.4	27	28	27	30	21	7	3	2.4	
PORTLAND	21	1013.5	1014.9	84	60	71.6	5.0	101	10	52	23	5	0	55	61	0.95	0.30	0.74	4	1	0.0	0	3.7	31	24	S	31	18	6	7	3.8	76
SALEM	196	1008.1	1015.3	84	54	69.1	3.0	101	11	45	23	6	0	55	66	1.49	1.04	1.17	6	0	0.0	0	1.7	28	21	20	30	16	7	8	4.0	
SEXTON SUMMIT R	3836	885.2	1014.2	78	55	66.3	3.1	97	11	41	31	2	0			0.59	0.34	0.32	5		0.0	0			28	20	31	25	2	4	1.9	
PACIFIC AREA																																
GUAM TAGUAC R	361	997.6	1010.1	86	70	78.1	- 1.2	89	30+	67	26	0	0	74	89	20.92	8.08	7.81	21	4	0.0	0	2.9	10	24	N	4					54
JOHNSTON	7	1013.5	1014.1	83	77	80.2	- 1.3	85	27	72	30	0	0	71	74	1.80	- 0.46	0.86	13	0	0.0	0	15.2	9	29	E	25	7	14	10	5.8	88
KOROR R	94	1006.1	1009.7	88	75	81.5	0.5	90	26+	73	28+	3	0	75	84	10.40	- 5.36	2.94	19	0	0.0	0	2.0	14	22	W	11	0	7	14	8.7	58
KWAJALEIN	8	1009.1	1009.9	86	77	81.1	- 0.8	88	2	71	6	0	0	75	82	11.19	1.60	2.16	22	0	0.0	0	9.2	9	32	11	5	2	5	24	8.4	
MAJURO	10	1010.5	1010.8	85	76	80.1	- 0.1	87	31	72	23	0	0	74	81	14.92	3.24	2.85	25	2	0.0	0	6.2	8	28	E	19	0	11	20	8.5	61
PAGO PAGO	12	1013.2	1013.5	84	74	78.6		86	22	68	18+	0	0	72	81	5.24		2.20	21	1	0.0	0	9.7	10	27	NE	15+	3	22	6	5.7	63

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

AUGUST 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																																
PONAPE R	123	1004.1	1009.4	87	72	79.4	0.0	89	28+	69	1	0	0	74	86	16.67	0.35	4.21	24	5	0.0	0	3.0	10	20	SE	14	1	12	18	8.2	43
TRUK MOEN ISLAND	5	1009.5	1009.6	87	76	81.5	1.1	89	30+	74	30+	0	0	74	81	10.63	- 2.18	2.97	24	3	0.0	0	3.8	9	23	S	1	0	8	23	8.7	73
WAKE	11	1011.5	1012.0	88	77	82.4	0.0	90	31+	70	10	6	0	73	74	6.51	- 0.57	3.18	16	3	0.0	0	6.1	11	38	N	13	3	12	16	7.5	65
YAP R	44			86	74	80.2	- 1.1	90	27	70	27+	1	0			12.15	- 2.55	2.61	24	3	0.0	0			20	SE	30	0	9	22	8.5	68
PENNSYLVANIA																																
ALLENTOWN	387	1003.7	1017.5	81	60	70.8	- 1.2	89	10+	45	25	0	0	61	74	9.25	4.78	3.88	10	6	0.0	0	2.0	28	25	1	28	14	8	9	4.6	
ERIE	731	991.5	1018.0	74	56	64.7	- 5.1	85	10	41	24	0	0	56	74	3.46	0.48	1.35	10	8	0.0	0	2.4	24	23	1	23	14	7	10	4.8	
HARRISBURG	338	1004.7	1017.4	82	63	72.2	- 1.9	89	21+	49	25	0	0	62	73	7.77	4.12	2.75	8	5	0.0	0	2.1	29	18	NW	23	12	11	8	4.6	64
PHILADELPHIA	5	1016.3	1017.2	84	66	75.3	1.7	92	10+	55	25	5	0	64	72	9.61	4.98	5.68	9	4	0.0	0	2.3	27	38	N	28	13	7	11	4.9	70
PITTSBURGH	1137	974.9	1018.2	81	59	69.6	- 1.2	87	21+	47	24	0	0	58	70	1.23	- 2.08	0.38	11	5	0.0	0	2.4	27	21	30	11	12	5	14	5.4	67
SCRANTON	930	983.4	1017.3	79	58	68.3	- 1.7	86	10+	44	25+	0	0	60	78	4.88	1.30	1.60	10	4	0.0	0	1.5	24	21	SW	23	9	13	9	5.3	67
WILLIAMSPORT	524	999.0	1017.7	81	60	70.4	- 1.2	88	8	46	25+	0	0	61	76	2.48	- 1.14	1.10	8	2	0.0	0	2.2	26	18	27	28+	11	8	12	5.5	
RHODE ISLAND																																
BLOCK ISLAND	110			77	64	70.1	0.5	85	9	48	25	0	0			1.24	- 2.62	0.48	7		0.0	0										
PROVIDENCE	51	1013.9	1016.4	83	64	73.0	2.5	92	9	48	25+	3	0	61	69	3.03	- 0.93	1.22	8	2	0.0	0	3.7	26	44	15	28	11	12	8	5.0	74
SOUTH CAROLINA																																
CHARLESTON	40	1015.2	1017.1	88	72	79.6	- 0.1	93	21	68	13	6	0	72	83	16.32	9.71	4.67	18	15	0.0	0	0.9	6	40Y	W	22	1	13	17	7.4	64
CHARLESTON U	9			86	75	80.6	- 0.4	92	21+	70	13	5	0			16.37	10.30	4.63	21		0.0	0			38	E	17					
COLUMBIA	213	1009.1	1017.2	89	71	80.1	- 0.4	94	21+	64	14	10	0	71	80	10.68	4.94	4.82	10	7	0.0	0	1.9	5	28	31	11	5	12	14	6.5	59
GRNVLLE-SPRTNBRG	957	983.4	1017.4	85	67	75.8	- 2.4	90	20	61	29+	1	0	67	79	2.44	- 2.07	0.78	11	6	0.0	0	1.8	5	19	SW	22+	7	13	11	5.8	54
SOUTH DAKOTA																																
ABERDEEN	1296	968.8	1014.8	90	56	73.0	1.5	105	23+	39	3	16	0	55	60	1.39	- 0.77	1.15	6	5	0.0	0	3.4	14	28	32	23+	26	2	3	2.3	
HURON	1281	968.8	1014.5	90	58	74.0	1.2	105	22	41	2	16	0	54	55	1.85	- 0.22	1.21	4	5	0.0	0	5.3	15	34	NW	18	20	7	4	3.1	89
RAPID CITY	3162	905.2	1013.5	90	58	73.9	1.9	101	22	45	24	19	0	49	46	0.52	- 0.70	0.31	3	4	0.0	0	2.8	12	42	NW	23	17	11	3	3.3	82
SIOUX FALLS	1418	966.1	1016.8	88	58	73.0	1.2	103	22	41	27	11	0	55	58	0.71	- 2.88	0.32	4	4	0.0	0	5.0	17	23	25	13	21	7	3	3.1	
TENNESSEE																																
BRISTOL	1507	965.1	1018.3	84	63	73.7	- 1.1	87	30+	56	29+	0	0	64	78	2.32	- 1.48	0.81	9	7	0.0	0	0.8	36	22	31	11	9	11	11	5.5	
CHATTANOOGA	665	992.6	1016.7	87	69	78.0	- 1.8	91	21	59	28	5	0	68	74	1.91	- 1.85	1.03	10	10	0.0	0	0.6	3	30	N	11	6	18	7	5.5	52
KNOXVILLE	980	983.1	1017.4	85	67	76.0	- 1.4	89	20+	59	28	0	0	66	78	3.05	- 0.41	1.19	10	6	0.0	0	1.6	1	20	SW	3	8	13	10	5.8	59
MEMPHIS	258	1006.4	1016.6	87	70	78.6	- 1.9	92	21	60	1	9	0	67	70	6.00	3.03	2.56	9	7	0.0	0	1.4	7	28	NW	11	12	9	10	5.3	79
NASHVILLE	590	995.6	1016.8	86	67	76.4	- 2.8	90	11+	59	29+	4	0	68	82	5.87	3.01	1.63	9	12	0.0	0	0.3	8	29	NW	11	12	8	11	5.3	62
OAK RIDGE R	905			85	65	74.8	- 1.3	88	31+	56	28	0	0			2.57	- 2.05	0.88	9		0.0	0			47Y		11	6	11	14	6.5	
TEXAS																																
ABILENE	1762	955.0	1015.3	85	68	76.9	- 6.1	93	22	62	3	7	0	65	70	6.92	5.45	1.93	13	11	0.0	0	5.6	17	26	E	28+	7	8	16	6.5	61
AMARILLO	3604	893.3	1014.4	83	62	72.2	- 7.3	92	21	58	7+	2	0	56	63	3.33	0.75	1.20	10	13	0.0	0	8.9	18	33	SE	10	13	7	11	5.0	83
AUSTIN	597	993.6	1015.1	90	73	81.2	- 3.5	97	28	69	4+	21	0	69	73	5.69	3.75	2.89	11	6	0.0	0	2.9	15	21	NE	31+	3	17	11	6.6	50
BROWNSVILLE	19	1013.9	1014.3	92	74	83.0	- 1.1	95	27	71	18+	29	0	72	74	2.64	- 0.13	1.42	9	5	0.0	0	6.8	13	26	SE	6	7	17	7	5.6	69
CORPUS CHRISTI	41	1013.2	1014.6	91	75	82.7	- 1.5	94	26+	71	2	26	0	74	80	8.32	5.55	4.25	10	5	0.0	0	6.3	13	25	S	4	5	17	9	5.8	56
DALLAS	481	998.6	1015.6	89	73	81.2	- 3.8	97	22	68	1	17	0	69	68	4.11	2.18	2.34	8	4	0.0	0	4.1	14	28	E	24	8	8	15	6.4	50
DEL RIO	1026	978.7	1014.1	88	70	78.6	- 7.2	93	27+	66	11	12	0	69	76	6.10	4.58	2.76	9	7	0.0	0	7.2	12	21	13	14+	8	9	14	6.4	
EL PASO	3918	882.8	1011.9	89	65	77.0	- 3.4	93	23	60	7+	13	0	56	52	1.59	0.40	0.62	9	9	0.0	0	2.6	12	40	N	8	12	18	1	4.4	84
FORT WORTH	537	995.6	1015.8	88	71	79.5	- 5.9	95	22	66	31+	14	0	70	76	5.70	4.02	2.63	8	9	0.0	0	3.5	14	20	9	24	8	7	16	6.5	
GALVESTON U	7			87	78	82.5	- 0.8	93	28	70	1	5	0			3.61	- 0.78	1.34	12		0.0	0			26	NE	8+					64
HOUSTON INTERCON	96	1011.9	1015.8	90	71	80.4	- 2.1	94	23	67	18	22	0	71	79	6.95	2.94	2.59	11	13	0.0	0	1.3	11	20	20	4	5	13	13	6.6	56
LUBBOCK	3254	905.5	1014.7	83	64	73.4	- 5.4	94	22	58	7+	2	0	62	73	4.15	2.47	1.53	14	9	0.0	0	5.2	15	32	32	22	9	7	15	6.0	
MIDLAND	2851	917.4	1014.2	85	64	74.4	- 7.8	93	22	60	3	1	0	61	68	3.27	1.79	1.38	6	4	0.0	0	6.8	13	24	8	23	9	8	14	6.0	
PORT ARTHUR	16	1015.2		88	70	79.3	- 3.0	93	27	66	1	18	0	74	88	10.56	5.07	6.08	10	13	0.0	0	1.0	9	30	SW	25	10	12	9	5.5	75
SAN ANGELO	1903	949.2	1014.5	84	66	75.4	- 9.7	91	23+	59	3	6	0	65	73	8.13	6.86	3.00	11	8	0.0	0	5.8	14	29	34	10	5	14	12	6.8	
SAN ANTONIO	788	987.5	1015.0	90	73	81.2	- 2.6	94	28+	67	9	23	0	69	70	9.42	7.06	2.90	13	7	0.0	0	3.0	12	28	SE	12	6	12	13	6.7	55
VICTORIA	104	1011.2	1015.1	92	74	82.5	- 0.9	95	28+	71	30+	26	0	72	76	4.01	0.88	1.12	10	12	0.0	0	3.8	13	39Y	E	29	2	15	14	7.2	
WACO	501	998.0	1015.5	89	72	80.5	- 5.0	97	28	67	31+	21	0	70	75	2.16	0.48	1.01	7	7	0.0	0	3.2	14	28	14	30	9	8	14	6.1	
WICHITA FALLS	994	979.0	1015.0	91	69	79.9	- 5.8	99	22+	61	3	20	0	67	70	7.61	5.82	4.62	7	10	0.0	0	4.9	14	38	23	23	9	9	13	6.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

AUGUST 1971

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days								No. of days		Snow, Ice pellets				Fastest mile							
		Station ⌀	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
UTAH																																
MILFORD	5028	847.6		90	58	74.2	2.0	98	2	52	11	18	0			1.59	0.86	0.62	10		0.0	0						8	17	6	4.8	
SALT LAKE CITY	4220	872.0	1012.3	91	62	76.9	2.4	100	14	52	24	24	0	48	40	2.15	1.28	0.90	6	8	0.0	0	2.2	15	35	SE	14	12	15	4	4.2	83
WENDOVER	4237	871.3	1013.2	91	68	79.3	2.1	99	11	57	24	22	0	41	29	0.70	0.34	0.42	7		0.0	0						13	15	3	4.1	
VERMONT																																
BURLINGTON	332	1003.7	1016.2	77	57	67.1	0.4	90	9	46	31+	1	0	57	74	4.85	1.48	2.54	13	2	0.0	0	2.1	22	31	NW	23	7	10	14	6.4	67
VIRGINIA																																
LYNCHBURG	916			83	63	72.6	- 2.2	89	10	54	30+	0	0			3.02	- 1.39	0.75	9		0.0	0			19	W	11	16	5	10	4.8	60
NORFOLK	24	1016.3	1017.2	84	68	75.7	- 1.8	91	21	58	25	5	0	66	75	4.63	- 1.34	3.08	7	2	0.0	0	0.9	8	52	NE	27	10	9	12	5.5	68
RICHMOND	164	1011.5	1017.8	85	66	75.3	- 0.7	90	21+	55	25	3	0	67	79	3.73	- 1.81	1.43	8	3	0.0	0	0.3	36	24	SE	1	11	11	9	5.3	67
ROANOKE	1149	976.6	1018.1	83	62	72.6	- 2.8	89	20+	52	25+	0	0	63	75	4.46	- 0.17	1.60	14	5	0.0	0	1.2	35	21	26	21	13	9	9	5.0	
WALLOPS ISLAND	9			82	68	74.8		92	21	59	25	2	0			4.65		2.83	8		0.0	0			59Y	ESE	27					
WASHINGTON																																
OLYMPIA	195	1008.5	1015.5	81	50	65.4	2.0	99	10	43	26+	4	0	54	72	0.71	- 0.18	0.65	4	0	0.0	0	2.0	21	21	25	22	10	16	5	4.6	
QUILLAYUTE	179	1008.8	1016.1	73	50	61.3	1.6	96	9	43	25	1	0	54	79	3.52	1.44	1.26	12	2	0.0	0	1.9	23	20	SE	30+	7	12	12	6.0	60
SEATTLE-TACOMA	400	999.3	1015.6	78	58	67.7	3.6	94	10+	53	31+	4	0	53	62	0.57	- 0.38	0.45	5	0	0.0	0	2.0	26	21	SW	21	12	12	7	4.4	76
SPOKANE	2356	930.6	1012.3	89	59	74.1	6.1	101	11+	44	23	16	0	41	35	0.59	0.18	0.45	5	3	0.0	0	4.0	20	26	SW	31	23	5	3	2.5	88
STAMPEDE PASS R	3958	880.8		70	51	60.5	4.9	86	10	40	31	0	0			1.42	- 0.62	0.64	7		0.0	0						11	12	8	4.6	
WALLA WALLA U	949			92	66	78.9	5.1	103	11	54	31+	20	0			0.36	0.06	0.16	4		0.0	0			18	NW	11	22	6	3	2.5	85
YAKIMA	1052	974.6	1012.1	93	52	72.3	3.7	110	10	39	23	21	0	47	44	0.14	- 0.06	0.14	1	1	0.0	0	3.3	28	28	19	21	24	4	3	1.9	
WEST INDIES																																
SAN JUAN P.R.	13	1013.5	1015.8	89	77	83.2	2.3	91	20+	75	24+	14	0	71	68	5.18	- 1.95	1.80	19	6	0.0	0	8.5	10	29	E	19+	5	17	9	5.9	70
WEST VIRGINIA																																
BECKLEY	2504	931.6	1018.2	77	58	67.5	- 2.2	84	10	45	24	0	0	60	81	1.74	- 2.25	0.58	10	6	0.0	0	1.0	22	23	32	4	8	8	15	6.4	
CHARLESTON	939	984.4	1018.1	82	62	71.9	- 1.9	88	26+	50	25+	0	0	64	81	2.12	- 1.83	0.79	11	4	0.0	0	0.3	24	15	23	20	5	14	12	6.5	
ELKINS	1948	948.9		79	55	67.0	- 1.8	86	10	42	25	0	0			3.87	- 0.36	0.87	10		0.0	0						4	15	12	6.8	
HUNTINGTON	827	988.2	1018.0	81	62	71.8	- 2.2	88	20	54	25+	0	0	63	78	1.05	- 1.77	0.41	6	4	0.0	0	0.3	17	29	27	25	1	15	15	7.4	
PARKERSBURG U	615			82	61	71.7	- 2.7	88	10	50	24	0	0			4.04	0.26	1.62	9		0.0	0			24	W	25					58
WISCONSIN																																
GREEN BAY	682	991.9	1017.3	77	53	65.3	- 3.6	89	9	45	4	0	0	55	71	2.99	0.24	1.27	8	6	0.0	0	1.8	28	30	SW	1	11	11	9	5.3	67
LA CROSSE	651	993.6	1017.9	81	56	68.1	- 3.5	93	22	44	27	3	0	58	74	2.22	- 1.41		5	3	0.0		2.1	15								
MADISON	858	986.5	1017.7	83	54	68.3	- 1.2	92	9	43	4	5	0	57	71	3.96	0.59	2.01	6	6	0.0	0	1.0	28	34	NE	13	13	9	9	4.9	68
MILWAUKEE	672	992.6	1017.7	76	58	67.0	- 0.8	90	10+	50	6+	2	0	57	74	2.28	- 0.78	0.72	8	7	0.0	0	1.8	28	35	N	22	15	9	7	4.3	77
WYOMING																																
CASPER	5338	839.8	1013.2	89	53	71.3	1.2	95	22	45	24	16	0	42	39	0.11	- 0.61	0.10	2	4	0.0	0	0.7	20	31	35	9	21	6	4	3.2	
CHEYENNE	6126	815.4	1014.1	84	53	68.7	1.0	91	21	46	24+	2	0	43	44	1.41	- 0.03	0.72	7	8	0.0	0	2.5	26	40	NW	19	13	14	4	4.3	74
LANDER	5563	831.7	1013.1	88	58	72.6	3.8	93	15	50	24	10	0	39	32	0.27	- 0.20	0.19	3	5	0.0	0	2.2	25	29	NE	16	14	12	5	4.2	78
SHERIDAN	3964	879.4	1013.2	92	55	73.6	4.1	100	14	41	24	25	0	41	33	0.52	- 0.38	0.50	3	3	0.0	0	1.8	31	29	NW	15	22	5	4	3.1	85

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day-data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
· And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

AUGUST 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days sunrise to sunset)			Sky cover tenths (sunrise to sunset	Possible sunshine
												No. of days					No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)								
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear 0-3	Partly cloudy 4-7	Cloudy, 8-10		
	M	Mb	Mb.	C	C.	C	C.	C		C				C	%	Mm	Mm.	Mm			Mm.	Mm	M.p.s.		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	994.9	1017.0	30.6	20.0	25.4	- 1.8	33.3	8	13.9	29	6	0	20.6	79	93	- 30	32	12	14	0	0	0.8	8	13.0	N	21	6	15	10	5.7	66
HUNTSVILLE	190	994.2	1017.0	30.0	19.4	24.8	- 2.0	32.2	21+	15.0	28	3	0	20.0	79	75	- 8	32	8	9	0	0	0.6	8	12.5	31	11	6	15	10	5.7	
MOBILE	64	1008.1	1016.1	32.2	23.3	27.8	0.0	34.4	5	21.7	14+	22	0	23.3	81	266	102	54	17	14	0	0	1.0	5	10.7	16	24	2	13	16	7.0	
MONTGOMERY	56	1009.1	1016.5	31.7	21.1	26.4	- 1.2	33.3	21+	17.2	28	15	0	21.7	82	82	- 22	44	11	10	0	0	0.5	7	9.4	S	31	4	12	15	6.5	50
ALASKA												B																			
ANCHORAGE	35	1003.1	1007.8	16.1	9.4	12.8	- 0.5	20.0	15	5.6	28	0	0	9.4	82	66	T	21	12	0	0	0	1.3	16	11.6	16	9	1	3	27	8.8	34
ANNETTE	34	1008.8	1012.7	17.2	11.1	14.3	- 0.4	25.0	9	5.6	27	7	0	11.7	88	218	27	79	18	0	0	0	3.1	14	16.5	15	19	2	4	25	8.7	
BARROW	9	1012.9	1013.5	2.8	- 1.1	0.8	- 2.4	15.6	16	- 3.9	30+	0	25	0.0	93	9	- 14	7	6	0	61	51	1.3	35	10.3	6	31	1	6	24	8.7	
CARTER ISLAND	12	1010.2	1012.0	4.4	- 0.6	2.0	- 2.4	16.1	17	- 4.4	12	0	19	1.1	91	11	- 16	5	9	0	T	T	1.5	30	11.6	27	4	4	2	25	8.3	
BETHEL	38	1003.1	1008.8	14.4	7.8	11.1	- 0.2	21.1	11	3.3	21	1	0	8.3	85	79	- 27	25	16	0	0	0	1.0	26	13.4	34	19	0	2	29	9.5	
BETTLES	196	984.1	1009.0	17.2	5.0	11.2		22.8	18	0.0	4	2	1	6.7	75	46		17	9	0	0	0	0.6	32	8.9	36	30	6	11	14	6.9	
BIG DELTA	386			17.2	6.7	12.0		23.3	18	1.7	15	4	0			64		13	17	0	0	0			9.8	19	17	2	7	22	8.2	
COLD BAY	29	1006.4	1010.3	11.7	6.7	9.2	- 1.6	21.7	5	4.4	16	1	0	7.2	91	70	- 38	19	22	0	0	0	2.5	23	18.8	32	19	0	0	31	9.8	
FAIRBANKS	133	991.5	1007.8	18.3	8.3	13.4	1.0	23.3	18	3.9	30+	5	0	7.2	69	59	3	15	14	1	0	0	0.6	29	9.4	22	20+	1	6	24	8.1	
GULKANA	479	951.9	1008.6	17.2	6.1	11.4		23.3	12	- 1.1	28+	4	2	7.2	76	100		51	15	0	0		1.7	19	10.3	18	8+	2	7	22	8.0	
HOMER	20	1005.4	1007.9	15.0	8.3	11.8		21.7	9	4.4	31+	1	0	9.4	85	50	- 22	19	15	0	0	0	0.6	25	9.4	13	29	1	3	27	9.1	
JUNEAU	4	1010.2	1010.9	16.7	9.4	13.0	0.7	23.3	1	1.7	28	3	0	10.6	89	175	47	45	20	0	0	0	1.7	9	11.2	12	23+	0	3	28	9.5	13
KING SALMON	15	1005.4	1007.4	16.7	8.9	12.7	0.2	22.2	18+	0.0	21	4	1	8.3	77	109	22	18	18	1	0	0	1.1	21	12.5	4	28	1	3	27	9.1	
KOTZEBUE	3	1008.8	1009.4	12.2	6.7	9.3	- 1.1	17.2	15	1.1	31	0	0	6.1	80	10	- 45	5	7	0	0	0	3.3	31	15.6	33	19	8	10	13	6.1	
MC GRATH	105	995.3	1007.9	18.3	8.3	13.3	1.0	23.3	29	1.7	22	7	0	9.4	81	53	- 44	21	12	1	0	0	0.4	30	8.0	8	14+	2	5	24	8.3	
NOME	4	1008.1	1009.0	13.3	5.0	9.2	- 0.3	18.3	28	0.6	21	0	0	4.4	72	10	- 86	5	4	0	0	0	0.8	33	10.3	31	20+	8	5	18	6.9	54
ST. PAUL ISLAND	7	1009.5	1010.2	8.9	5.0	6.9	- 1.7	15.0	2	2.8	2	0	0	6.1	97	71	- 13	27	17	0	0	0	2.8	32	15.6	31	22+	1	0	30	9.7	
SHEMYA	37	1008.5	1012.1	9.4	6.7	8.1	- 1.7	11.1	21+	5.0	24+	0	0	6.7	90	101	47	44	20	0	0	0	0.6	5	17.4	20	20	0	0	31	9.9	
SUMMIT	732	923.5	1008.1	14.4	5.0	9.7		20.6	11	0.0	30+	0	2	5.6	77	66		13	15	0	0	0	0.4	26	9.4	23	1	3	5	23	8.2	
TALKEETNA	105			18.3	8.3	13.3	0.7	22.2	12+	2.2	15	9	0			197	62	40	17	0	0	0			8.9	36	14					
UNALAKLEET	5			13.9	7.8	10.9		20.6	14	2.2	20	0	0			37		11	12	0	0	0			11.6	34	19	4	7	20	7.8	
YAKUTAT	9	1008.8	1009.9	15.6	8.3	11.9	- 0.2	21.7	28	0.6	28	1	0	10.6	94	162	-116	33	21	0	0	0	1.4	12	12.5	12	19	0	1	30	9.5	
ARIZONA																																
FLAGSTAFF	2135	791.7	1016.4	25.0	10.6	17.8	0.1	28.9	1	8.3	29+	0	0	11.1	72	114	42	22	17	26	0	0	0.6	24	12.5	35	13	3	15	13	6.6	
PHOENIX	340	971.9	1009.6	38.3	26.1	32.0	1.2	41.1	31+	22.2	13+	30	0	17.8	45	25	- 3	8	7	12	0	0	0.6	19	20.6Y	ESE	12	6	24	1	4.4	75
TUCSON	788	924.8	1010.8	33.3	21.7	27.4	1.0	36.1	29+	19.4	12+	23	0	17.2	60	84	10	25	15	23	0	0	1.1	18	17.9	SE	3	7	16	8	5.5	74
WINSLOW	1492	852.7	1012.6	33.3	17.8	25.6	0.1	37.2	3+	15.6	31+	23	0	12.2	51	36	- 1	13	8	15	0	0	1.1	23	14.3	8	10+	8	16	7	5.4	
YUMA	59	1001.7	1008.9	38.3	26.7	32.6	0.6	42.2	1	23.9	21	31	0	20.0	51	20	8	14	5	5	0	0	3.0	16	16.1	E	4	15	12	4	3.9	85
ARKANSAS																																
FORT SMITH	136	1000.3	1016.6	31.1	20.0	25.5	- 2.4	34.4	11	15.0	30+	16	0	20.0	76	167	93	129	8	5	0	0	1.1	8	10.3	N	27	7	9	15	6.2	55
LITTLE ROCK	78	1007.1	1016.4	31.1	20.6	25.6	- 1.8	34.4	26+	13.9	1	9	0	21.1	80	219	147	97	8	6	0	0	0.7	9	13.0	NW	23	6	12	13	6.4	78
CALIFORNIA																																
BAKERSFIELD	145	993.9	1011.1	37.2	22.8	30.0	2.4	42.8	11+	15.6	30	28	0	12.8	39	3	3	3	1	1	0	0	2.1	33	9.4	31	18	27	4	0	1.3	
BISHOP	1252	873.7		36.7	14.4	25.6	2.1	40.6	11+	7.2	31	31	0			3	T	3	2		0	0						15	14	2	3.6	
BLUE CANYON	1609			26.7	16.7	21.5	2.2	34.4	10	8.9	31	3	0			7	5	7	2		0	0			7.6	22	17	27	3	1	1.3	
EUREKA U	13			18.3	12.8	15.6	1.8	22.8	21	10.6	14+	0	0			14	11	7	7		0	0			12.1	NW	22	6	9	16	7.0	65
FRESNO	100	999.7	1011.2	36.7	17.8	27.3	1.2	42.2	2	13.9	30+	29	0	13.3	46	T	T	T	0	0	0	0	2.5	29	8.5	NW	31	25	5	1	1.5	94
LONG BEACH	8	1011.2	1012.4	32.2	20.6	26.3	3.9	37.8	4	16.7	31+	15	0	16.7	61	0	- 1	0	0	0	0	0	1.3	22	7.2	26	29+	23	7	1	2.6	
LOS ANGELES	30	1008.1	1011.9	27.2	20.0	23.5	2.9	32.2	10	16.7	31+	1	0	17.8	76	0	- 1	0	0	0	0	0	2.8	25	12.5Y	W	29	20	10	1	2.7	
LOS ANGELES U	82			31.1	21.1	26.1	3.2	36.1	6	18.3	31	14	0			0	- 1	0	0		0	0			6.7	SW	29+	27	4	0	1.7	91
MT SHASTA R	1080			30.0	11.7	20.7	1.4	38.3	11	6.7	29	10	0			3	- 2	2	2		0	0										
OAKLAND	2	1014.2	1014.4	22.2	15.0	18.5	0.6	28.3	23	13.9	23+	0	0	13.3	77	T	- 1	T	0	1	0	0	3.2	28	9.4	31	25+	18	11	2	3.4	
RED BLUFF	104	998.6	1010.9	36.7	18.3	27.7	0.4	47.8	10	13.9	30+	28	0	10.6	38	T	- 2	T	0	0	0	0	1.4	17	9.8	N	23	26	2	3	1.5	97
SACRAMENTO	5	1010.8	1011.6	34.4	15.6	24.9	1.5	42.2	10	12.2	18	25	0	12.2	52	0	- 1	0	0	0	0	0	3.1	20	11.6	SW	12	27	3	1	1.4	99
SANDBERG R	1377	863.5		29.4	17.8	23.6	0.6	34.4	10	9.4	31	4	0			0	- 2	0	0		0	0			13.4	34	9	25	5	1	1.4	
SAN DIEGO	4	1011.2	1012.2	27.2	21.1	24.1	2.0	31.1	1	18.9	31	0	0	18.3	73	1	- 1	1	1	1	0	0	1.9	27	8.5	W	26	15	8	8	4.3	76
SAN FRANCISCO	2	1013.9	1014.5	23.3	13.3	18.4	1.3	30.6	23	11.1	19	0	0	12.8	75	T	- 1	T	0	0	0	0	4.8	29	11.2	28	31+	23	7	1	2.4	
SAN FRANCISCO U	16			19.4	13.3	16.2	0.9	27.2	23	11.7	15+	0	0			T	- 1	T	1		0	0			11.2	W	10+					71
SANTA MARIA	72			23.9	12.8	18.4	1.5	32.2	8	10.6	28	1	0			0	- 1	0	0		0	0						19	11	1	2.9	
STOCKTON	7	1011.5	1012.5	35.0	17.8	26.4	1.9	42.8	10	13.9	30	27	0	12.2	47	0	0	0	0	0	0	0	3.4	30	8.9	30	31+	28	0	3	1.4	
COLORADO																																
ALAMOSA	2297	776.8		26.1	8.3	17.2	0.0	29.4	1[illegible]	3.9	1	0	0			31	6	11	13		0	0						12	17	2	4.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm	Mm			Mm	Mm	M.p.s.		M p s							%
COLORADO																																
COLORADO SPRINGS	1873	815.1	1015.0	27.8	13.9	20.6	- 0.1	30.6	22+	9.4	8+	0	0	9.4	54	51	- 4	19	8	11	0	0	1.3	7	14.3	35	18	13	16	2	4.1	
DENVER	1610	838.8	1013.0	31.7	13.9	22.7	0.7	34.4	22+	10.0	7	11	0	10.0	50	22	- 11	18	5	6	0	0	1.3	13	13.4	N	4	13	14	4	4.3	75
GRAND JUNCTION	1476	853.0	1011.2	33.9	17.8	25.8	1.7	36.7	10+	11.7	31	23	0	9.4	42	26	- 1	9	7	7	0	0	1.1	14	17.0	W	30	15	12	4	4.4	81
PUEBLO	1428	857.4	1013.2	32.2	15.0	23.7	0.0	35.6	22	11.1	8	19	0	10.0	48	22	- 25	19	4	5	0	0	1.0	7	17.9	N	18	13	14	4	4.4	84
CONNECTICUT																																
BRIDGEPORT	2	1016.6	1017.5	27.2	17.2	22.3	- 0.1	32.8	9	10.6	24	1	0	17.2	74	126	13	86	7	3	0	0	1.4	26	24.6	12	28	15	8	8	4.4	
HARTFORD	52	1009.8	1016.2	29.4	15.6	22.3	0.6	35.0	10	6.1	24	7	0	15.0	66	135	33	76	9	4	0	0	1.3	26	16.5	SE	28	9	11	11	5.5	71
DELAWARE																																
WILMINGTON	23	1014.2	1017.3	28.3	18.3	23.3	- 0.2	32.2	21+	10.6	24	3	0	17.2	71	213	71	104	10	6	0	0	0.8	29	20.6	35	28	12	8	11	5.1	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	88	1006.1	1017.5	29.4	16.1	22.7		32.2	21+	7.8	24	6	0	17.8	77	113		50	7	4	0	0	0.5	30	13.0	20	1	14	5	12	5.0	
WASHINGTON NATIONAL	3	1015.2	1017.5	30.0	19.4	24.8	0.1	33.9	21+	14.4	25	6	0	17.8	67	182	58	96	8	4	0	0	0.4	29	11.6	W	3	14	7	10	4.8	72
FLORIDA																																
APALACHICOLA U	4			31.1	23.3	27.4	- 0.1	33.3	9	22.2	30+	9	0			184	- 13	33	19	17	0	0			10.3	E	13	9	20	11	6.7	55
DAYTONA BEACH	9	1015.2	1016.5	31.7	22.2	27.1	0.0	34.4	17	20.6	10	12	0	22.2	80	101	- 61	30	10	9	0	0	1.4	10	10.3	14	27	4	19	8	6.9	
FORT MYERS	5	1015.6	1016.0	31.7	23.3	27.5	- 0.7	33.3	22+	21.7	11	14	0	22.2	78	205	17	61	19	20	0	0	0.7	15	10.3	18	30+	2	18	11	6.5	
JACKSONVILLE	8	1015.6	1016.5	31.7	22.8	27.2	- 0.7	34.4	8	21.1	10	16	0	22.8	81	326	152	88	14	17	0	0	0.9	11	15.2	W	23	5	14	12	6.5	62
KEY WEST	1	1014.9	1015.6	31.1	25.6	28.4	- 0.2	32.8	9	21.7	1	3	0	22.8	72	229	119	61	16	16	0	0	1.9	13	14.3	S	9	2	18	11	6.4	76
LAKELAND U	65			32.2	22.8	27.3	- 0.4	35.0	22	20.6	10+	18	0			187	7	48	21		0	0						3	23	5	5.6	64
MIAMI	2	1015.6	1015.9	30.6	25.0	27.7	- 0.2	32.2	24+	22.2	11+	2	0	23.3	80	153	- 24	47	20	17	0	0	1.5	10	14.3	31	9	1	17	13	6.7	
ORLANDO	33	1011.9	1016.2	33.3	23.9	28.5	0.3	35.0	8	21.1	6	26	0	22.8	76	191	14	73	19	16	0	0	1.1	12	10.3	23	15+	1	23	7	6.5	
PENSACOLA	34	1012.2	1016.2	31.1	23.3	27.2	- 0.3	33.3	20+	21.1	2+	14	0	21.1	74	185	8	55	15	14	0	0	0.8	5	9.4	24	24	3	15	13	6.4	
TALLAHASSEE	17	1013.5	1015.9	32.2	21.1	26.7	- 0.6	34.4	22+	19.4	3	21	0	21.7	80	273	97	76	21	24	0	0	1.1	6	10.7	S	6	2	22	7	6.6	
TAMPA	6	1015.6	1015.7	32.2	23.3	27.7	- 0.1	34.4	30	21.1	6	18	0	22.2	77	189	- 20	71	16	26	0	0	0.5	13	10.3	34	2	0	19	12	7.3	47
WEST PALM BEACH	5	1015.2	1016.0	32.8	24.4	28.4	0.1	34.4	11+	21.7	11+	26	0	22.8	76	111	- 60	27	17	11	0	0	1.7	13	17.9	1	9	2	17	12	6.8	
GEORGIA																																
ATHENS	244	988.5	1017.1	30.0	20.0	25.1	- 1.1	32.2	21+	16.1	28	4	0	21.1	84	116	24	25	12	7	0	0	0.8	5	7.6	18	19+	6	11	14	6.3	
ATLANTA	308	980.7	1016.7	29.4	20.6	24.8	- 0.8	31.7	20+	17.2	29	0	0	20.0	79	70	- 21	19	11	8	0	0	1.0	9	10.7	SW	22	5	13	13	6.4	52
AUGUSTA	41	1011.2	1016.6	31.1	20.6	25.9	- 0.9	33.3	20	18.3	14	8	0	21.7	82	170	71	62	11	10	0	0	0.6	4	11.2	6	5	3	15	13	6.7	
COLUMBUS	117	1002.7		31.7	21.7	26.6	- 0.5	33.9	8	18.9	15	12	0	22.2	80	130	12	62	11	12	0	0	1.1	6	9.8	17	3	8	12	11	6.6	
MACON	108	1004.1	1016.9	32.8	22.2	27.3	- 0.1	35.0	21	19.4	18	20	0	22.2	78	97	- 9	32	14	11	0	0	1.3	4	9.8	E	5	2	12	17	7.1	58
ROME	194			31.1	19.4	25.4	- 0.3	33.3	9	13.3	29	10	0			96	0	21	14		0	0										
SAVANNAH	14	1014.9	1016.6	31.7	22.8	27.1	- 0.1	34.4	22+	20.6	14	14	0	22.2	81	379	211	179	14	13	0	0	0.4	8	13.4	NW	23	1	12	18	7.4	64
HAWAII																																
HILO	8	1015.6	1016.9	30.0	20.0	24.8	0.4	32.8	14	17.8	31+	1	0	19.4	75	68	-223	25	16	0	0	0	0.2	2	7.6	NE	13	6	17	8	5.9	53
HONOLULU	2	1015.9	1016.4	30.6	22.8	26.4	0.1	31.7	28	20.0	27	0	0	18.3	63	7	- 16	3	7	0	0	0	5.4	6	13.0	NE	25+	8	20	3	4.7	80
KAHULUI	15	1013.5	1016.0	31.1	19.4	25.4	- 0.7	33.3	14	16.1	31	2	0	18.9	69	14	5	10	5	0	0	0	3.8	4	13.9	E	18+	21	8	2	3.0	84
LIHUE	31	1012.9	1017.8	30.0	23.3	26.6	0.8	30.6	30+	21.1	9+	0	0	20.6	72	22	- 40	6	13	0	0	0	4.2	6	10.7	E	2	5	21	5	5.2	72
IDAHO																																
BOISE	865	914.0	1011.4	34.4	17.2	25.9	3.6	40.0	1	6.7	23	26	0	6.7	31	5	1	5	2	4	0	0	0.3	36	15.2	NW	22	15	12	4	3.5	84
LEWISTON	431			34.4	16.7	25.6	3.6	41.1	1	7.8	23	24	0			24	13	14	2		0	0			20.1Y			20	7	4	3.8	
POCATELLO	1358	963.2	1012.5	32.2	11.7	21.7	0.6	36.7	14	2.8	24	22	0	6.1	40	15	1	12	5	4	0	0	1.1	24	13.4	NW	30+	15	9	7	3.9	79
ILLINOIS																																
CAIRO U	96			29.4	20.6	24.9	- 1.7	32.8	20	15.0	1	8	0			102	24	45	9		0	0			13.0	NW	21+	14	11	7	4.5	66
CHICAGO O HARE	201	993.6	1017.4	28.3	16.1	22.2	0.4	34.4	20	11.7	29+	7	0	15.0	67	101	19	58	7	4	0	0	0.5	29	18.3	36	24+	10	13	8	5.2	
CHICAGO MIDWAY	185	995.6	1018.0	27.8	17.2	22.4	- 1.0	35.6	20	12.2	17	8	0	16.1	69	50	- 30	25	6	4	0	0	0.3	20	17.4	N	22	12	13	6	4.6	73
MOLINE	177	996.6	1017.8	29.4	15.0	22.2	- 0.9	35.0	24+	10.0	28+	7	0	15.6	68	9	- 81	6	4	4	0	0	0.4	18	13.9	NW	10	20	11	10	4.3	78
PEORIA	199	994.2	1018.0	28.3	15.6	22.0	- 1.5	34.4	10	10.0	27	4	0	15.6	71	56	- 18	37	6	7	0	0	0.3	14	20.6	NW	14	11	10	10	5.3	70
ROCKFORD	221	991.2	1017.8	28.3	14.4	21.5	- 1.0	34.4	10	10.0	28+	7	0	14.4	69	38	- 68	10	6	6	0	0	0.0	25	14.8	6	22	10	11	10	5.3	
SPRINGFIELD	179	995.6	1017.5	28.9	16.7	22.5	- 1.5	33.3	10	10.6	28	5	0	16.1	70	27	- 43	18	6	6	0	0	0.3	13	13.0	NE	24	11	10	10	5.2	77
INDIANA																																
EVANSVILLE	116	1008.7	1017.6	30.6	18.9	24.8	- 0.4	35.0	21	12.2	1	11	0	18.3	70	56	- 23	20	7	3	0	0	0.4	5	8.5	NW	21	17	6	8	4.4	76

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max 32.2 °C or above	Temperature: No. of days Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days .25 mm. or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, ice pellets Total	Precipitation: Snow, ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset) Clear 0-3	No. of days (sunrise to sunset) Partly cloudy, 4-7	No. of days (sunrise to sunset) Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
INDIANA																																
FORT WAYNE	241	989.2	1018.8	27.8	13.9	20.9	- 1.6	32.8	10	8.9	12	1	0	15.0	71	51	- 26	27	7	7	0	0	0.8	24	13.0	NW	10	10	13	8	5.0	80
INDIANAPOLIS	241	989.5	1018.2	27.8	16.1	21.8	- 1.3	31.7	10	10.0	12	0	0	16.1	72	49	- 28	18	6	5	0	0	0.4	31	13.0	SW	23	14	7	10	5.4	75
SOUTH BEND	236	990.2	1018.0	26.1	14.4	20.1	- 2.2	31.1	10	8.3	7	0	0	15.0	78	71	- 19	41	8	5	0	0	1.1	27	14.3	32	10	10	14	7	4.9	
IOWA																																
BURLINGTON	211			28.9	16.1	22.4	- 1.3	35.6	10	10.0	27	7	0	16.1	69	15	- 77	10	4	6	0	0	0.5	17	13.0	33	24	12	11	8	5.0	
DES MOINES	286	983.1	1017.4	29.4	16.7	22.9	- 0.5	36.1	23+	8.9	27	7	0	15.0	65	46	- 47	28	5	5	0	0	1.2	15	10.3	SW	21	14	5	12	4.8	64
DUBUQUE	322	979.7		25.6	13.3	19.5	- 1.9	31.1	13	8.9	28+	0	0			66	- 29	24	7		0	0						10	9	12	5.2	
SIOUX CITY	334	977.3	1016.6	30.0	16.1	23.1	- 0.8	36.1	22	7.2	27	10	0	16.1	67	3	- 65	2	3	3	0	0	1.9	14	10.3	S	13	13	13	5	4.3	80
WATERLOO	265	986.5	1018.0	26.7	11.7	19.3	- 2.8	33.9	13	5.0	27	2	0	13.9	73	11	- 76	10	3	1	0	0	0.7	18	10.7	32	10	13	9	9	4.7	
KANSAS																																
CONCORDIA	448	963.4	1015.2	31.7	17.8	24.6	- 1.5	35.6	23	13.9	7+	16	0	16.1	63	10	- 70	5	3	3	0	0	3.6	16	10.3	SW	20	13	11	7	4.5	83
DODGE CITY	787	925.8	1014.6	31.7	17.8	24.8	- 1.4	36.1	31	16.1	25+	13	0	14.4	59	25	- 35	16	5	7	0	0	3.8	17	12.1	SE	13+	8	16	7	5.5	78
GOODLAND	1114	889.9	1013.7	31.7	15.6	23.4	- 0.3	37.2	21	11.7	25+	18	0	12.8	56	17	- 41	15	4	5	0	0	3.5	15	13.9	9	4	11	14	6	4.6	
TOPEKA	267	985.4	1016.6	31.7	17.2	24.4	- 1.4	36.7	24	10.6	29	17	0	16.1	64	7	-102	4	3	1	0	0	1.5	16	13.0	NE	4	15	10	6	4.5	70
WICHITA	403	968.8	1015.6	31.7	18.3	24.9	- 2.2	35.6	26+	14.4	3	18	0	16.1	63	38	- 35	24	3	6	0	0	2.9	16	15.2	NW	21	13	13	5	4.5	63
KENTUCKY																																
COVINGTON	265	987.1	1018.2	28.3	16.7	22.4	- 0.9	32.2	18	12.2	24+	1	0	16.7	73	88	22	40	7	5	0	0	0.0	24	8.9	29	22+	9	12	10	5.7	
LEXINGTON	294	983.4	1018.3	29.4	17.2	23.3	- 1.2	33.3	20	12.2	28	3	0	16.7	70	22	- 59	9	5	2	0	0	0.4	10	6.7	25	26+	9	10	12	5.5	
LOUISVILLE	145	1000.0	1017.4	28.9	17.8	23.4	- 1.2	32.8	25	12.8	1	3	0	17.8	72	46	- 29	23	8	2	0	0	0.4	9	12.1	SW	10	9	15	7	5.2	60
LOUISIANA																																
ALEXANDRIA	28	1011.9	1016.4	31.7	20.6	26.2	- 1.6	33.9	27+	17.8	29	17	0	22.2	84	95	6	28	12	10	0	0	0.1	1	10.3	4	23	11	12	8	5.1	
BATON ROUGE	20	1013.2	1015.8	32.8	22.8	27.6	- 0.4	36.1	27	20.6	29	25	0	22.2	77	130	- 3	39	13	9	0	0	0.5	3	9.8	16	19	10	13	8	5.7	
LAKE CHARLES	3	1014.6	1015.7	32.8	22.8	27.6	- 0.3	34.4	27+	21.1	29+	24	0	22.8	81	160	38	59	11	15	0	0	0.8	6	9.4	4	25+	7	15	9	5.9	
NEW ORLEANS	1	1014.9	1015.8	32.2	22.8	27.3	- 0.4	33.3	22+	19.4	28	17	0	22.2	78	146	10	37	15	11	0	0	0.4	1	10.3	31	11	9	13	9	5.6	
SHREVEPORT	77	1006.8	1015.9	32.2	21.7	27.0	- 1.8	36.1	27	17.8	29	22	0	21.1	75	76	11	37	7	6	0	0	0.2	7	9.4	8	23	12	9	10	5.6	56
MAINE																																
CARIBOU	190	990.5		22.2	10.6	16.3	- 0.7	28.9	9	3.3	26	0	0			86	- 7	20	15		0	0						2	8	21	7.8	
PORTLAND	13	1012.9	1015.2	26.7	14.4	20.5	- 1.2	32.2	10+	5.6	25	2	0	15.0	73	82	21	35	10	5	0	0	1.6	25	13.9	SE	28	10	12	9	5.3	70
MARYLAND																																
BALTIMORE	45	1012.5	1018.1	28.9	18.3	23.4	- 0.4	32.8	10	11.7	24	3	0	17.8	72	277	145	110	10	5	0	0	1.1	28	10.3	W	28	15	9	7	4.6	68
MASSACHUSETTS																																
BLUE HILL OBS R	192			27.2	16.1	21.6	0.8	32.8	10	6.1	24	2	0			47	- 56	17	7		0	0			30.0	SSW	28					73
BOSTON	5	1014.9	1015.7	27.8	18.3	23.0	0.9	33.9	10+	11.1	24	3	0	15.0	65	40	- 53	21	7	2	0	0	1.7	26	20.1	SW	28	12	12	7	4.7	76
WORCESTER	301	980.7	1017.4	25.6	14.4	20.1	- 0.1	30.6	18+	6.1	25	0	0	13.3	67	119	11	50	9	6	0	0	2.4	27	11.2	16	28	10	13	8	4.8	
MICHIGAN																																
ALPENA	210	992.2	1017.4	23.9	10.0	16.8	- 1.2	30.0	10+	2.8	16	0	0	11.7	72	104	27	39	13	7	0	0	0.7	29	8.9	N	22	12	9	10	5.0	62
DETROIT	189			27.8	16.7	22.2	- 0.5	33.9	22	9.4	24	7	0	13.9	62	98	25	72	7	6	0		0.9	26	10.3	24	10					
DETROIT METRO	193	993.2	1017.2	28.9	13.9	21.3	- 0.3	35.0	10	6.1	24	8	0	13.3	63	41	- 31	27	3	5	0	0	1.0	26	16.1	NW	22	13	12	6	4.5	72
FLINT	235	989.8	1017.3	26.1	13.3	19.7	- 1.2	32.8	10	6.7	24+	1	0	12.8	67	41	- 39	15	9	8	0	0	1.2	27	11.6	25	10	14	10	7	4.3	
GRAND RAPIDS	239	988.8	1017.6	27.8	12.8	20.3	- 1.0	32.2	22+	7.2	24	3	0	12.8	64	23	- 45	17	6	2	0	0	1.3	23	17.0	SW	10	13	11	7	4.5	76
HOUGHTON LAKE	350	976.0	1017.9	24.4	10.0	17.4	- 1.2	30.0	7	1.7	24	0	0	12.8	76	45	- 23	29	10	7	0	0	0.8	29	10.3	26	10	12	12	7	4.8	
LANSING	256	986.5	1017.8	26.7	12.2	19.4	- 1.8	34.4	10	5.0	5	1	0	15.0	76	64	- 14	23	9	6	0	0	1.3	26	21.0	SW	10	13	11	7	4.6	81
MARQUETTE U	206			22.2	12.8	17.4	- 1.3	32.2	9	5.0	24	1	0			37	- 40	10	11		0	0			12.5	SW	12	11	10	10	4.9	68
MUSKEGON	191	994.9	1017.8	25.6	12.8	19.3	- 2.0	29.4	10+	7.8	24	0	0	13.9	73	34	- 40	23	7	6	0	0	1.3	24	11.6	19	10	13	12	6	4.2	
SAULT STE MARIE	220	990.2	1016.8	21.7	8.9	15.1	- 2.7	27.2	9+	3.9	24+	0	0	11.7	80	102	29	31	12	5	0	0	1.0	29	12.5	W	10	7	9	15	6.1	63
MINNESOTA																																
DULUTH	435	966.8	1017.8	23.3	10.6	16.9	- 0.8	32.2	9	3.3	27	1	0	11.7	74	114	18	66	11	8	0	0	0.6	22	21.9	W	9	15	7	9	4.8	67
INTERNATIONAL FALLS	359	973.6	1016.3	25.0	9.4	17.4	0.1	33.9	16	2.8	26	2	0	12.2	73	35	- 57	10	10	6	0	0	0.7	21	9.4	11	31+	12	8	11	5.3	
MINNEAPOLIS	254	987.1	1017.3	27.8	14.4	20.9	- 0.2	36.1	22	6.7	27	4	0	12.2	60	45	- 36	32	5	5	0	0	0.7	17	13.0	SE	31	13	12	6	4.5	78
ROCHESTER	395	970.5	1017.7	26.7	13.3	19.8	- 1.2	33.9	13	6.1	27	2	0	13.9	70	51	- 46	29	5	4	0	0	1.6	19	11.2	31	25+	12	9	10	4.9	
ST CLOUD	315	979.7	1017.4	26.7	12.2	19.7	- 0.7	36.1	22	5.6	27+	4	0			71	- 24	48	7		0	0						18	8	5	3.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets				Fastest mile (1.6 kilometers)								
		Station	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0.3	Partly cloudy, 4.7	Cloudy, 8.10		
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s							°o
MISSISSIPPI																																
JACKSON	94	1004.7	1016.4	32.2	21.7	26.9	- 0.8	33.9	27+	18.3	29+	21	0	22.8	84	67	- 18	20	10	9	0	0	0.4	6	9.8	NW	23	9	9	13	5.8	68
MERIDIAN	88	1005.4	1016.4	32.2	20.6	26.5	- 0.8	33.9	20+	17.2	29	19	0	21.1	77	51	- 39	21	9	7	0	0	0.3	2	8.0	8	16	2	18	11	6.4	
MISSOURI																																
COLUMBIA REGIONAL	270	986.1	1017.8	30.0	17.2	23.7	- 1.4	35.6	24+	10.6	27	11	0	16.1	66	29	- 67	9	6	5	0	0	1.0	12	11.2	NW	10	10	14	7	5.1	73
KANSAS CITY	226	990.2	1016.4	31.7	19.4	25.7	- 0.8	37.8	23	12.8	27	14	0	16.1	59	26	- 69	26	2	9	0	0	1.2	15	13.9	S	21	16	9	6	3.9	83
ST JOSEPH	247			29.4	14.4	21.9	- 3.4	33.9	22	6.1	28	6	0			44	- 63		4				0.8	15	8.0	10	21	15	7	9	4.3	
ST LOUIS	163	997.3	1017.4	30.6	17.8	24.3	- 0.6	36.1	24+	11.7	27	9	0	17.8	71	2	- 75	1	2	4	0	0	0.1	26	13.0	SW	10	8	12	11	5.6	64
SPRINGFIELD	386	972.9	1017.4	32.2	17.2	24.6	- 1.0	36.7	25+	10.0	28	18	0	15.6	61	58	- 26	41	5	4	0	0	1.4	14	8.0	NE	4	15	11	5	3.9	84
MONTANA																																
BILLINGS	1087	891.3	1012.1	33.3	16.1	24.8	2.7	38.9	14	7.2	24	25	0	6.7	36	11	- 12	9	4	4	0	0	0.8	26	17.0	NW	3	16	10	5	3.7	78
GLASGOW	696	932.3	1011.9	33.9	16.7	25.1	5.2	41.1	14	10.0	24	21	0	6.1	34	20	- 18	19	3	4	0	0	2.3	10	15.6	30	23	18	9	4	3.5	
GREAT FALLS	1116	888.6	1012.0	33.9	15.0	24.4	5.1	38.3	14+	7.2	24	24	0	5.6	34	29	- 3	18	6	8	0	0	1.8	24	15.6	S	22	16	9	6	4.1	80
HAVRE	788	921.8	1011.4	34.4	13.9	24.2	4.7	40.6	6+	6.1	24	24	0	5.6	34	18	- 10	11	4	3	0	0	0.1	3	22.4	NW	22	15	13	3	3.7	87
HELENA	1167	881.5	1014.0	30.6	10.6	20.6	1.6	34.4	14+	2.2	24	16	0	4.4	40	31	8	18	5	7	0	0	1.0	27	18.3	W	16	15	9	7	4.1	76
KALISPELL	904	911.3	1013.9	31.7	9.4	20.4	3.2	36.7	11+	2.2	24	19	0	8.3	53	37	10	14	5	5	0	0	0.4	23	11.2	3	29	20	7	4	3.1	
MILES CITY	801	920.8	1011.3	34.4	17.8	26.2	3.7	40.0	14+	8.9	24	22	0	8.9	36	41	9		3	3	0		1.8	8								
MISSOULA	972	904.6	1014.3	33.3	10.6	21.9	3.7	38.3	4+	2.2	24	22	0	7.2	45	23	5	12	6	7	0	0	0.9	31	16.1	NW	22	19	7	5	3.1	87
NEBRASKA																																
GRAND ISLAND	561	950.6	1015.4	31.1	16.7	24.1	0.1	36.1	22+	12.8	25	14	0	14.4	59	17	- 43	12	4	4	0	0	2.6	15	10.3	21	18	13	12	6	4.5	
LINCOLN U	351			30.6	18.9	24.6	- 0.8	35.6	23	12.8	27	14	0			24	- 62	12	7		0	0			12.5	S	30	11	9	11	5.0	69
NORFOLK	471			30.0	16.1	23.2	- 0.8	36.7	22	10.6	27	12	0			13	- 53	5	6		0	0						13	10	8	4.4	
NORTH PLATTE	846	919.4	1015.2	30.0	14.4	22.3	- 1.3	34.4	22	10.0	25+	8	0	14.4	67	23	- 31	9	6	8	0	0	2.7	13	17.9	SE	14	8	15	8	5.0	75
OMAHA	298	981.7	1016.3	30.6	17.2	23.7	- 0.8	35.0	23+	9.4	28+	10	0	16.1	67	41	- 60	23	7	8	0	0	1.6	16	8.5	S	13	11	10	10	4.8	73
SCOTTSBLUFF	1206	880.8	1013.6	31.7	13.9	22.7	0.2	35.6	26+	10.6	7	14	0	12.2	59	37	12	19	2	3	0	0	1.8	11	17.9	33	9	18	9	4	3.5	
VALENTINE	789			32.8	15.6	24.1	1.4	39.4	22	10.0	25+	18	0			88	29	86	4		0	0			18.8	W	20	18	10	3	3.5	81
NEVADA																																
ELKO	1539	846.3	1013.6	31.7	11.1	21.6	2.2	35.0	13	3.3	24	18	0	4.4	37	25	17	19	6	10	0	0	0.1	1	10.7	19	14	13	15	3	4.0	
ELY	1906	811.7	1012.6	30.0	10.6	20.2	1.3	34.4	13	5.6	24	6	0	5.6	44	6	- 6	4	6	12	0	0	1.6	20	15.6	SW	17	5	18	8	5.8	75
LAS VEGAS	659	936.0	1010.2	38.3	25.0	31.7	1.0	42.8	2+	21.7	14	31	0	12.2	34	23	11	13	5	10	0	0	1.1	18	24.6	NE	8	15	9	8	4.4	78
RENO	1342	866.9	1013.4	33.9	9.4	21.5	2.9	37.8	10	2.8	22	26	0	4.4	38	2	- 2	2	2	3	0	0	1.1	28	15.2	SW	28	22	7	2	2.5	93
WINNEMUCCA	1311	868.9	1012.4	36.1	11.7	23.8	4.0	39.4	12+	3.9	18	29	0	2.2	28	6	2	4	3	5	0	0	0.5	30	15.2	SE	1	17	11	3	3.5	84
NEW HAMPSHIRE																																
CONCORD	104	1003.7	1016.1	26.7	12.2	19.4	- 0.2	31.7	9	2.2	25	0	0	14.4	75	71	- 4	26	9	4	0	0	1.3	27	13.4	SE	28+	11	11	9	5.3	69
MT WASHINGTON OBS	1909			11.7	5.0	8.3	- 0.4	18.9	19	- 3.3	24+	0	5			236	67	87	13	4	5	T			48.7Y	SE	28	3	5	23	8.0	34
NEW JERSEY																																
ATLANTIC CITY	20	1014.9	1017.4	26.7	16.1	21.3	- 1.8	30.6	10	7.8	24	0	0	18.3	83	264	140	88	9	4	0	0	1.0	25	15.6	12	28	12	9	10	5.0	67
ATLANTIC CITY U	3			25.6	18.3	21.7	- 1.5	30.6	9	12.8	24	0	0			263	133	91	8						28.2	SE	28					
NEWARK	2	1015.9	1016.8	29.4	19.4	24.4	0.9	33.9	10	11.7	24	7	0	16.7	64	270	157	199	9	5	0	0	1.3	25	10.3	31	28	11	11	9	5.1	
TRENTON U	17			27.8	18.3	23.1	- 0.2	32.8	9	11.1	25	2	0			245	124	192	9		0	0			19.2	NE	28	12	10	9	4.7	68
NEW MEXICO																																
ALBUQUERQUE	1619	840.2	1013.1	30.6	15.6	23.3	- 1.3	32.8	31+	11.7	8	7	0	10.0	50	22	- 12	9	9	11	0	0	0.8	13	19.7	E	14	15	13	3	3.9	74
CLAYTON	1515			27.2	13.9	20.7	- 2.2	32.2	21	10.0	1	1	0			63	10	29	7		0	0						14	12	5	4.4	
ROSWELL	1101			31.1	16.7	23.8	- 0.9	35.6	22	14.4	20+	11	0			92	51	32	11		0	0			15.2	NW	9					73
NEW YORK																																
ALBANY	84	1006.1	1016.8	26.1	12.2	19.3	- 1.8	31.1	9	3.9	25	0	0	13.9	74	179	101	115	11	4	0	0	1.2	27	16.5	W	23	9	10	12	5.8	63
BINGHAMTON	485	959.7	1018.1	23.3	12.2	17.8	- 1.3	27.8	30+	3.3	24	0	0	13.9	80	53	- 37	27	8	3	0	0	1.6	26	13.0	NW	22	8	8	15	5.8	63
BUFFALO	215	991.9	1017.4	25.0	14.4	19.9	- 0.3	31.1	18+	6.1	24	0	0	13.9	71	113	35	36	12	9	0	0	2.1	24	13.0	N	23+	8	10	13	6.0	68
NEW YORK U	40	1013.5	1016.7	28.9	20.0	24.4	0.4	33.3	9	12.8	24	5	0	16.7	66	238	125	147	7	4	0	0	1.2	26	14.3	SE	28					70
NEW YORK KENNEDY	4	1016.3	1017.0	29.4	20.0	24.7	1.1	34.4	9	12.8	25	7	0	17.2	65	110	- 16	86	6	2	0	0	1.5	24	14.3	31	28	13	11	7	4.5	
NEW YORK LA GUARDIA	3	1016.3	1017.2	27.8	19.4	23.8	- 0.3	32.8	10	12.8	24	2	0	16.7	66	213	84	139	8	6	0	0	1.2	27	17.9	SE	28	12	12	7	4.5	
ROCHESTER	167	997.0	1016.9	27.2	13.9	20.4	- 0.5	33.3	10	5.6	24	3	0	15.6	74	81	12	35	11	5	0	0	1.3	26	20.1	W	22	10	10	11	5.4	65
SYRACUSE	125	1002.0	1016.8	25.6	13.3	19.5	- 1.7	31.7	19	5.6	24	0	0	15.0	77	102	19	28	11	7	0	0	1.1	26	15.2	NW	23	10	7	14	6.2	63

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature								No. of days			Average relative humidity	Precipitation			No. of days		Snow, Ice pellets		Wind				Sky cover tenths (sunrise to sunset)			Possible sunshine
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 °C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers) Speed	Direction	Date	Clear, 0-3	Partly cloudy 4-7	Cloudy 8-10	
NORTH CAROLINA	M	Mb	Mb.	C	C	C	C	C		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s						%
ASHEVILLE	652	943.4	1018.5	28.3	16.7	22.3	0.4	31.1	11	11.1	14	0	0	18.3	85	77	- 49	17	13	9	0	0	0.4	36	8.0	36	23+	2	17	12	6.6	66
CAPE HATTERAS R	2	1016.9	1017.4	28.9	22.2	25.4	0.1	32.2	21	17.8	31+	1	0	22.2	82	247	84	62	15	11	0	0	0.4	13	18.3	16	27	7	8	16	6.6	57
CHARLOTTE	224	990.5	1017.3	28.9	20.0	24.3	- 1.6	32.2	4	15.6	25	1	0	19.4	78	73	- 34	25	9	6	0	0	0.8	6	10.3	N	11	7	12	12	6.2	73
GREENSBORO	273	986.8	1018.0	28.3	17.8	22.9	- 1.6	31.1	9+	12.2	25	0	0	19.4	84	107	- 10	36	12	6	0	0	0.5	3	9.4	NE	12+	8	10	13	6.4	61
RALEIGH	132	1002.4	1017.9	29.4	18.9	24.1	- 0.9	32.2	21	14.4	25+	1	0	20.0	82	159	27	34	10	7	0	0	0.4	8	13.0	13	15	7	11	13	6.2	57
WILMINGTON	9	1015.9	1017.4	30.6	21.7	26.0	- 0.3	34.4	21	18.9	13	7	0	22.2	85	265	90	89	13	9	0	0	0.8	8	10.7	S	17	3	13	15	7.1	58
NORTH DAKOTA																																
BISMARCK	502	955.3	1014.1	31.1	12.8	22.0	1.3	38.9	21	4.4	2	15	0	11.1	55	1	- 43	1	1	3	0	0	1.8	13	13.9	NW	23	19	8	4	3.1	87
FARGO	273	983.1	1015.5	27.8	12.8	20.2	- 0.7	35.6	16+	4.4	3	7	0	13.9	69	23	- 52	9	7	6	0	0	1.6	16	18.8	W	9	16	9	6	3.7	90
WILLISTON	579	946.2	1013.1	31.7	13.9	22.8	2.7	38.3	7	5.6	1	16	0	9.4	46	2	- 36	1	3	2	0	0	0.9	11	16.5	NW	23	15	12	4	3.8	81
OHIO																																
AKRON	368	973.9	1018.0	27.2	13.3	20.2	- 1.8	30.0	21+	7.8	24	0	0	13.9	71	73	- 6	61	11	5	0	0	0.8	27	8.0	1	23+	9	11	11	5.6	
CINCINNATI ABBE OB	232			28.9	16.7	22.7	- 1.6	32.2	20+	11.7	24	2	0			80	- 3	25	6		0	0			5.8	W	22					37
CLEVELAND	237	989.5	1018.3	26.7	14.4	20.5	- 0.8	31.1	19+	7.2	24	0	0	14.4	71	23	- 60	8	6	4	0	0	0.7	25	16.1	NW	10	13	8	10	5.0	68
COLUMBUS	247	988.5	1018.2	26.7	14.4	20.5	- 2.4	30.6	19	8.3	24	0	0	15.0	72	71	- 1	26	7	5	0	0	0.3	19	11.2	S	10	11	7	13	5.6	59
DAYTON	305	982.4	1018.1	27.2	16.1	21.7	- 1.4	31.1	21	11.7	24+	0	0	15.6	69	79	6	39	6	3	0	0	1.1	30	8.5	W	22	10	9	12	5.2	71
MANSFIELD	395			26.7	14.4	20.3	- 0.9	29.4	21+	8.3	24	0	0	15.0	74	55	- 27	27	7	4	0	0	1.3	24	8.9	17	10	12	10	9	5.1	
TOLEDO	204	992.6	1017.5	28.3	12.8	20.6	- 1.1	33.3	10	6.1	24	4	0	13.3	66	28	- 57	16	6	4	0	0	1.0	26	14.8	NW	10	10	14	7	4.8	75
YOUNGSTOWN	359	976.0	1018.2	26.7	12.8	19.7	- 1.4	31.1	18	5.6	24	0	0	13.9	71	71	- 18	40	11	5	0	0	0.7	28	11.2	33	22	12	6	13	5.2	
OKLAHOMA																																
OKLAHOMA CITY	392	970.2	1015.8	31.1	18.9	25.1	- 3.1	35.6	11	13.9	2	12	0	17.8	68	54	- 10	37	8	6	0	0	2.5	16	14.8	SE	12	12	11	8	5.4	68
TULSA	198	992.2	1016.0	32.2	20.0	26.1	- 1.4	36.7	21	13.9	2	20	0	18.3	67	47	- 30	29	7	5	0	0	1.8	17	9.8	SW	21	12	11	8	5.1	72
OREGON																																
ASTORIA	2	1015.6	1016.2	21.7	12.2	16.9	0.8	28.3	8	7.2	26	0	0	13.9	84	29	- 9	14	5	2	0	0	1.6	25	9.4	31	26+	10	11	10	5.5	
BURNS U	1265	873.7	1013.7	31.1	11.7	21.6	2.0	36.1	12+	2.8	23	16	0	7.2	41	T	- 7	T	0		0	0	0.8	28				19	12	0	3.0	
EUGENE	109	1002.0	1015.4	28.9	11.7	20.1	1.3	38.3	11	6.1	16	6	0	12.2	68	34	24	21	5	0	0	0	1.1	25	8.9	34	23	16	6	9	4.1	
MEACHAM	1234	878.1	1013.4	27.8	12.8	20.3	3.8	33.3	11+	3.9	23	6	0			8	- 6	6	2		0	0			7.2	30	22	22	5	4	2.3	
MEDFORD	396	966.8	1013.6	33.3	13.3	23.4	1.9	42.8	11	6.7	23	22	0	10.6	49	7	3	6	3	1	0	0	1.7	31	7.6	29	19	23	5	3	2.0	
PENDLETON	452	960.7	1013.1	33.3	16.1	24.9	2.7	41.1	9	9.4	31+	18	0	7.2	35	4	- 4	2	3	4	0	0	1.5	27	12.5	27	30	21	7	3	2.4	
PORTLAND	6	1013.5	1014.9	28.9	15.6	22.0	2.8	38.3	10	11.1	23	5	0	12.8	61	24	8	19	4	1	0	0	1.7	31	10.7	S	31	18	6	7	3.8	76
SALEM	60	1008.1	1015.3	28.9	12.2	20.6	1.7	38.3	11	7.2	23	6	0	12.8	66	38	26	30	6	0	0	0	0.8	28	9.4	20	30	16	7	8	4.0	
SEXTON SUMMIT R	1169	885.2	1014.2	25.6	12.8	19.1	1.7	36.1	11	5.0	31	2	0			15	9	8	5		0	0			12.5	20	31	25	2	4	1.9	
PACIFIC AREA																																
GUAM TAGUAC R	110	997.6	1010.1	30.0	21.1	25.6	- 0.7	31.7	30+	19.4	26	0	0	23.3	89	531	205	198	21	4	0	0	1.3	10	10.7	N	4					54
JOHNSTON	2	1013.5	1014.1	28.3	25.0	26.8	- 0.7	29.4	27	22.2	30	0	0	21.7	74	46	- 12	22	13	0	0	0	6.8	9	13.0	E	25	7	14	10	5.8	88
KOROR R	29	1006.1	1009.7	31.1	23.9	27.5	0.3	32.2	26+	22.8	28+	3	0	23.9	84	264	-136	75	19	0	0	0	0.9	14	9.8	W	11	0	7	24	8.7	58
KWAJALEIN	2	1009.1	1009.9	30.0	25.0	27.3	- 0.4	31.1	2	21.7	6	0	0	23.9	82	284	41	55	22	0	0	0	4.1	9	14.3	11	5	2	5	24	8.4	
MAJURO	3	1010.5	1010.8	29.4	24.4	26.7	- 0.1	30.6	31	22.2	23	0	0	23.3	81	379	82	72	25	7	0	0	2.8	8	10.3	E	19	0	11	20	8.5	61
PAGO PAGO	4	1013.2	1013.5	28.9	23.3	25.9		30.0	22	20.0	18+	0	0	22.2	81	133		56	21	1	0	0	4.3	10	12.1	NE	15+	3	22	6	5.7	63
PONAPE R	37	1004.1	1009.4	30.6	22.2	26.3	0.0	31.7	28+	20.6	1	0	0	23.3	86	423	9	107	24	5	0	0	1.3	10	8.9	SE	14	1	12	18	8.2	43
TRUK MOEN ISLAND	2	1009.5	1009.6	30.6	24.4	27.5	0.6	31.7	30+	23.3	30+	0	0	23.3	81	270	- 55	75	24	3	0	0	1.7	9	10.3	S	1	0	8	23	8.7	73
WAKE	3	1011.5	1012.0	31.1	25.0	28.0	0.0	32.2	31+	21.1	10	6	0	22.8	74	165	- 14	81	16	3	0	0	2.7	11	17.0	N	13	3	12	16	7.5	65
YAP R	13			30.0	23.3	26.8	- 0.6	32.2	27	21.1	27+	1	0			309	- 65	66	24	3	0	0			8.9	SE	30	0	9	22	8.5	68
PENNSYLVANIA																																
ALLENTOWN	118	1003.7	1017.5	27.2	15.6	21.6	- 0.7	31.7	10+	7.2	25	0	0	16.1	74	235	121	99	10	6	0	0	0.9	28	11.2	1	28	14	8	9	4.6	
ERIE	223	991.5	1018.0	23.3	13.3	18.2	- 2.8	29.4	10	5.0	24	0	0	13.3	74	88	12	34	10	8	0	0	1.1	24	10.3	1	23	14	7	10	4.8	
HARRISBURG	103	1004.7	1017.4	27.8	17.2	22.3	- 1.1	31.7	21+	9.4	25	0	0	16.7	73	197	105	70	8	5	0	0	0.9	29	8.0	NW	23	12	11	8	4.6	64
PHILADELPHIA	2	1016.3	1017.2	28.9	18.9	24.1	0.9	33.3	10+	12.8	25	5	0	17.8	72	244	126	144	9	4	0	0	1.0	27	17.0	N	28	13	7	11	4.9	70
PITTSBURGH	347	974.9	1018.2	27.2	15.0	20.9	- 0.7	30.6	21+	8.3	24	0	0	14.4	70	31	- 53	10	11	5	0	0	1.1	27	9.4	30	11	12	5	14	5.4	67
SCRANTON	283	983.4	1017.3	26.1	14.4	20.2	- 0.9	30.0	10+	6.7	25+	0	0	15.6	78	124	33	41	10	4	0	0	0.7	24	9.4	SW	23	9	13	9	5.3	67
WILLIAMSPORT	160	999.0	1017.7	27.2	15.6	21.3	- 0.7	31.1	8	7.8	25+	0	0	16.1	76	63	- 29	28	8	2	0	0	1.0	26	8.0	27	28+	11	8	12	5.5	
RHODE ISLAND																																
BLOCK ISLAND	34			25.0	17.8	21.2	0.3	29.4	9	8.9	25	0	0			31	- 67	12	7		0	0									
PROVIDENCE	16	1013.9	1016.4	28.3	17.8	22.8	1.4	33.3	9	8.9	25+	3	0	16.1	69	77	- 24	31	8	2	0	0	1.7	26	19.7	15	28	11	12	8	5.0	74

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

AUGUST 1971

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)				Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days								No. of days		Snow, ice pellets				Fastest mile (1.6 kilometers)								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm. or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
SOUTH CAROLINA	M	Mb	Mb	C.	C.	C	C	C		C.				C	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s		M.p.s								%
CHARLESTON	12	1015.2	1017.1	31.1	22.2	26.4	- 0.1	33.9	21	20.0	13	6	0	22.2	83	415	247	119	18	15	0	0	0.4	6	17.9Y	W	22	1	13	17	7.4	64
CHARLESTON U	3			30.0	23.9	27.0	- 0.2	33.3	21+	21.1	13	5	0			416	262	118	21		0	0			17.0	E	17					
COLUMBIA	65	1009.1	1017.2	31.7	21.7	26.7	- 0.2	34.4	21+	17.8	14	10	0	21.7	80	271	125	122	10	7	0	0	0.8	5	12.5	31	11	5	12	14	6.5	59
GRNVLLE-SPRTNBRG	292	983.4	1017.4	29.4	19.4	24.3	- 1.3	32.2	20	16.1	29+	1	0	19.4	79	62	- 53	20	11	6	0	0	0.8	5	8.5	SW	22+	7	13	11	5.8	54
SOUTH DAKOTA																																
ABERDEEN	395	968.8	1014.8	32.2	13.3	22.8	0.8	40.6	23+	3.9	3	16	0	12.8	60	35	- 20	29	6	5	0	0	1.5	14	12.5	32	23+	26	2	3	2.3	
HURON	390	968.8	1014.5	32.2	14.4	23.3	0.7	40.6	22	5.0	2	16	0	12.2	55	47	- 6	31	4	5	0	0	2.4	15	15.2	NW	18	20	7	4	3.1	89
RAPID CITY	964	905.2	1013.5	32.2	14.4	23.3	1.1	38.3	22	7.2	24	19	0	9.4	46	13	- 18	8	3	4	0	0	1.3	12	18.8	NW	23	17	11	3	3.3	82
SIOUX FALLS	432	966.1	1016.8	31.1	14.4	22.8	0.7	39.4	22	5.0	27	11	0	12.8	58	18	- 73	8	4	4	0	0	2.2	17	10.3	25	13	21	7	3	3.1	
TENNESSEE																																
BRISTOL	459	965.1	1018.3	28.9	17.2	23.2	- 0.6	30.6	30+	13.3	29+	0	0	17.8	78	59	- 38	21	9	7	0	0	0.4	36	9.8	31	11	9	11	11	5.5	
CHATTANOOGA	203	992.6	1016.7	30.6	20.6	25.6	- 1.0	32.8	21	15.0	28	5	0	20.0	74	49	- 47	26	10	10	0	0	0.3	3	13.4	N	11	6	18	7	5.5	52
KNOXVILLE	299	983.1	1017.4	29.4	19.4	24.4	- 0.8	31.7	20+	15.0	28	0	0	18.9	78	77	- 10	30	10	6	0	0	0.7	1	8.9	SW	3	8	13	10	5.8	59
MEMPHIS	79	1006.4	1016.6	30.6	21.1	25.9	- 1.1	33.3	21	15.6	1	9	0	19.4	70	152	77	65	9	7	0	0	0.6	7	12.5	NW	11	12	9	10	5.3	79
NASHVILLE	180	995.6	1016.8	30.0	19.4	24.7	- 1.6	32.2	11+	15.0	29+	4	0	20.0	82	149	76	41	9	12	0	0	0.1	8	13.0	NW	11	12	8	11	5.3	62
OAK RIDGE R	276			29.4	18.3	23.8	- 0.7	31.1	31+	13.3	28	0	0			65	- 52	22	9		0	0			21.0Y		11	6	11	14	6.5	
TEXAS																																
ABILENE	537	955.0	1015.3	29.4	20.0	24.9	- 3.4	33.9	22	16.7	3	7	0	18.3	70	176	138	49	13	11	0	0	2.5	17	11.6	E	28+	7	8	16	6.5	61
AMARILLO	1098	893.3	1014.4	28.3	16.7	22.3	- 4.1	33.3	21	14.4	7+	2	0	13.3	63	85	19	30	10	13	0	0	4.0	18	14.8	NE	10	13	7	11	5.0	83
AUSTIN	182	993.6	1015.1	32.2	22.8	27.3	- 1.9	36.1	28	20.6	4+	21	0	20.6	73	145	95	73	11	6	0	0	1.3	15	9.4	NE	31+	3	17	11	6.6	50
BROWNSVILLE	6	1013.9	1014.3	33.3	23.3	28.3	- 0.6	35.0	27	21.7	18+	29	0	22.2	74	67	- 3	36	9	5	0	0	3.0	13	11.6	SE	6	7	17	7	5.6	69
CORPUS CHRISTI	12	1013.2	1014.6	32.8	23.9	28.2	- 0.8	34.4	26+	21.7	2	26	0	23.3	80	211	141	108	10	5	0	0	2.8	13	11.2	S	4	5	17	9	5.8	56
DALLAS	147	998.6	1015.6	31.7	22.8	27.3	- 2.1	36.1	22	20.0	1	17	0	20.6	68	104	55	59	8	4	0	0	1.8	14	12.5	E	24	8	8	15	6.4	50
DEL RIO	313	978.7	1014.1	31.1	21.1	26.9	- 4.0	33.9	27+	18.9	11	12	0	20.6	76	155	116	70	9	7	0	0	3.2	12	9.4	13	14+	8	9	14	6.4	
EL PASO	1194	882.8	1011.9	31.7	18.3	25.0	- 1.9	33.9	23	15.6	7+	13	0	13.3	52	40	10	16	9	3	0	0	1.2	12	17.9	N	8	12	18	1	4.4	84
FORT WORTH	164	995.6	1015.8	31.1	21.7	26.4	- 3.3	35.0	22	18.9	31+	14	0	21.1	76	145	102	67	8	9	0	0	1.6	14	8.9	9	24	8	7	16	6.5	
GALVESTON U	2			30.6	25.6	28.1	- 0.4	33.9	28	21.1	1	5	0			92	- 20	34	12		0	0			11.6	NE	8+					64
HOUSTON INTERCON	29	1011.9	1015.8	32.2	21.7	26.9	- 1.2	34.4	23	19.4	18	22	0	21.7	79	177	75	66	11	11	0	0	0.6	11	8.9	20	4	5	13	13	6.6	56
LUBBOCK	992	905.5	1014.7	28.3	17.8	23.0	- 3.0	34.4	22	14.4	7+	2	0	16.7	73	105	63	39	14	9	0	0	2.3	15	14.3	32	22	9	7	15	6.0	
MIDLAND	869	917.4	1014.2	29.4	17.8	23.6	- 4.3	33.9	22	15.6	3	1	0	16.1	68	83	45	35	6	4	0	0	3.0	13	10.7	8	23	9	8	14	6.0	
PORT ARTHUR	5	1015.2		31.1	21.1	26.3	- 1.7	33.9	27	18.9	1	18	0	23.3	88	268	129	154	10	13	0	0	0.4	9	13.4	SW	25	10	12	7	5.5	78
SAN ANGELO	580	949.2	1014.5	28.9	18.9	24.1	- 5.4	32.8	23+	15.0	3	6	0	18.3	73	207	174	76	11	8	0	0	2.6	14	13.0	34	10	5	14	12	6.8	
SAN ANTONIO	240	987.5	1015.0	32.2	22.8	27.3	- 1.4	34.4	28+	19.4	9	23	0	20.6	70	239	179	74	13	7	0	0	1.3	12	12.5	SE	11	6	12	13	6.7	55
VICTORIA	32	1011.2	1015.1	33.3	23.3	28.1	- 0.5	35.0	28+	21.7	30+	26	0	22.2	76	102	22	28	10	12	0	0	1.7	13	17.4Y	E	29	2	15	14	7.2	
WACO	153	998.0	1015.5	31.7	22.2	26.9	- 2.8	36.1	28	19.4	31+	21	0	21.1	75	55	12	26	7	7	0	0	1.4	14	12.5	14	30	9	8	14	6.1	
WICHITA FALLS	303	979.0	1015.0	32.8	20.6	26.6	- 3.2	37.2	22+	16.1	3	20	0	19.4	70	193	148	117	7	10	0	0	2.2	14	17.0	23	23	9	9	13	6.1	
UTAH																																
MILFORD	1533	847.6		32.2	14.4	23.4	1.1	36.7	2	11.1	11	18	0			40	22	16	10		0	0						8	17	6	4.8	
SALT LAKE CITY	1286	872.0	1012.3	32.8	16.7	24.9	1.3	37.8	14	11.1	24	24	0	8.9	40	55	33	23	6	8	0	0	1.0	15	15.6	SE	14	12	15	4	4.2	84
WENDOVER	1291	871.3	1013.2	32.8	20.0	26.3	1.2	37.2	11	13.9	24	22	0	5.0	29	18	9	11	7		0	0						13	15	3	4.1	
VERMONT																																
BURLINGTON	101	1003.7	1016.2	25.0	13.9	19.5	0.2	32.2	9	7.8	31+	1	0	13.9	74	123	38	65	13	2	0	0	0.9	22	13.9	NW	23	7	10	14	6.4	67
VIRGINIA																																
LYNCHBURG	279			28.3	17.2	22.6	- 1.2	31.7	10	12.2	30+	0	0			77	- 35	19	9		0	0			8.5	W	11	16	5	10	4.8	60
NORFOLK	7	1016.3	1017.2	28.9	20.0	24.3	- 1.0	32.8	21	14.4	25	5	0	18.9	75	118	- 34	78	7	2	0	0	0.4	8	23.2	NE	27	10	9	12	5.5	68
RICHMOND	50	1011.5	1017.8	29.4	18.9	24.1	- 0.4	32.2	21+	12.8	25	3	0	19.4	79	95	- 46	36	8	3	0	0	0.1	36	10.7	NE	1	11	11	9	5.3	67
ROANOKE	350	976.6	1018.1	28.3	16.7	22.6	- 1.6	31.7	20+	11.1	25+	0	0	17.2	75	113	- 4	41	14	5	0	0	0.5	35	9.4	26	21	13	9	9	5.0	
WALLOPS ISLAND	3			27.8	20.0	23.8		33.3	21	15.0	25	2	0			118		72	8		3	0			24.4Y	ESE	27					
WASHINGTON																																
OLYMPIA	59	1008.5	1015.5	27.2	10.0	18.6	1.1	37.2	10	6.1	26+	4	0	12.2	72	18	- 5	17	4	0	0	0	0.9	21	9.4	25	22	10	16	5	4.6	
QUILLAYUTE	55	1008.8	1016.1	22.8	10.0	16.3	0.9	35.6	9	6.1	25	1	0	12.2	79	89	37	32	12	7	0	0	0.8	23	8.9	SE	30+	7	12	12	6.0	60
SEATTLE-TACOMA	122	999.3	1015.6	25.6	14.4	19.8	2.0	34.4	10+	11.7	31+	4	0	11.7	62	14	- 10	11	5	0	0	0	0.9	26	9.4	SW	21	12	12	7	4.4	76
SPOKANE	718	930.6	1012.3	31.7	15.0	23.4	3.4	38.3	11+	6.7	23	16	0	5.0	35	15	5	11	5	3	0	0	1.8	20	11.6	NW	31	25	5	3	2.5	88
STAMPEDE PASS, R	1206	880.8		21.1	10.6	15.8	2.7	30.0	10	4.4	31	0	0			36	- 16	16	7		0	0						11	12	8	4.0	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

AUGUST 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max 32.2 °C or above	Temperature: No. of days Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 25 mm or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, ice pellets Total	Precipitation: Snow, ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset) Clear, 0-3	No. of days (sunrise to sunset) Partly cloudy, 4-7	No. of days (sunrise to sunset) Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C	%	Mm.	Mm	Mm.			Mm	Mm.	M.p.s		M.p.s							%
WASHINGTON																																
WALLA WALLA U	289			33.3	18.9	26.1	2.8	39.4	11	12.2	31+	20	0			9	2	4	4		0	0			8.0	NW	31					
YAKIMA	321	974.6	1012.1	33.9	11.1	22.4	2.1	43.3	10	3.9	23	21	0	8.3	44	4	- 2	4	1	1	0	0	1.5	28	12.5	19	21	24	4	3	1.9	
WEST INDIES																																
SAN JUAN P.R.	4	1013.5	1015.8	31.7	25.0	28.4	1.3	32.8	20+	23.9	24+	14	0	21.7	68	132	- 50	46	19	6	0	0	3.8	10	13.0	E	19+	5	17	9	5.9	70
WEST VIRGINIA																																
BECKLEY	763	931.6	1018.2	25.0	14.4	19.7	- 1.2	28.9	10	7.2	24	0	0	15.6	81	44	- 57	15	10	6	0	0	0.4	22	10.3	32	4	8	8	15	6.4	
CHARLESTON	286	984.4	1018.1	27.8	16.7	22.2	- 1.1	31.1	26+	10.0	25+	0	0	17.8	81	54	- 46	20	11	4	0	0	0.1	24	6.7	23	20	5	14	12	6.5	
ELKINS	594	948.9		26.1	12.8	19.4	- 1.0	30.0	10	5.6	25	0	0			98	- 9	22	10		0	0						4	15	12	6.8	
HUNTINGTON	252	988.2	1018.0	27.2	16.7	22.1	- 1.2	31.1	20	12.2	25+	0	0	17.2	78	27	- 45	10	6	4	0	0	0.1	17	13.0	27	25	1	15	15	7.4	
PARKERSBURG U	187			27.8	16.1	22.1	- 1.5	31.1	10	10.0	24	0	0			103	7	41	9		0	0			10.7	W	25					58
WISCONSIN																																
GREEN BAY	208	991.9	1017.3	25.0	11.7	18.5	- 2.0	31.7	9	7.2	4	0	0	12.8	71	76	6	32	8	6	0	0	0.8	28	13.4	SW	1	11	11	9	5.3	67
LA CROSSE	198	993.6	1017.9	27.2	13.3	20.1	- 1.9	33.9	22	6.7	27	3	0	14.4	74	56	- 36		5	3	0		0.9	15								
MADISON	262	986.5	1017.7	28.3	12.2	20.2	- 0.7	33.3	9	6.1	4	5	0	13.9	71	101	15	51	6	6	0	0	0.4	28	15.2	NE	13	13	9	9	4.9	68
MILWAUKEE	205	992.6	1017.7	24.4	14.4	19.4	- 0.4	32.2	10+	10.0	6+	2	0	13.9	74	58	- 20	18	8	7	0	0	0.8	28	15.6	N	22	15	9	7	4.3	77
WYOMING																																
CASPER	1627	839.8	1013.2	31.7	11.7	21.8	0.7	35.0	22	7.2	24	16	0	5.6	39	3	- 15	3	2	4	0	0	0.3	20	13.9	35	9	21	6	4	3.2	
CHEYENNE	1867	815.4	1014.1	28.9	11.7	20.4	0.6	32.8	21	7.8	24+	2	0	6.1	44	36	- 1	18	7	8	0	0	1.1	26	17.9	NW	19	13	14	4	4.3	74
LANDER	1696	831.7	1013.1	31.1	14.4	22.6	2.1	33.9	15	10.0	24	10	0	3.9	32	7	- 5	5	3	5	0	0	1.0	25	13.0	NE	16	14	12	5	4.2	78
SHERIDAN	1208	879.4	1013.2	33.3	12.8	23.1	2.3	37.8	14	5.0	24	25	0	5.0	33	13	- 10	13	3	3	0	0	0.8	31	13.0	NW	15	22	5	4	3.1	85

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

AUGUST 1971

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	0	0	0
HUNTSVILLE	0	0	0
MOBILE	0	0	0
MONTGOMERY	U	U	0
ALASKA			
ANCHORAGE	302	593	493
ANNETTE	220	365	450
BARROW	970	1725	1643
BARTER ISLAND	905	1581	1510
BETHEL	398	772	713
BETTLES	391	612	
BIG DELTA	348	545	
COLD BAY	504	1041	899
FAIRBANKS	271	405	503
GULKANA	381	638	
HOMER	360	769	
JUNEAU	290	517	639
KING SALMON	306	630	635
KOTZEBUE	499	775	827
MC GRATH	274	525	546
NOME	533	930	977
ST. PAUL ISLAND	628	1341	1144
SHEMYA	563	1196	1052
SUMMIT	474	923	
TALKEETNA	272	532	539
UNALAKLEET	407	739	
YAKUTAT	356	731	685
ARIZONA			
FLAGSTAFF	40	64	114
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	0	0	0
YUMA	0	0	0
ARKANSAS			
FORT SMITH	0	0	0
LITTLE ROCK	0	0	0
CALIFORNIA			
BAKERSFIELD	0	0	0
BISHOP	0	0	0
BLUE CANYON	20	37	84
EUREKA U	154	453	527
FRESNO	0	0	0
LONG BEACH	0	0	0
LOS ANGELES	0	0	35
LOS ANGELES U	0	M	0
MT SHASTA R	24	55	59
OAKLAND	17	114	103
RED BLUFF	0	0	0
SACRAMENTO	0	0	0
SANDBERG R	6	6	0
SAN DIEGO	0	0	6
SAN FRANCISCO	21	154	159
SAN FRANCISCO U	120	345	366
SANTA MARIA	22	132	192
STOCKTON	0	0	0
COLORADO			
ALAMOSA	63	127	164
COLORADO SPRINGS	5	38	34
DENVER	0	24	15
GRAND JUNCTION	0	0	0
PUEBLO	0	3	0
CONNECTICUT			
BRIDGEPORT	4	4	0
HARTFORD	11	13	6
DELAWARE			
WILMINGTON	2	2	0
DIST.OF COLUMBIA			
WASHINGTON DULLES	2	M	
WASHINGTON NATIONAL	0	0	0
FLORIDA			
APALACHICOLA U	0	M	M
DAYTONA BEACH	0	M	0
FORT MYERS	0	0	0
JACKSONVILLE	M	M	0
KEY WEST	0	0	0
LAKELAND U	M	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	M	M	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	0	0	0
ATLANTA	0	0	0
AUGUSTA	0	0	0
COLUMBUS	0	0	0
MACON	0	M	0
ROME	0	M	0
SAVANNAH	0	0	0
IDAHO			
BOISE	6	16	0
LEWISTON	11	27	0
POCATELLO	13	32	0
ILLINOIS			
CAIRO U	0	0	0
CHICAGO O HARE	3	10	12
CHICAGO MIDWAY	2	7	0
MOLINE	3	20	9
PEORIA	5	22	6
ROCKFORD	5	19	15
SPRINGFIELD	1	10	0
INDIANA			
EVANSVILLE	0	0	0
FORT WAYNE	2	7	9
INDIANAPOLIS	M	4	0
SOUTH BEND	13	29	6
IOWA			
BURLINGTON	4	19	0
DES MOINES	4	12	9
DUBUQUE	24	53	43
SIOUX CITY	2	13	9
WATERLOO	40	77	31
KANSAS			
CONCORDIA	0	3	0
DODGE CITY	0	2	0
GOODLAND	0	11	6
TOPEKA	0	4	0
WICHITA	0	4	0
KENTUCKY			
COVINGTON	0	0	0
LEXINGTON	0	0	0
LOUISVILLE	0	0	0
LOUISIANA			
ALEXANDRIA	0	0	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	0	0	0
MAINE			
CARIBOU	141	200	193
PORTLAND	20	23	65
MARYLAND			
BALTIMORE	0	0	0
MASSACHUSETTS			
BLUE HILL OBS R	15	15	22
BOSTON	2	2	9
WORCESTER	35	38	40
MICHIGAN			
ALPENA	122	215	173
DETROIT	4	4	0
DETROIT METRO	6	19	11
FLINT	28	57	33
GRAND RAPIDS	11	26	35
HOUGHTON LAKE	95	165	138
LANSING	39	74	28
MARQUETTE U	123	213	140
MUSKEGON	22	53	40
SAULT STE MARIE	190	334	201
MINNESOTA			
DULUTH	133	244	180
INTERNATIONAL FALLS	106	217	183
MINNEAPOLIS	22	38	53
ROCHESTER	31	60	59
ST CLOUD	44	86	75
MISSISSIPPI			
JACKSON	0	0	M
MERIDIAN	M	0	0
MISSOURI			
COLUMBIA REGIONAL	2	6	M
KANSAS CITY	0	4	0
ST JOSEPH	6	21	6
ST LOUIS	0	0	0
SPRINGFIELD	0	3	M
MONTANA			
BILLINGS	7	32	21
GLASGOW	0	27	78
GREAT FALLS	5	39	81
HAVRE	5	32	81
HELENA	22	113	90
KALISPELL	28	144	149
MILES CITY	3	11	12
MISSOULA	12	87	108
NEBRASKA			
GRAND ISLAND	0	6	6
LINCOLN U	0	4	6
NORFOLK	0	14	9
NORTH PLATTE	0	12	6
OMAHA	1	6	6
SCOTTSBLUFF	0	13	0
VALENTINE	U	25	21
NEVADA			
ELKO	6	20	43
ELY	4	22	71
LAS VEGAS	0	M	0
RENO	13	22	130
WINNEMUCCA	3	6	34
NEW HAMPSHIRE			
CONCORD	49	75	96
MT WASHINGTON OBS	554	1081	1029
NEW JERSEY			
ATLANTIC CITY	15	19	0
ATLANTIC CITY U	2	2	0
NEWARK	1	1	0
TRENTON U	3	3	0
NEW MEXICO			
ALBUQUERQUE	0	M	0
CLAYTON	8	33	6
ROSWELL	0	0	0
NEW YORK			
ALBANY	45	65	19
BINGHAMTON	85	130	87
BUFFALO	29	40	56
NEW YORK U	0	0	0
NEW YORK KENNEDY	0	0	0
NEW YORK LA GUARDIA	1	1	0
ROCHESTER	33	50	40
SYRACUSE	51	64	34
NORTH CAROLINA			
ASHEVILLE	0	M	M
CAPE HATTERAS R	M	0	0
CHARLOTTE	0	0	0
GREENSBORO	0	0	0
RALEIGH	0	0	0
WILMINGTON	0	0	U
NORTH DAKOTA			
BISMARCK	20	72	62
FARGO	36	93	65
WILLISTON	5	47	74
OHIO			
AKRON	18	18	9
CINCINNATI ABBE OB	0	0	0
CLEVELAND	13	22	21
COLUMBUS	5	M	6
DAYTON	M	0	6
MANSFIELD	12	15	0
TOLEDO	12	30	16
YOUNGSTOWN	26	42	25
OKLAHOMA			
OKLAHOMA CITY	0	0	0
TULSA	0	0	0
OREGON			
ASTORIA	85	250	276
BURNS U	31	99	49
EUGENE	23	83	68
MEACHAM	52	195	208
MEDFORD	12	28	M
PENDLETON	M	20	M
PORTLAND	5	38	53
SALEM	18	79	68
SEXTON SUMMIT R	74	197	162
PENNSYLVANIA			
ALLENTOWN	M	8	0
ERIE	55	87	44
HARRISBURG	3	3	0
PHILADELPHIA	0	0	0
PITTSBURGH	6	7	9
SCRANTON	22	27	19
WILLIAMSPORT	7	7	9
RHODE ISLAND			
BLOCK ISLAND	12	12	16
PROVIDENCE	7	7	16
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	M	U	U
GRNVLLE-SPRTNBRG	0	0	0
SOUTH DAKOTA			
ABERDEEN	15	47	50
HURON	8	40	21
RAPID CITY	2	45	34
SIOUX FALLS	12	41	44
TENNESSEE			
BRISTOL	0	0	0
CHATTANOOGA	0	0	0
KNOXVILLE	0	0	0
MEMPHIS	0	0	0
NASHVILLE	U	0	0
OAK RIDGE R	0	U	0
TEXAS			
ABILENE	0	0	0
AMARILLO	0	1	0
AUSTIN	0	0	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	0	0	0
DEL RIO	0	0	0
EL PASO	0	0	0
FORT WORTH	0	0	0
GALVESTON U	0	0	0
HOUSTON INTERCON	0	0	0
LUBBOCK	0	0	0
MIDLAND	0	0	0
PORT ARTHUR	0	M	0
SAN ANGELO	0	0	0
SAN ANTONIO	0	0	0
VICTORIA	0	0	0
WACO	0	0	0
WICHITA FALLS	0	0	M
UTAH			
MILFORD	0	0	0
SALT LAKE CITY	0	0	0
WENDOVER	0	0	0
VERMONT			
BURLINGTON	49	61	93
VIRGINIA			
LYNCHBURG	0	0	0
NORFOLK	0	0	0
RICHMOND	0	M	0
ROANOKE	0	M	0
WALLOPS ISLAND	0	0	
WASHINGTON			
OLYMPIA	49	162	139
QUILLAYUTE	126	327	334
SEATTLE-TACOMA	17	99	118
SPOKANE	19	83	34
STAMPEDE PASS R	175	422	564
WALLA WALLA U	5	17	0
YAKIMA	21	73	12
WEST VIRGINIA			
BECKLEY	10	16	34
CHARLESTON	1	1	0
ELKINS	18	18	34
HUNTINGTON	0	2	0
PARKERSBURG U	1	1	0
WISCONSIN			
GREEN BAY	57	89	78
LA CROSSE	22	37	31
MADISON	21	49	65
MILWAUKEE	37	57	90
WYOMING			
CASPER	0	36	42
CHEYENNE	6	62	50
LANDER	0	12	25
SHERIDAN	5	64	56

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	403	1316	
HUNTSVILLE	364	1272	
MOBILE	534	2085	
MONTGOMERY	454	1576	
ALASKA			
ANCHORAGE	0	1	
ANNETTE	2	53	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	0	83	
BIG DELTA	0	22	
COLD BAY	0	0	
FAIRBANKS	0	89	
GULKANA	0	12	
HOMER	1	1	
JUNEAU	0	0	
KING SALMON	0	5	
KOTZEBUE	0	16	
MC GRATH	0	29	
NOME	0	4	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	3	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	17	153	
PHOENIX	773	2778	
TUCSON	514	1967	
WINSLOW	408	1256	
YUMA	799	2748	
ARKANSAS			
FORT SMITH	408	1419	
LITTLE ROCK	411	1425	
CALIFORNIA			
BAKERSFIELD	660	1905	
BISHOP	411	1039	
BLUE CANYON	201	373	
EUREKA U	2	2	
FRESNO	505	1402	
LONG BEACH	453	930	
LOS ANGELES	292	540	
LOS ANGELES U	435	1068	
MT SHASTA R	158	331	
OAKLAND	33	51	
RED BLUFF	529	1414	
SACRAMENTO	375	938	
SANDBERG R	301	670	
SAN DIEGO	327	534	
SAN FRANCISCO	34	51	
SAN FRANCISCO U	6	13	
SANTA MARIA	32	49	
STOCKTON	459	1171	
COLORADO			
ALAMOSA	8	46	
COLORADO SPRINGS	138	423	
DENVER	248	600	
GRAND JUNCTION	425	1224	
PUEBLO	305	897	
CONNECTICUT			
BRIDGEPORT	233	664	
HARTFORD	243	725	
DELAWARE			
WILMINGTON	287	909	
DIST.OF COLUMBIA			
WASHINGTON DULLES	255	829	
WASHINGTON NATIONAL	372	1183	
FLORIDA			
APALACHICOLA U	509	1938	
DAYTONA BEACH	495	1968	
FORT MYERS	517	2416	
JACKSONVILLE	504	1882	
KEY WEST	570	3204	
LAKELAND U	511	2255	
MIAMI	531	2933	
ORLANDO	573	2560	
PENSACOLA	503	1948	
TALLAHASSEE	476	1640	
TAMPA	526	2271	
WEST PALM BEACH	569	2640	
GEORGIA			
ATHENS	385	1318	
ATLANTA	371	1256	
AUGUSTA	428	1443	
COLUMBUS	467	1593	
MACON	505	1765	
ROME	404	1285	
SAVANNAH	495	1805	
HAWAII			
HILO	367	2002	
HONOLULU	456	2717	
KAHULUI	401	2433	
LIHUE	471	2722	
IDAHO			
BOISE	435	867	
LEWISTON	424	824	
POCATELLO	212	387	
ILLINOIS			
CAIRO U	376	1364	
CHICAGO O HARE	228	743	
CHICAGO MIDWAY	237	855	
MOLINE	225	824	
PEORIA	214	826	
ROCKFORD	190	692	
SPRINGFIELD	241	979	
INDIANA			
EVANSVILLE	367	1263	
FORT WAYNE	150	653	
INDIANAPOLIS	202	782	
SOUTH BEND	114	580	
IOWA			
BURLINGTON	239	855	
DES MOINES	263	898	
DUBUQUE	97	497	
SIOUX CITY	273	879	
WATERLOO	100	411	
KANSAS			
CONCORDIA	359	1035	
DODGE CITY	366	1195	
GOODLAND	291	820	
TOPEKA	345	1101	
WICHITA	372	1295	
KENTUCKY			
COVINGTON	236	917	
LEXINGTON	285	857	
LOUISVILLE	291	989	
LOUISIANA			
ALEXANDRIA	444	1671	
BATON ROUGE	523	1969	
LAKE CHARLES	524	2091	
NEW ORLEANS	508	1979	
SHREVEPORT	488	1906	
MAINE			
CARIBOU	33	109	
PORTLAND	149	350	
MARYLAND			
BALTIMORE	293	958	
MASSACHUSETTS			
BLUE HILL OBS R	203	534	
BOSTON	271	701	
WORCESTER	141	412	
MICHIGAN			
ALPENA	43	162	
DETROIT	224	733	
DETROIT METRO	177	557	
FLINT	111	425	
GRAND RAPIDS	129	509	
HOUGHTON LAKE	50	254	
LANSING	103	431	
MARQUETTE U	81	217	
MUSKEGON	82	363	
SAULT STE MARIE	14	55	
MINNESOTA			
DULUTH	60	116	
INTERNATIONAL FALLS	59	142	
MINNEAPOLIS	168	534	
ROCHESTER	123	443	
ST CLOUD	125	388	
MISSISSIPPI			
JACKSON	487	1676	
MERIDIAN	460	1569	
MISSOURI			
COLUMBIA REGIONAL	306	1058	
KANSAS CITY	421	1364	
ST JOSEPH	212	1009	
ST LOUIS	340	1175	
SPRINGFIELD	353	1152	
MONTANA			
BILLINGS	377	612	
GLASGOW	383	612	
GREAT FALLS	351	527	
HAVRE	338	534	
HELENA	154	210	
KALISPELL	155	227	
MILES CITY	449	836	
MISSOULA	220	381	
NEBRASKA			
GRAND ISLAND	327	942	
LINCOLN U	356	1110	
NORFOLK	276	784	
NORTH PLATTE	229	574	
OMAHA	308	1042	
SCOTTSBLUFF	254	584	
VALENTINE	330	749	
NEVADA			
ELKO	191	338	
ELY	117	247	
LAS VEGAS	752	2404	
RENO	197	425	
WINNEMUCCA	313	653	
NEW HAMPSHIRE			
CONCORD	118	348	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	191	603	
ATLANTIC CITY U	194	537	
NEWARK	350	1085	
TRENTON U	276	854	
NEW MEXICO			
ALBUQUERQUE	282	1004	
CLAYTON	149	609	
ROSWELL	315	1357	
NEW YORK			
ALBANY	107	346	
BINGHAMTON	61	257	
BUFFALO	122	386	
NEW YORK U	347	1070	
NEW YORK KENNEDY	365	996	
NEW YORK LA GUARDIA	308	901	
ROCHESTER	159	445	
SYRACUSE	124	431	
NORTH CAROLINA			
ASHEVILLE	231	729	
CAPE HATTERAS R	402	1183	
CHARLOTTE	341	1144	
GREENSBORO	261	930	
RALEIGH	329	1097	
WILMINGTON	433	1478	
NORTH DAKOTA			
BISMARCK	230	391	
FARGO	142	319	
WILLISTON	262	417	
OHIO			
AKRON	130	558	
CINCINNATI ABBE 08	253	924	
CLEVELAND	143	521	
COLUMBUS	135	603	
DAYTON	196	772	
MANSFIELD	131	533	
TOLEDO	143	524	
YOUNGSTOWN	109	408	
OKLAHOMA			
OKLAHOMA CITY	388	1449	
TULSA	444	1497	
OREGON			
ASTORIA	11	13	
BURNS U	219	414	
EUGENE	129	251	
MEACHAM	167	332	
MEDFORD	302	595	
PENDLETON	379	828	
PORTLAND	217	406	
SALEM	152	297	
SEXTON SUMMIT R	124	278	
PACIFIC AREA			
GUAM TAGUAC R	412	3403	
JOHNSTON	478	3210	
KOROR R	517	4092	
KWAJALEIN	509	3981	
MAJURO	476	3788	
PAGO PAGO	429	3475	
PONAPE R	452	3619	
TRUK MOEN ISLAND	519	3999	
WAKE	547	3747	
YAP R	478	3852	
PENNSYLVANIA			
ALLENTOWN	194	621	
ERIE	55	263	
HARRISBURG	236	825	
PHILADELPHIA	326	1031	
PITTSBURGH	158	546	
SCRANTON	132	453	
WILLIAMSPORT	178	608	
RHODE ISLAND			
BLOCK ISLAND	177	400	
PROVIDENCE	263	719	
SOUTH CAROLINA			
CHARLESTON	457	1698	
CHARLESTON U	493	1741	
COLUMBIA	473	1652	
GRNVLLE-SPRTNBRG	345	1164	
SOUTH DAKOTA			
ABERDEEN	269	601	
HURON	293	686	
RAPID CITY	284	507	
SIOUX FALLS	268	651	
TENNESSEE			
BRISTOL	276	871	
CHATTANOOGA	411	1309	
KNOXVILLE	350	1081	
MEMPHIS	426	1545	
NASHVILLE	360	1192	
OAK RIDGE R	312	1013	
TEXAS			
ABILENE	376	1826	
AMARILLO	232	1072	
AUSTIN	511	2369	
BROWNSVILLE	566	3031	
CORPUS CHRISTI	556	2712	
DALLAS	511	2212	
DEL RIO	429	2184	
EL PASO	375	1735	
FORT WORTH	456	1901	
GALVESTON U	549	2097	
HOUSTON INTERCON	485	2084	
LUBBOCK	269	1359	
MIDLAND	301	1525	
PORT ARTHUR	451	2095	
SAN ANGELO	328	1891	
SAN ANTONIO	509	2514	
VICTORIA	548	2479	
WACO	489	2273	
WICHITA FALLS	470	2033	
UTAH			
MILFORD	291	745	
SALT LAKE CITY	374	876	
WENDOVER	454	1117	
VERMONT			
BURLINGTON	118	360	
VIRGINIA			
LYNCHBURG	242	848	
NORFOLK	343	1144	
RICHMOND	327	1047	
ROANOKE	245	798	
WALLOPS ISLAND	306	870	
WASHINGTON			
OLYMPIA	67	141	
QUILLAYUTE	18	26	
SEATTLE-TACOMA	107	219	
SPOKANE	306	549	
STAMPEDE PASS R	42	130	
WALLA WALLA U	443	899	
YAKIMA	256	563	
WEST INDIES			
SAN JUAN P.R.	573	3825	
WEST VIRGINIA			
BECKLEY	91	356	
CHARLESTON	219	753	
ELKINS	88	327	
HUNTINGTON	215	733	
PARKERSBURG U	214	775	
WISCONSIN			
GREEN BAY	71	392	
LA CROSSE	128	498	
MADISON	131	517	
MILWAUKEE	105	373	
WYOMING			
CASPER	202	369	
CHEYENNE	128	263	
LANDER	246	435	
SHERIDAN	276	421	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

TROPICAL STORM DORIA FLOODS—NEW JERSEY

AUGUST 1971

Elmer R. Nelson, Office of Hydrology

Tropical Storm Doria moved up Maryland's southern Eastern Shore through Delaware into New Jersey during the evening of Aug. 27. It moved into New Jersey, west of Cape May during the late evening of Aug. 27 and the early morning of Aug. 28. The track over land prevented the storm from developing into a hurricane. Winds associated with tropical storm Doria were generally about 60 m.p.h. but gusts occasionally approached hurricane speed. Philadelphia, Pa., recorded 74 m.p.h. gusts and Bridgeport, Conn., 75 m.p.h.

At 2 a.m. on Aug. 28, a flash flood warning bulletin was released by the National Weather Service as it was apparent from radar and rainfall reports that from 2 to 4 inches of rain would accompany the northward movement of Doria through New Jersey. The bulletin emphasized the danger of flash flooding and that forecasts for the main rivers would be revised.

The antecedent precipitation index in New Jersey was high as heavy rains had occurred during the previous 24 hours. The rainfall from the northward moving warm front during the night of Aug. 26-27 was especially heavy in New Jersey and a portion of southeastern Pennsylvania. The 12 to 18-hour rainfall totalled from 4 to 9 inches over most of New Jersey extending from northern Delaware, southeastern Pennsylvania through the Trenton area into northeastern New Jersey. See figure 1 for the amount and distribution of antecedent precipitation. The weather maps for Aug. 26, and Aug. 27 reveal the slow northward moving warm front that caused the heavy rains. The rain in New Jersey ended in the late afternoon and early evening of Aug. 27. This antecedent rain was sufficient to raise the water level of many streams up to near or slightly over bankfull.

The Rahway-Elizabeth, N. J., areas were especially hard hit by both tidal and falsh flooding.

Extremely heavy rainfall accompanied tropical storm Doria as it moved northeastward across New Jersey. Two to 5 inches of rain was reported in less than 4 hours during the late evening of Aug. 27 and during the early morning of Aug. 28. See figure 2 for the amount and distribution of rainfall accompanying tropical storm Doria. The Weather maps for Aug. 28 and Aug. 29 show the northeastern movement of tropical storm Doria.

The total storm rainfall in New Jersey, covering the two precipitation periods ranged from 7 to around 11-1/2 inches through the interior portion of the state. See figure 3.

The rainfall amounts in New England ranged from about 6 inches in southwestern Connecticut to 3 to 4 inches in central New England and 1 to 2 inches in northern and eastern New England.

This excessive rainfall resulted in rapid flooding in many areas of New Jersey. Flash floods were widespread during the early morning hours of Aug. 28. The water level of Bound Brook Creek at Bound Brook, N. J. was reported to have risen 10 feet in 30 to 45 minutes. Major flooding developed later on during the day on the lower Passaic, Saddle, Millstone, Raritan, Rancocas Rivers and Assunpink Creek. These rivers reached crests near or above record levels. See table 1, Comparative Crest State Data of Major Floods and figure 4 for location of rivers and stations.

Only minor small stream overflows were reported from scattered areas in southern and central New England. All major rivers were well within their banks. Considerable street and road flooding resulted from clogged or insufficient capacity of sewers and culverts.

This flood was the most damaging throughout the Raritan River basin and the Assunpink Creek in central New Jersey. The communities hardest hit were Bound Brook, Raritan, Green Brook, Lodi, Manville and Elizabeth, N. J. Power failures, road washouts, homes flooded and evacuations were widespread throughout Bucks County, Pa., and New Jersey except the northwest hills and the coastal sections of New Jersey.

Tidal flooding from tropical storm Doria was not serious. However, considerable pier, boat and beach damage was caused by wave actions.

A federal-state survey team estimated the damage in New Jersey at $138.5 million. Of this total, damage to public property was estimated at $53.5 million and damage to residential, industrial and commercial property at $85 million. In Bucks County, Pa., flood damages were estimated at $150,000. Three deaths by drowning were attributed to Tropical Storm Doria.

The warnings, bulletins and statements issued by the National Weather Service were timely and effective. User response was excellent. Specific precautions and actions were taken as a result of the NWS releases, bulletins and forecasts.

ACKNOWLEDGMENTS

Acknowledgments are due the following:

1. Joseph A. Strahl, Chief, Operations Branch, Hydrologic Services Division for general guidance in preparation of report.

2. Herbert Groper, Meteorologist in Charge, National Weather Service, Trenton, N. J., and Donald V. Dunlap, Climatologist for New Jersey, for excellent report on flood and furnishing essential data.

3. Environmental Data Service for weather maps.

4. Federal-State Survey team for estimate of flood damage.

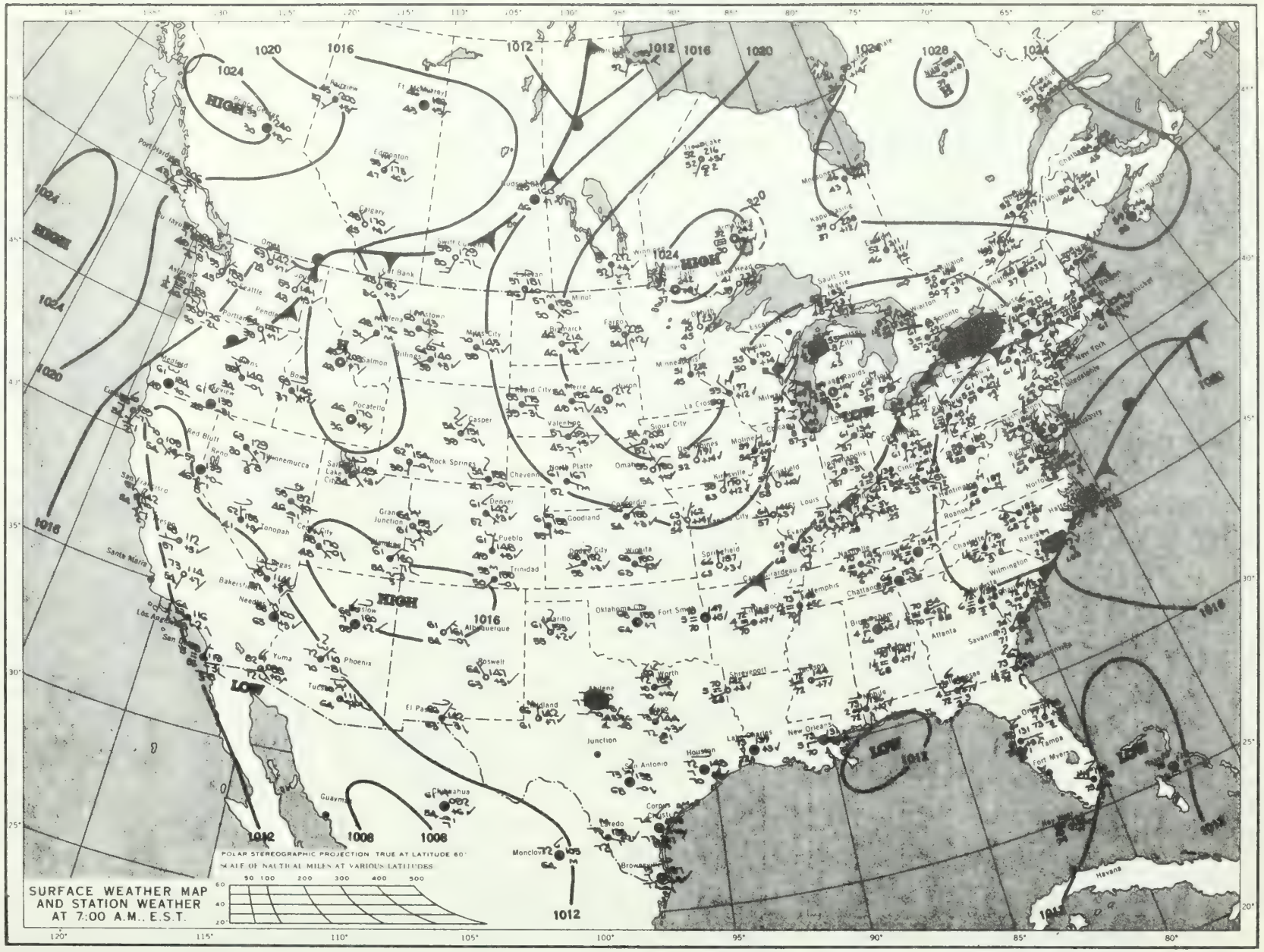
5. Elizabeth Journal, Elizabeth, New Jersey, for photograph used in report.

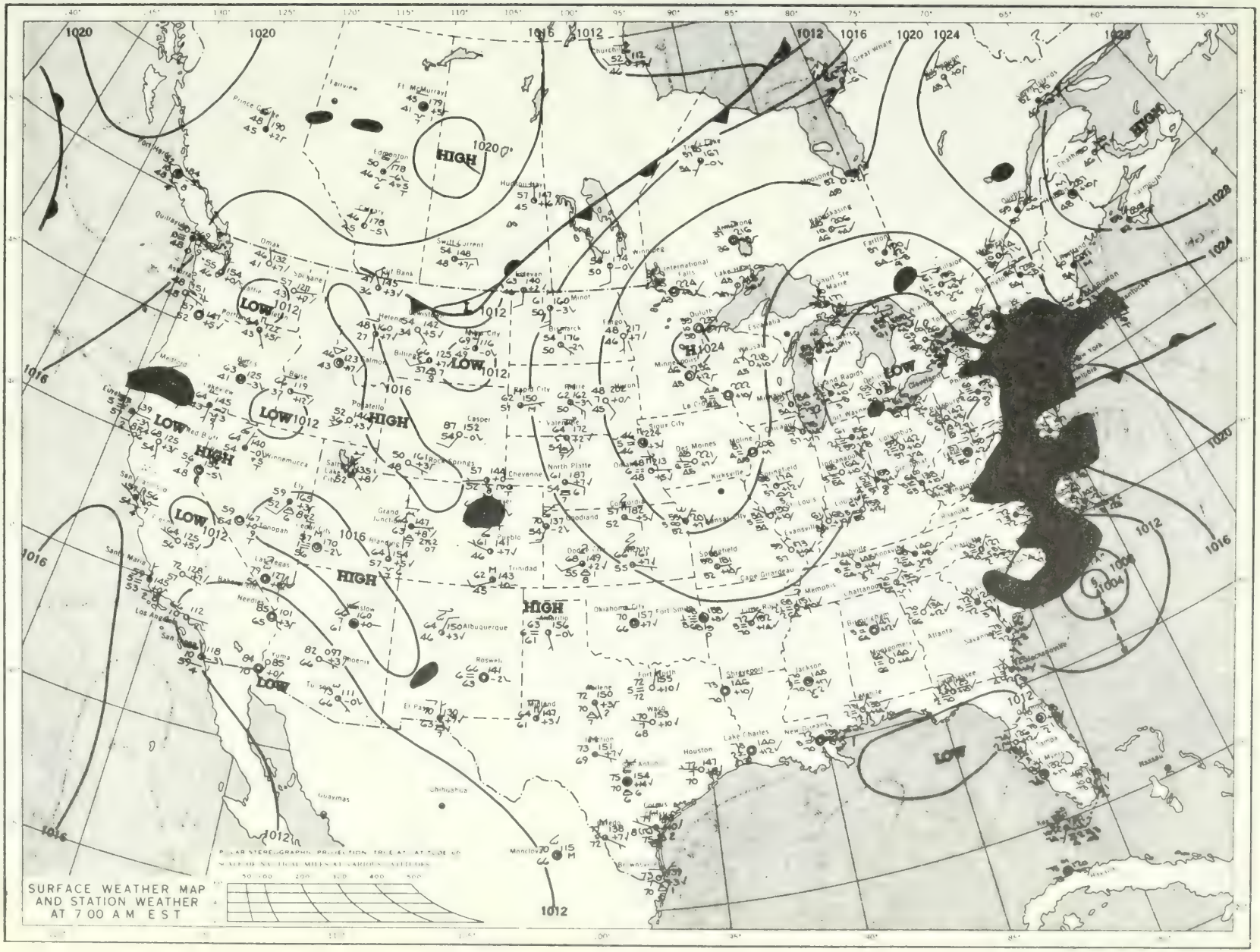
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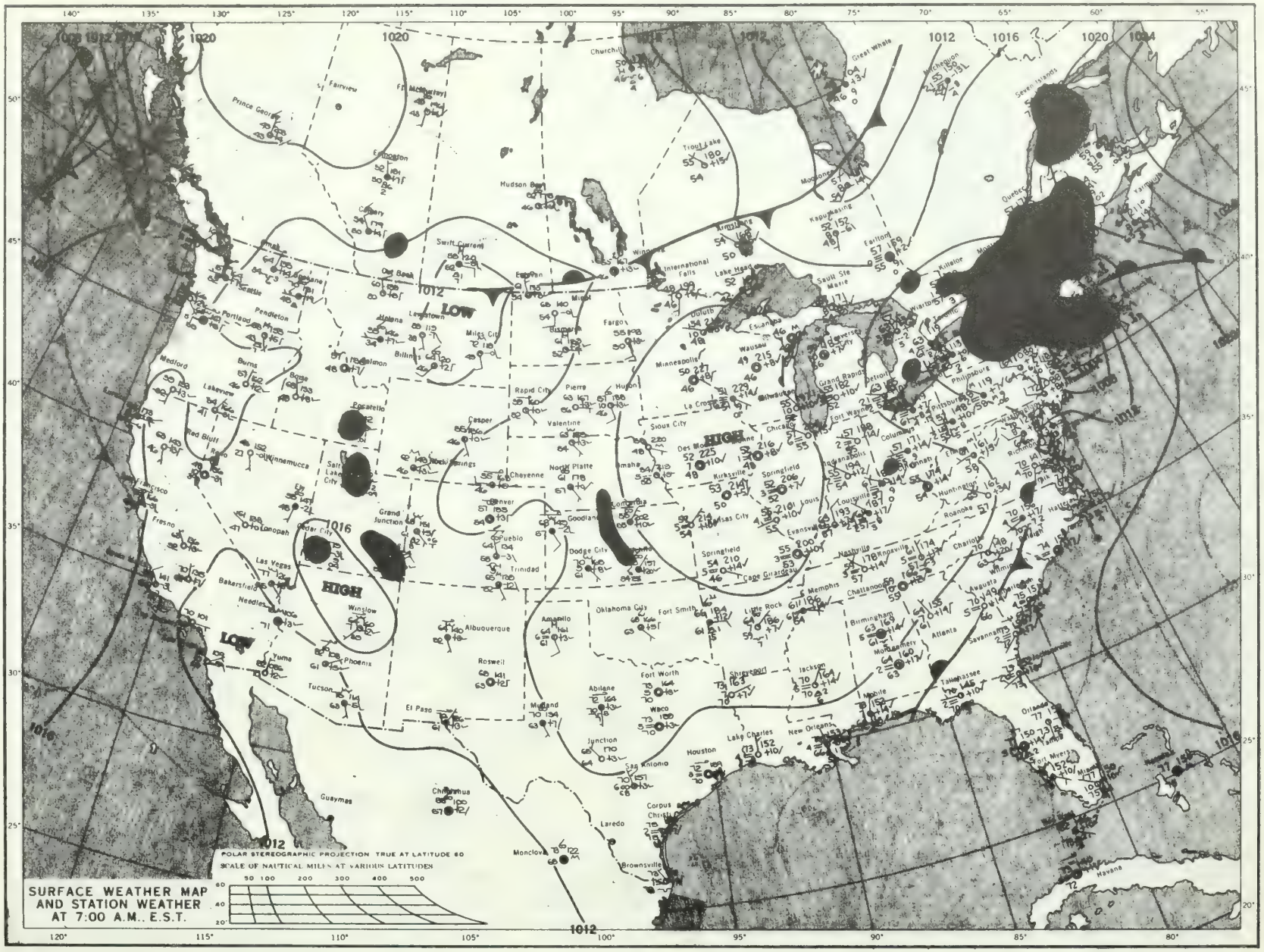
1. Climatological Data, New Jersey, August 1971, Volume 76, No. 8 by Environmental Data Service.

2. Storm Data, August 1971, Volume 13, No. 8 by Environmental Data Service.

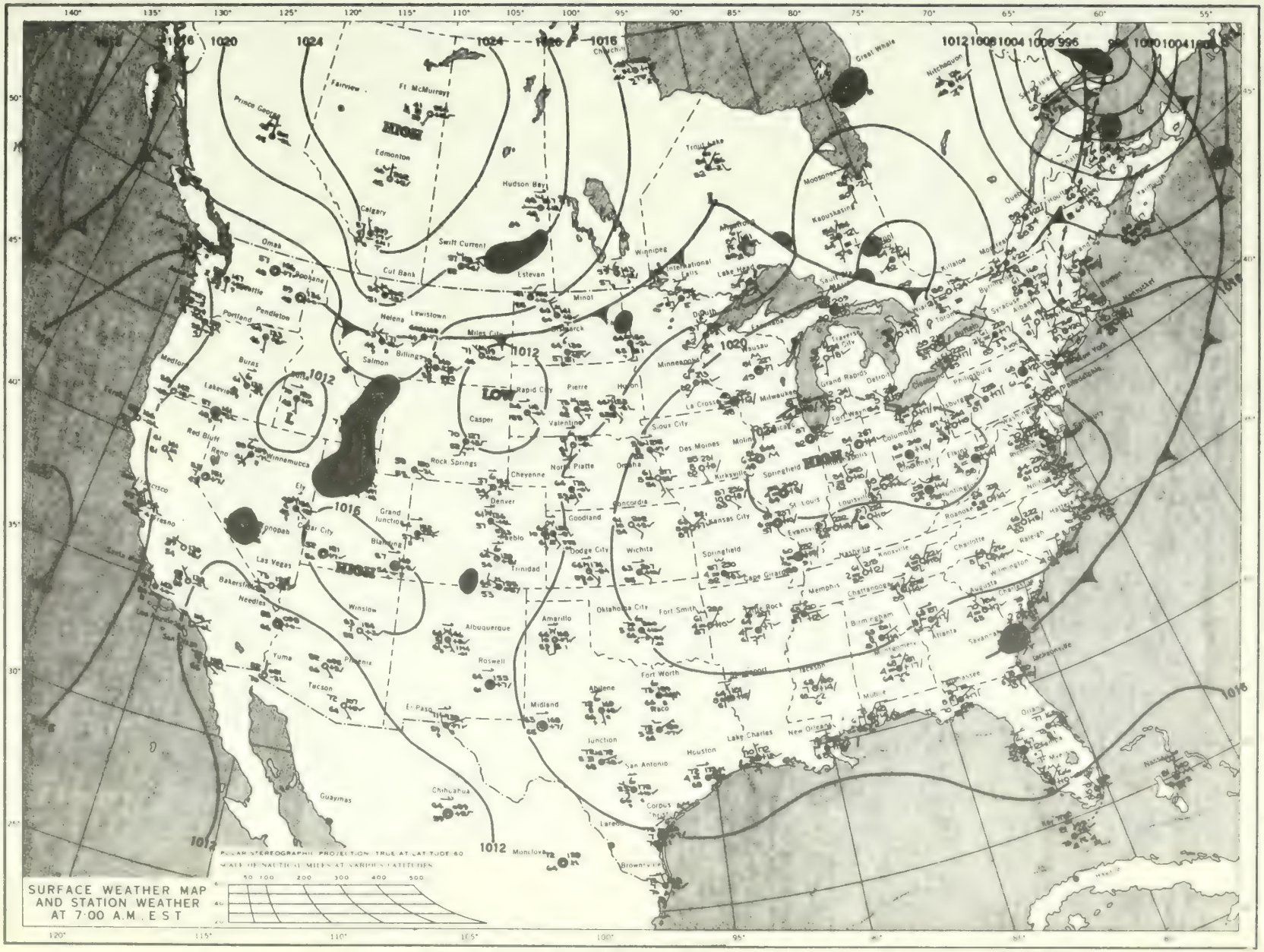
3. Floods and Flash Floods of August 27-29, 1971, Northern and Central New Jersey by National Weather Service Eastern Region team.


SURFACE WEATHER MAP
AND STATION WEATHER
AT 7:00 A.M., E.S.T.
POLAR STEREOGRAPHIC PROJECTION TRUE AT LATITUDE 60°
SCALE OF NAUTICAL MILES AT VARIOUS LATITUDES
50 100 200 300 400 500
HIGH
LOW
1024
1020
1016
1012
1008
1028


SURFACE WEATHER MAP
AND STATION WEATHER
AT 7 00 A M E S T


1020
1020
1012
1016
1020
1012
1012
LOW
HIGH
1016
HIGH
LOW
1012
1012
POLAR STEREOGRAPHIC PROJECTION TRUE AT LATITUDE 60
SCALE OF NAUTICAL MILES AT VARIOUS LATITUDES
50 100 200 300 400 500
SURFACE WEATHER MAP
AND STATION WEATHER
AT 7:00 A.M., E.S.T.

SUNDAY, AUGUST 29, 1971



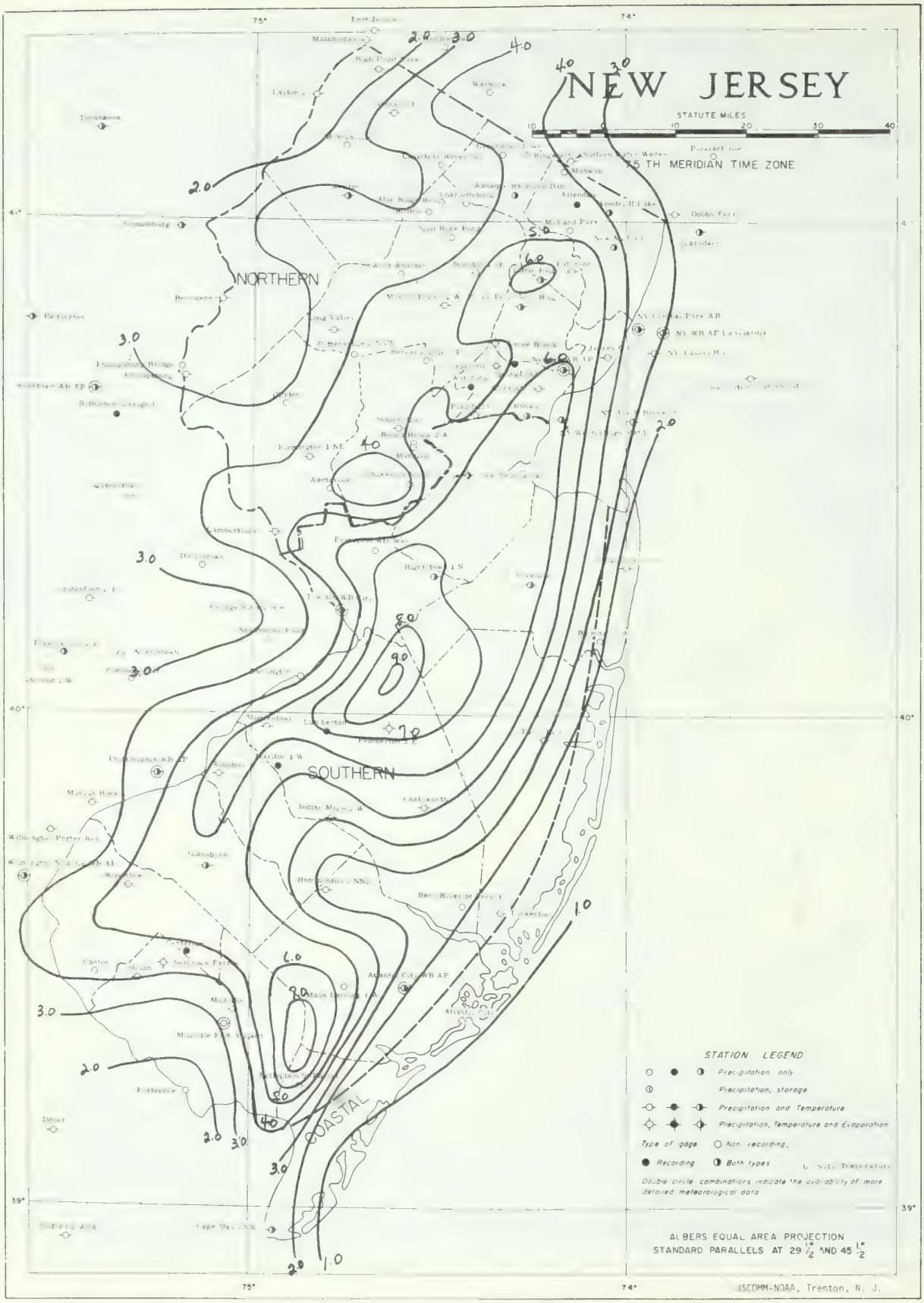


FIGURE 1.-Antecedent precipitation (in.), August 26-27,1971.

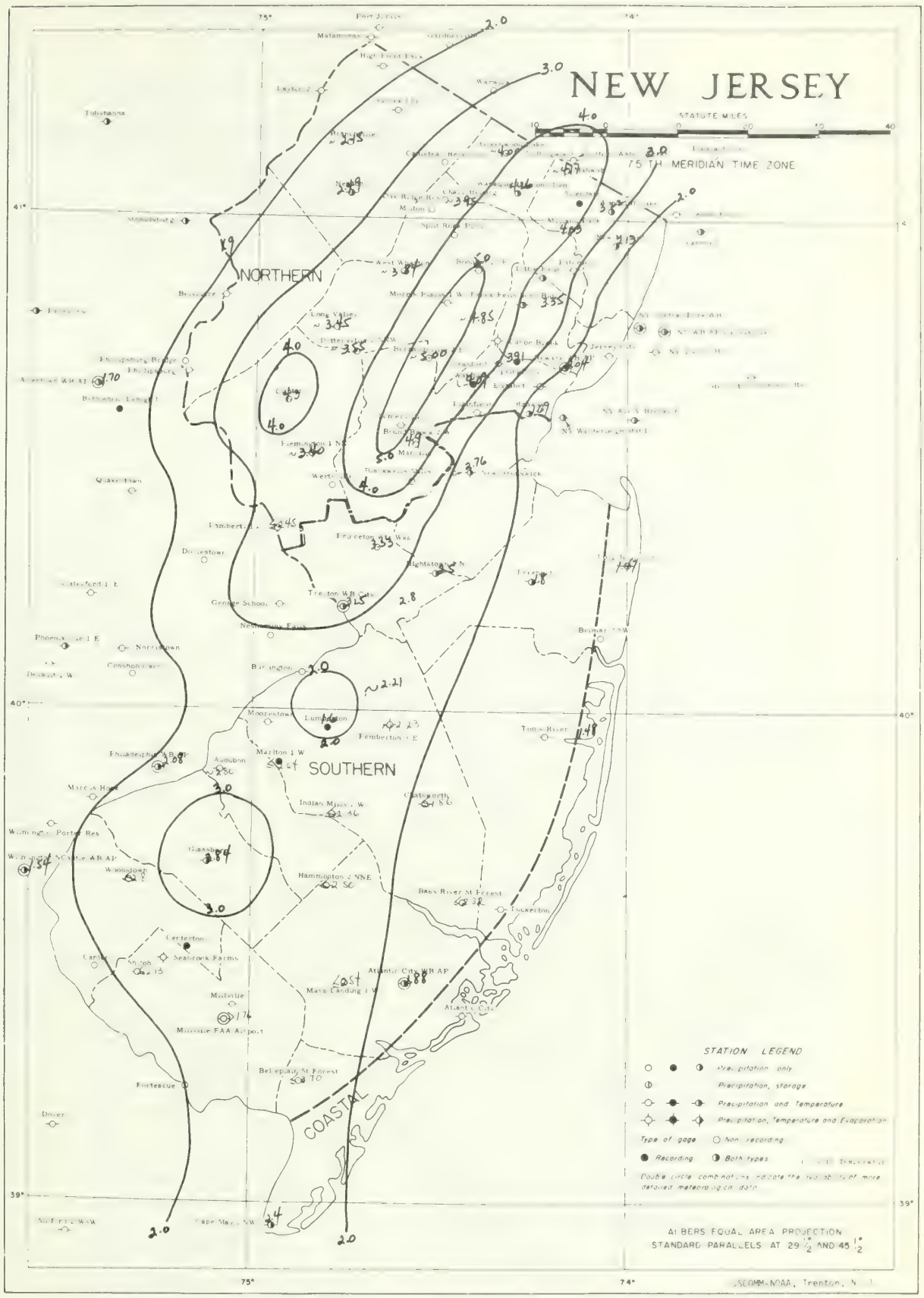


FIGURE 2.-Tropical storm Doria precipitation (in.),August 27-28,1971.

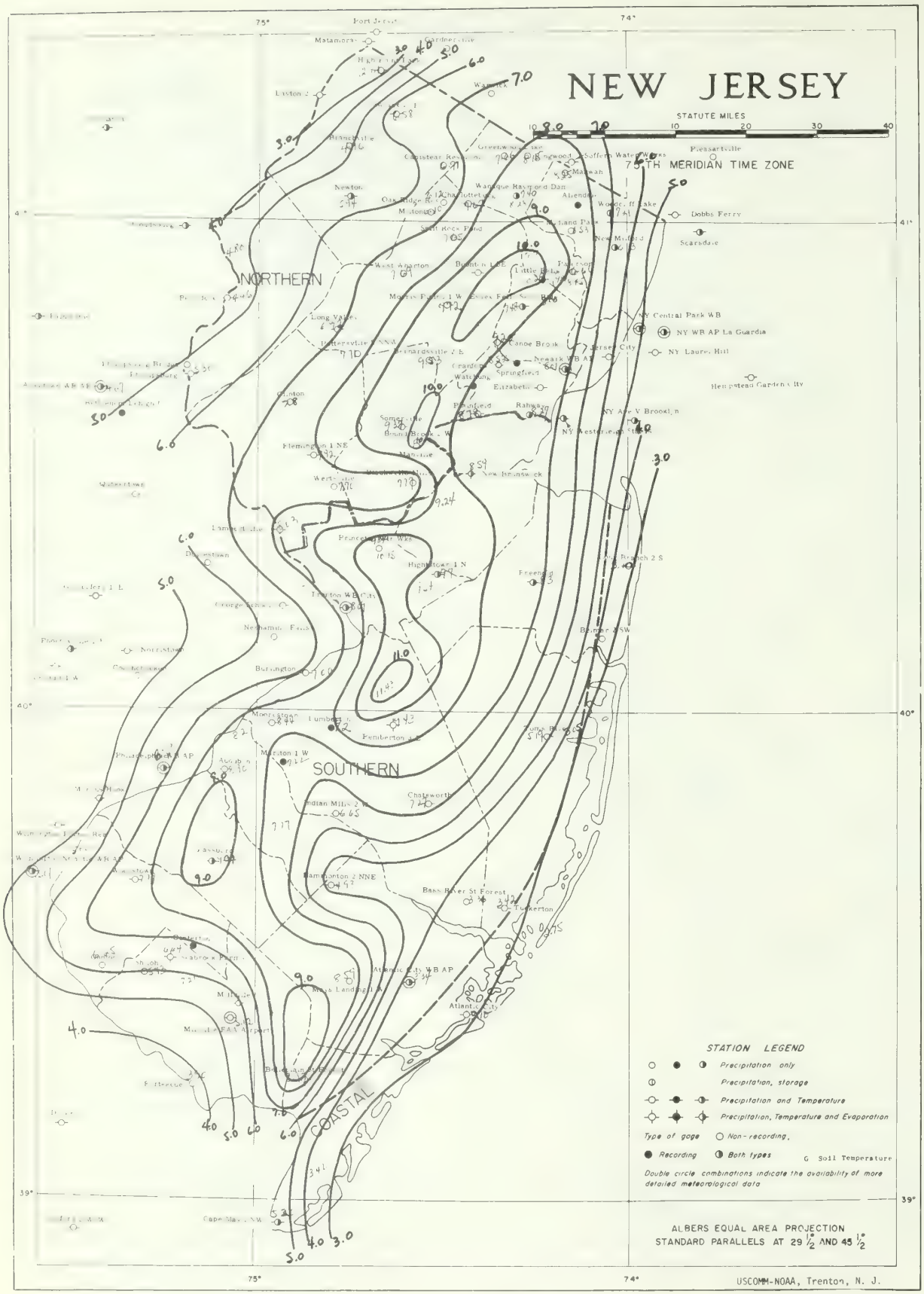


FIGURE 3.-Total storm precipitation (in.),August 26-28,1971.



FIGURE 4.-New Jersey river and rainfall stations.

TROPICAL STORM DORIA FLOODS-NEW JERSEY

COMPARATIVE CREST STAGE DATA OF MAJOR FLOODS

Table 1

August 1971

River and Station	Flood Stage	Above Flood Stages dates August 1971		Crest August 1971		Previous Maximum Crest of Record	
		From	To	Stage	Date	Stage	Date
	feet			feet		feet	
Ramapo:							
Mahwah, N.J.	8	28	29	10.76	28	11.87	5/29/68
Pompton Lakes, N.J.	2	28	29	2.98	28	4.40	10/16/55
Pompton:							
Pompton Plains, N.J.	12	28	29	H 15.47	28	18.62	5/30/68
Passaic:							
Chatham, N.J.	6	28	Sept. 3	8.16	28	8.3	1/9/05
Little Falls, N.J.	7	28	31	8.20	29	10.73	5/31/68
Millstone:							
Blackwells Mills, N.J.	7	27	29	18.68	28	15.29	9.21/38
Raritan:							
Manville, N.J.	12	27	29	23.8	28	22.10	8/19/55
Bound Brook, N.J.	8	27	29	H 19.5	28	16.30	9/23/38
Assunpink Creek:							
Trenton, N.J.	7	27	29	13.46	28	10.74	9/22/38
North Branch Rancocas Creek:							
Pemberton, N.J.	2.7	27	30	4.18	28		8/21/39
Neshaminy Creek:							
Langhorne, Pa.	9	27	28	14.80	28	22.84	8/19/55
Brandywine Creek:							
Chadds Ford, Pa.	9	27	28	11.47	28	16.9	8/20/55

H - High water mark; —-Exceeded previous maximum stage of record.



ELIZABETH RIVER AT ELIZABETH, N. J. (W. JERSEY STREET), AUGUST 28, 1971. COURTESY, ELIZABETH JOURNAL).

TROPICAL STORM DORIA — AUGUST 20 - 29, 1971

Tropical storm Doria was the third tropical cyclone this season to skirt the U.S. Atlantic coast. She was the first to cross it. Doria brought much-needed rain, yet the rain was responsible for flooding, and flooding was responsible for five of the seven storm-related deaths. In New England, Doria's storm surge fortunately occurred at low tide. Yet, sightseers were able to get close to the shore and one person drowned while saving two others who had been pulled in by the surf. Damage estimates are $147.35 million. Most damage was the result of flooding. Six people were killed: three in New Jersey, one in Massachusetts, one in Pennsylvania, and one in Virginia.

Doria was spawned by an African disturbance which had moved across the Atlantic. Interest in the system was spurred by satellite pictures early on August 20. These pictures showed an organized cloud pattern about 1,000 miles east of the Windward Islands. Reconnaissance aircraft reached the newly formed tropical depression later in the day. There was little change in Doria's second stage of development as she moved west-northwestward through the Leeward Islands on the 23d and into the Bahama Islands on the 25th. The storm became better organized and generated 35 to 40 m.p.h. squalls northeast of its center. On the afternoon of the 26th, reconnaissance aircraft found a definite pressure center of 1008 millibars about 100 miles north of the Bahamas. The depression was named Doria and few hours later became a tropical storm. She plodded northward and deepened 20 millibars in 24 hours.

Early on the afternoon of the 27th, Doria crossed the North Carolina coast, west of Morehead City. Just prior to landfall, her central pressure reached its lowest point - 29.20 inches (989 mb.) Doria pounded eastern North Carolina with gales and driving rain as she moved across the State and into southeastern Virginia that evening. The Outer Banks and the shores of Pamlico and Albemarle Sounds were pelted by 4- to 5-inch rains, lashed by 60 m.p.h. wind gusts, and inundated by tides 1 foot to 2 feet above normal. At Atlantic Beach, close to Doria's point of landfall, winds reached 69 m.p.h. in gusts, tides were 3 to 4 feet above normal, and pressure dropped to 29.38 inches. Heaviest rains fell ahead of the storm, and the 4-inch totals were confined to eastern sections of the State. Damage throughout North Carolina was minor, and estimates of property and crop damage were about $150,000. No storm related deaths were reported.

The day before Doria reached North Carolina, a stationary frontal trough hung over the east coast, bringing rains from North Carolina to New England. The combination of this trough and Doria produced the high rainfall totals that occurred during the 2-day period. The storm rainfall amounts resulted from this combination of factors.

Doria accelerated and moved up the Virginia-Maryland-Delaware shore during the night of the 27th. Norfolk sustained 52 m.p.h. winds in the early evening, and tides were 3.6 feet above normal at Portsmouth Navy Yard. Doria spawned a tornado which touched down near Norfolk Regional Airport causing some $250,000 damage. The tropical storm itself caused some $125,000 damage in southeastern Virginia. Damage was mainly from flooding and fallen limbs. One person drowned in northern Virginia. Along Maryland's Eastern Shore and in Delaware, Doria was accompanied by 50 m.p.h. gusts, tides 2 to 4 feet above normal, and rains of 5 to 8 inches. Chesapeake Bay tides were 1 to 2 feet above normal. Annapolis, Md., recorded 8.76 inches of rain, Cambridge, Md., 7.40 inches, and Talleyville, Del., 7.96 inches. Despite the flooding damage and minor wind damage, rains benefited late-maturing crops, fall seeding of cover crops, and pastures.

In the early morning hours of the 28th, Doria made her way up the Jersey shore toward New York City. It was in New Jersey that she wrought the most damage. Excessive rainfall had occurred over most of New Jersey and southeastern Pennsylvania during the 24 hours preceding Doria. Although the rainfall that could be directly attributed to Doria was less than that from the front, the combined fall in a short period of time produced devastating floods in central and northeastern communities of New Jersey and minor flooding in the southeastern counties of Pennsylvania. In the Pennsylvania counties of Chester, Delaware, Montgomery, Philadelphia, and Bucks, flash floods closed streets and caused power failures. Rainfall totalled over 6 inches in parts of the area, with a 6.57-inch fall in Philadelphia and an unofficial 7.5 inches reported at Kennett Square near the Delaware border. The strongest reported wind was a 73 m.p.h. gust in Philadelphia. One person was killed by a falling limb in Chester County.

The hardest hit New Jersey communities were Bound Brook, Manville, and Elizabeth. Trenton set a 24-hour record with 7.55 inches of rain and had an 8.09-inch total. The old Trenton record was 5.42 inches during a 24-hour period in October 1903. New 24-hour marks were also set at New Brunswick and Newark. Newark was deluged with 8.01 inches of rain. Streets and highways became flooded in many areas, and mudslides blocked some roads in Middlesex County. New York to Philadelphia railway service was interrupted for some 29 hours when water flooded the Trenton station. The American Cyanamid Company at Bridgewater suffered severe flooding. Total damage in New Jersey was estimated at $138.5 million. Of this amount, $53.5 million was done to bridges, and water and sewer systems, and $85 million to other private and industrial property. Minor damage and beach erosion resulted from the 25 to 45 m.p.h. winds and tides of 2-4 feet above normal along the coast. Three people drowned in New Jersey.

Come Saturday morning, early-rising New Yorkers awoke to the sound of 20 to 30 m.p.h. winds and a second straight day of driving rain. Stronger winds of 30 to 40 m.p.h. with gusts to near 50 m.p.h. had occurred earlier in the morning. Before the storm was finished, 5.96 inches of rain fell at Central Park, 3.69 inches at Kennedy Airport, and 5.49 inches at LaGuardia Airport. At LaGuardia, 2.29 inches fell in 1 hour on the afternoon of the 27th. The early morning tide at the Battery was 4.7 feet above normal. Out on Long Island, at Bridgehampton, winds gusted to 60 m.p.h. but rain totalled only 0.41 inches.

Heaviest precipitation occurred from New York City northward up the Hudson River Valley to the Poughkeepsie-Kingston area. Amounts ranged from 6 to 8 inches during the 27th-28th. Staten Island recorded 7.86 inches, and Glenham in southwestern Dutchess County reported 7.81 inches. Rain totalling 4 to 5 inches fell as far north as Lake George, and totals of 2.5 to 3.5 inches were reported as far west as Sullivan, Delaware, and Otsego Counties, as well as in the eastern Mohawk Valley and northward through Essex County. Precipitation decreased eastward across Long Island from the totals of 6 to 8 inches around New York to 2.5 to 3.5 inches in Nassau and northwestern Suffolk County and to less than 1 inch on the eastern end of the Island.

Streets, highways, and subways were flooded in New York City, and all surface transportation was greatly hampered. Similar flooding occurred on western Long

Island and over much of the Hudson River Valley with overflowing of small streams and creeks. Wind damage was light with downed limbs and powerlines representing the primary source of trouble. Some 25,000 homes were without power on Long Island. Agricultural losses were light: some fruit was dislodged from trees and some corn blown over. Total damage in New York was estimated at $4.32 million.

Doria began to weaken as she headed inland over western Connecticut and western Massachusetts on Saturday morning. However, her forward speed increased to 35 to 40 m.p.h. Strongest winds were east of her center. Bridgeport experienced a 75 m.p.h. gust. At Boston, gusts were reported at 56 m.p.h. and on top of Blue Hill at Milton, Mass., an 87 m.p.h. gust was recorded during the morning of the 28th. Winds gusted to 52 m.p.h. as far north as Concord, N.H.

While the storm surge produced tides up to 5 feet above normal, tides at the time were near their low and coastal flooding was minimal. However, high surf did batter some homes and swamp some small boats. Sightseers were out in force to admire the pounding surf. At Marblehead, Mass., a young man was drowned after rescuing two others who had been caught by the high surf.

Rain in New England was heaviest mainly west of Doria's center. The combination of the frontal system and the tropical storm produced 5- to 6-inch rains from Pittsfield, Mass., to north of Brattleboro, Vt., and 6-inch totals in southwestern Connecticut. Northwestern Connecticut, western Massachusetts, and Vermont had 2 to 4 inches of rain. In eastern Connecticut, northwestern Rhode Island, central Massachusetts, New Hampshire, and central and western Maine, 1- to 2-inch totals were common; some sections of New Hampshire had 2 to 3 inches. Elsewhere, totals were less than 1 inch.

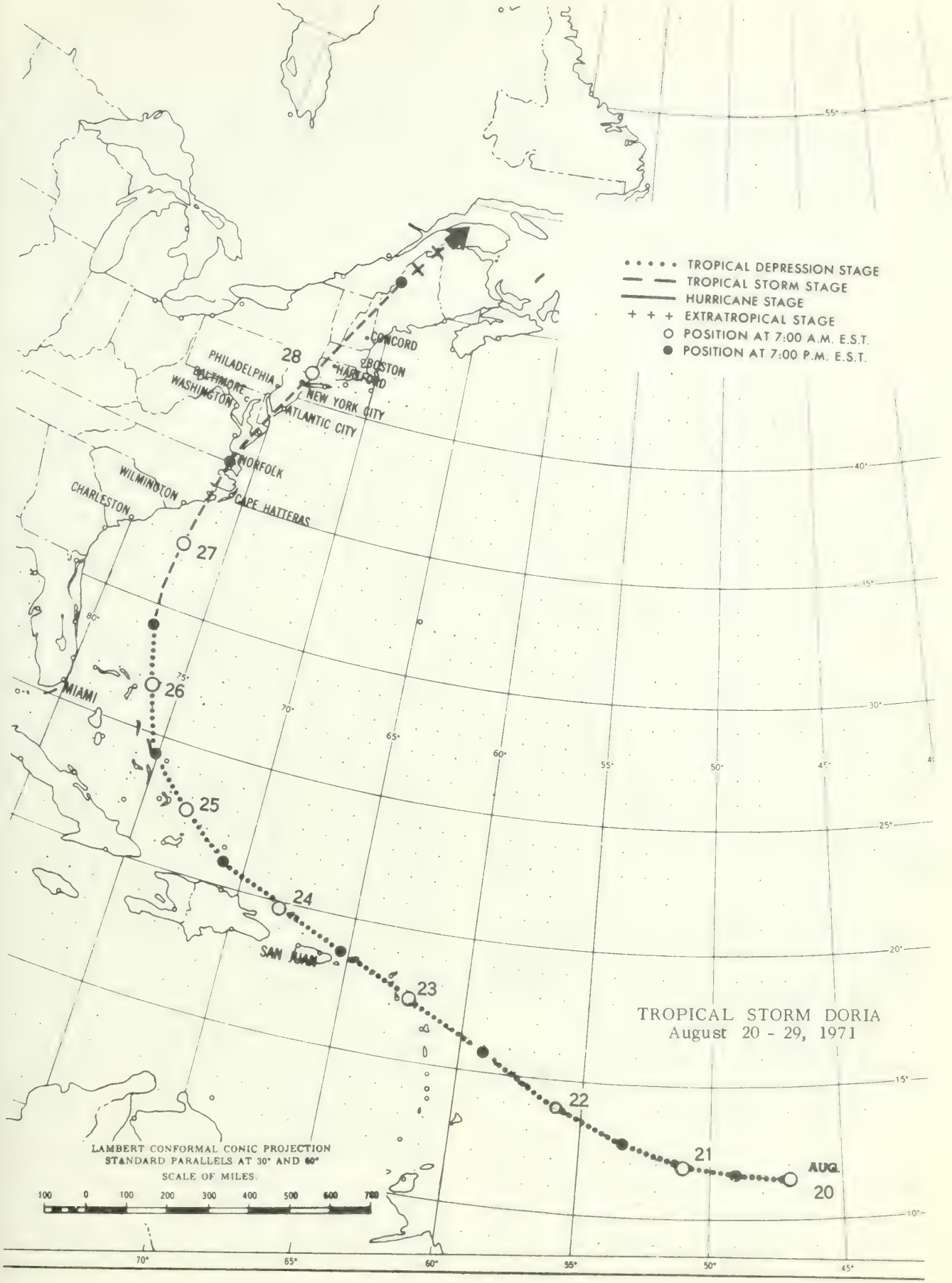
In Connecticut and throughout most of New England, east of the storm's center, the ground was littered with leaves, branches, and often whole trees. Utility lines were knocked down in some areas. Some 150,000 homes were without electricity in Connecticut. Autos and buildings were damaged by fallen limbs. Structural damage to a Connecticut high school was estimated at $250,000. Crop damage was spotty. Some apple orchards lost up to 15 percent of their crop. Some peach orchards were hard hit, and corn was blown down in some areas. A 270-foot television tower was blown over in Brunswick, Maine. Vermont got little wind, but rain washed out several bridges. Total preliminary damage estimates for Connecticut and New England run from $4 to $5 million.

During the afternoon of the 28th, Doria started to turn extratropical as she tore across western Maine. That evening she raced into Canada and across the St. Lawrence River.

TROPICAL CYCLONE DATA
TROPICAL STORM DORIA
August 26-29, 1971

Station	Date	Pressure (inches) Low	Time	Wind (miles per hour) Fastest Mile	Time	Gusts	Time	Highest Tide (feet)	Time*	Storm Rainfall (inches)	Remarks
SOUTH CAROLINA	Aug.										
Charleston	27	29.77	0500	NW 22	1057			5.7 MLW	1145	T	1.75 in. at Ocean Drive Beach
NORTH CAROLINA											
Wilmington	27	29.68	1201	N 21	1159	N 30	1222	2 AN		2.19	Tide at Cape Fear
Hatteras	27	29.61	1557	SSE 41#	1557	S 54	1600			4.17	
Elizabeth City	27	29.33	1800			60					
VIRGINIA											
Norfolk	27	29.37	1951	NE 52	1837	NNE 71*	1909	3.6 AN		3.09	Tornado confirmed 10 mi west-southwest
Richmond	27	29.79	2158	SE 17	1347					1.40	of Norfolk Regional Airport.
DISTRICT OF COLUMBIA											
Washington National Airport	28	29.77	0100	NW 19	0014	W 26	0844			3.55	
MARYLAND											
Salisbury (FAA)	27	29.39	2330	ENE 36	2210	ENE 50	2210			3.34	
Assateague Island	27			SE 30	2215	50	2215	2 AN		3.58	
Baltimore (WSO)	27	29.75	28/0032	N 18	2347			2.7		4.39	Tide at Ft. Henry
Ocean City (C.G. Station)	27	29.43	28/0000	E 23	2200	E 63	2330				
			0100								
DELAWARE											
Wilmington	28	29.56	0156					3.2 AN	0000	5.09	Tide at Lewes
PENNSYLVANIA											
Philadelphia	28	29.44	0250	NW 51	0355	NW 73	0430			6.57	
NEW JERSEY											
Atlantic City	28	29.37	0230	SE 35	0055	SE 54	0048	5.3	0050	1.88	
Trenton	28	29.43	0145	NE 43	0159					8.09	7.55 in. rain in 24 hr set record for
Newark	28	29.46	0155	NW 23	0554					8.01	station
NEW YORK											
						NE 48	0335				
New York City (WSO)	28	29.43	0515	SE 32#	0424	SE 48	0424	3.8	0548	5.96	Tide at the Battery
New York City (J.F.K.)	28	29.44	0530	NW 32	0711	ESE 44	0308			3.69	
New York City (LGA)	28	29.43		S 40	0415	E 40	0252			5.49	2.29 in. of rain, 1340-1440 on the 27th.
CONNECTICUT											
Hartford	28	29.51	0745	SE 37	0645	SSE 48	0726			3.12	
RHODE ISLAND											
Providence	28	29.66	1018	SSE 44#	0738	SSE 61	0737	5.9 MLW		0.97	
MASSACHUSETTS											
Boston	28	29.62	1056	SSW 45	1018	SE 56	0857			0.83	
MAINE											
Portland	28	29.63				45					

* EST
One minute wind speed
* Anemometer at 60 ft
- Tide above mean sea level unless noted
AN - above normal
MLW - above mean low water


TROPICAL DEPRESSION STAGE
TROPICAL STORM STAGE
HURRICANE STAGE
EXTRATROPICAL STAGE
POSITION AT 7:00 A.M. E.S.T.
POSITION AT 7:00 P.M. E.S.T.
CONCORD
BOSTON
HARTFORD
NEW YORK CITY
PHILADELPHIA
BALTIMORE
WASHINGTON
ATLANTIC CITY
NORFOLK
WILMINGTON
CHARLESTON
CAPE HATTERAS
MIAMI
SAN JUAN
28
27
26
25
24
23
22
21
AUG.
20
TROPICAL STORM DORIA
August 20 - 29, 1971
LAMBERT CONFORMAL CONIC PROJECTION
STANDARD PARALLELS AT 30° AND 60°
SCALE OF MILES
100 0 100 200 300 400 500 600 700
55°
40°
35°
30°
25°
20°
15°
10°
80°
75°
70°
65°
60°
55°
50°
45°

STORM SUMMARY

AUGUST 1971

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE				† DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama																4													
Alaska *																													
Arizona	1	1		41	6					1	1	5			2											1		6	5
Arkansas												4																	
California																3												4	
Colorado									4																			4	
Connecticut											2	6	5			4												5	
Delaware												°5	C															4	
Florida	7	5		1	4									2	12	6												6	
Georgia								?	?			4		2	8	?												5	4
Hawaii *																													
Idaho												4	2			6												4	2
Illinois	2	2		2	5			4	3			4	3	1		4													
Indiana																5													
Iowa								4	4			4	4																
Kansas	1	1						5	5			4	3			5												4	4
Kentucky								?	?			?	?	1	1	5												°6	C
Louisana														1															
Maine	2	1			4							5	3		1	5											1	4	
Maryland												°5	C			4										14		7	3
Massachusetts										1	2	6	4			4												5	
Michigan	2	1		1	5			3	5		35	6		2	2	4													
Minnesota	2	1		1	4			4	5			5	5		2	5													
Mississippi	2	2			4							?	?			5												?	
Missouri	1	1												3	4														
Montana												4	?															5	5
Nebraska								4	6																				
Nevada	1	1			?							?																5	
New Hampshire											3	5	4			3												4	
New Jersey	1	1			5																					3		8	5
New Mexico	1	1			2									1														5	
New York	3	3			4						1	6	4	1	6	5											1	6	5
North Carolina									4			5	5		2	5												5	5
North Dakota	1	1						5	5		3	5	4																
Ohio	1	1			4			?	?	1	3	5		1	8	5													
Oklahoma								?	4		1	5	?	1	1	4												?	5
Oregon									4							?	?											?	?
Pacific *																													
Pennsylvania									1			5	2	2	1	5										1	1	6	3
Puerto Rico																										1	2	°4	C
Rhode Island												5	4															6	3
South Carolina															3	3													
South Dakota									5			5					4												
Tennessee								2	2			4	3			4												°5	C
Texas	20	9			4							4		3		4										9		6	8
Utah																3										5		5	4
Vermont																												5	
U.S. Virgin Is. *																													
Virginia	1	1			5																					1		5	
Washington	1	1			4			2	3	1		3	5			4	4												
West Virginia *																													
Wisconsin								5	5	3	15	6	5	1															
Wyoming *																													

° Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
AUGUST 1971

Elmer R. Nelson, Office of Hydrology

The most damaging floods during August occurred in New Jersey from the heavy rains accompanying Tropical Storm, Doria. The total damages were estimated at $138.5 million and the total number of deaths were placed at three. See the special article on "Tropical Storm Doria Floods - New Jersey," following the general summary of river and flood conditions.

Severe flash flooding accounted for 16 deaths and approximately $1 million in property damages in Baltimore City and Baltimore and Harford Counties in Maryland on August 1-2.

Major flooding occurred on the Matanuska and Susitna Rivers in Alaska on Aug. 6-9. The total damages were estimated at $5.8 million. This was the second most damaging flood in Alaska's history.

ATLANTIC SLOPE DRAINAGE

Heavy thundershowers during the afternoon of Aug. 1 caused flash flooding in the Saucon Creek Basin south of Allentown, Pa. Floodwaters caused extensive damage estimated at almost $300,000. Of this total, around $200,000 damage was reported at the site of the St. Francis De Sales College in Center Valley. The library located in the basement of De Sales Hall was severely damaged. One death was reported at Saucon Park when a little girl fell into the creek. Some 60 people who ignored a warning to leave the rain threatened area had to be evacuated from a picnic grove, south of Hellertown.

Flash floods occurred on small streams in the Washington, D. C., metropolitan area on Aug. 3 and Aug. 27. During the latter storm, two deaths were reported. One drowning occurred in Alexandria, Va., when a small girl fell into a drainage ditch and was swept through an underground pipe. Her body was found in a creek more than a quarter mile away. Property damage along Four Mile Run in Arlandria, Va., was estimated at $50,000. The second drowning occurred in the Kentland section of Prince George County when a youth was swept into high water near Beaver Dam Creek. The youth was carried away when the narrow creek overflowed its banks and swelled to a width of 15 feet. In the Temple Hills' area of Prince George County, children swam in residential streets covered with water up to 4 feet deep. Flooding on the John Hanson highway resulted in all traffic being rerouted to the Baltimore-Washington Parkway. A Greyhound bus, bound from Richmond to New York, overturned after a braking skid on the wet pavement on the parkway. This resulted in minor injuries to at least a dozen passengers. Dormitory basements on the American University Campus in northwest Washington were flooded. Rush hour traffic throughout the Washington area was delayed for hours as homebound motorists encountered bumper-high water on many major roadways. In the District of Columbia, the Minnesota Avenue viaduct at Dean Avenue and the intersection of Benning Road and East Capitol Street were under more than 2 feet of water. The flash flooding was due to heavy rains that began shortly after midnight on the 26th-27th. The heavy rains continued throughout the 27th. By late on the 27th, 4 inches of rain had fallen at Suitland, Md.

During the evening of Aug. 1 and the early morning of Aug. 2, scattered thunderstorms caused severe flash flooding in Baltimore, Md., Baltimore County and Harford County in Maryland. Major east coast highways were closed by the high water for more than 6 hours. Hundreds of residents were left homeless and some 20,000 homes were without electricity. Property damage, both public and private, was estimated at approximately $1 million. Sixteen deaths resulted from the floods. Much of the damage and many of the casualties occurred in Baltimore City and Baltimore County in the vicinity of White Marsh, Md., and along State Route 7, U. S. 40, and Interstate 95 along Gunpowder River and its tributaries. Supplemental precipitation surveys indicated that up to 12.5 inches of rain fell between 6:30 p.m., Aug. 1 to 2:30 a.m., Aug. 2, near White Marsh, Md. Several other locations indicate more than 11 inches of rain during that storm. In general, the precipitation exceeded 5 inches in an 8-hour period in southeastern Baltimore County and in the city of Baltimore. Preliminary reports show that three new crest records were set during the flash flood. They were on White Marsh Run at White Marsh, Md., Stemmers Run at Rossville, Md., and Brien Run at Stemmers, Md., all in the vicinity of the 12.5-inch center. Estimated time of crest at all three sites was around 11 p.m., Aug. 1.

Significant precipitation occurred in eastern North Carolina in advance of Tropical Storm Doria during the evening of the 26th, continuing through the 28th. Rainfall from this storm averaged from 1 to 3 inches, with some isolated areas in eastern North Carolina and south-central Virginia recording a total of more than 5 inches. Some flooding occurred in the low-lying areas where the heavier showers fell, but all rivers remained within their banks. Some damage occurred in the northeastern Cape Fear Basin.

A tropical depression formed in the northeastern Gulf of Mexico on the 16th and moved northward through eastern Georgia and the Carolinas on the 17th and 18th. Rainfall totalled over 9 inches within 72 hours at Peedee, S. C. Three to 4 inches occurred locally within 24 hours over the Edisto, Black, Waccamaw, and Little Pee Dee River basins. Flooding was mainly to swampland. Flash flooding occurred in and near Florence, S. C., on the 16th. Streets in low areas were affected by shallow flooding, with one underpass impassable. A trailer court à few miles west of Florence was flooded, with water entering some trailers. Damage was mostly to trailers.

Heavy rains on the 17th caused minor flooding on the Savannah River at Clyo, Ga., on the 20th-27th. The Ogeechee River at Eden, Ga., reached bankfull stage on the 23d. Damage from the high water was slight.

The Oconee River at Milledgeville, Ga., rose 4.2 feet above flood stage on the 17th. The Satilla River at Waycross, Ga., was out of its banks on the 20th-24th. The crest on the 21st was 0.5 foot above flood stage. No damage resulted as mostly lowland was flooded.

EAST GULF OF MEXICO DRAINAGE

Heavy rains during the last week of July and the first part of August caused light flooding on the Apalachicola River in northwest Florida. The river remained above flood level at Blountstown, Fla., from the 2d through the 7th.

Heavy shower activity during the latter part of July and the first part of August caused the Pearl River to rise above flood stage at Bogalusa, La., on Aug. 2-9. Discharge from the Ross Barnett Reservoir produced above flood stage readings at Jackson, Miss., from July 29 to Aug. 5. The highest stage at Jackson was 23.9 feet (flood stage, 18 feet) on July 31. No flooding occurred in the city of Jackson, as the levee system around the city contained the overflow.

A thundershower just north of Meridian, Miss., on the evening of July 31 produced very heavy rains in a short period of time. A survey by U. S. Geological Survey showed that amounts of 7 to 10 inches fell in an area about 3 miles in diameter. Sowashee Creek rose rapidly, inundating shopping centers and light industry that had been built along its banks. Damage was sustained by over 500 houses in that city. A great many automobiles were inundated; streets and bridges were damaged by the high water. Damage to the area was estimated at about $1.5 million by Civil Defense, Red Cross, and Meridian City engineers.

MISSISSIPPI SYSTEM

Missouri Basin--Heavy rains on Aug. 30 produced flash flooding in the Yellowstone Drainage on Big Timber Creek in central Montana. This is one of the major drainage streams of the Crazy Mountains. The approaches to most bridges over the creek were washed out. A few ranches reported basement flooding. Considerable debris was deposited on croplands along the creek. The total damages were estimated at $166,000.

Ohio Basin-- The Licking River at Salyersville, Ky., rose 2 feet above flood stage during the night of Aug. 4-5. There was a considerable amount of flash flooding over the valley. Heavy local thunderstorms over the Mash Fork, State Fork, and Burning Fork caused heavy flow into the Licking in and near Salyersville. It was reported that the outflow from these tributaries was so heavy at one time that it caused the Licking to flow backward upstream from the town. The water rose 2 to 3.5 feet deep in many streets and yards.

Most of the damage from this flood occurred around Salyersville, Ky. Fifty to 60 families were evacuated from their homes. Preliminary estimates indicate the damage at $1 million.

White Basin--The flooding on the Cache River at Patterson, Ark., in the beginning of the month was due to 3 to 4 inches of rain on July 23-24. Additional rains of 3 to 4 inches on Aug. 3-4 produced an additional rise to a crest of 8.5 feet (flood stage, 7 feet) at Patterson on Aug. 7. The Cache remained above flood stage until Aug. 16.

Arkansas Basin--A small intense storm on the 6th caused brief flash flooding on the Salt Fork of the Arkansas River between Pond Creek and Medford, Okla. A total of 3.73 inches of rainfall was reported at Medford, Okla., on the 6th.

Locally heavy thunderstorm activity on the 15th produced some flash flooding in Colorado on Pueblo's north side and Belmont areas. Reports indicated that a basement of one home was flooded, but no major damage was reported. Some of the flooding of streets was due to clogged drains.

Flash flood warnings were issued on the 19th for portions of southern Crowley and northern Otero Counties in southeastern Colorado. Reports of 1.45 inches of rain and some flooding of aroyos and small streams was reported to have occurred 13 miles northwest of Timpas in Otero County.

Brief flash flooding occurred east of Ponca City, Okla., and west of Cleveland, Okla., due to heavy rains on the 22d. The rain averaged about 3 inches from south-central Kansas southeastward to Tulsa, Okla. Slight rises resulted on the Arkansas River at Ponca City, and Ralston, Okla. Minor rises occurred at Heyburn and Keystone Reservoirs.

Heavy rains on the 28th in Colorado caused some flooding along highway 101 in Los Animas County. In downtown Salida, Colo., in southeastern Chaffee County, several homes were evacuated due to high water resulting from 4 inches of rain. Some damage resulted to the local lumber yard.

Red Basin--Heavy thunderstorm activity in southwestern Oklahoma and northwestern Texas late on the 14th and early on the 15th caused flooding on the Wichita River at Wichita Falls, Tex. It crested 2.4 feet above flood stage on the 15th and receded within its banks on the 16th.

The Salt Fork of the Red River at Mangum, Okla., rose to near flood stage on the morning of the 15th. West Cache Creek and Deep Red Run near Randlett, Okla., rose briefly out of their banks on the 15th.

Damage from flash floods resulting from the heavy rains on the 14th-15th in Cotton County, Oklahoma, was estimated at $500,000.

Minor flooding occurred on the Sulphur River in northeastern Texas on the 15th. The crest at Hagansport, Tex., was 1.5 feet above flood stage.

WEST GULF OF MEXICO DRAINAGE

Above normal rainfall during August over the upper Trinity and upper Brazos River Basins ended the severe to extreme drought conditions and produced moderate to sharp rises on major streams. Bushy Elm Creek overflowed east of Muenster, Tex., during the morning of the 14th. Water was reported 3 feet deep around a trailer court east of Muenster. Joes Creek in north Dallas also overflowed, stalling cars with the water rising above curb level in a shopping center on the morning of the 14th. Heavy rains beginning during the night of the 23d caused Clear Fork, a tributary of the Brazos, above Possum Kingdom Reservoir, to rise out of its banks at Leuders, Tex., on the 24th.

Rainfall of 2 to 5 inches during the evening of the 1st and the morning of the 2d caused about 5 feet of overflow on the San Saba River at San Saba, Tex., on the 2d. No significant damages resulted from this overflow. A general rain of 2 to 4 inches on the 11th-12th caused the Llano River at Llano, Tex., to overflow its banks. It remained about 2 feet above flood stage on the 12th-13th. There was no significant damage.

Heavy rains on the 5th-6th caused minor flooding on the Navidad River at Ganado, Tex., and on the Lavaca River at Edna, Tex. The heaviest rains occurred on the 6th with totals ranging from 2 to 4 inches. The flooding on the 6th-8th was restricted to lowlands and no significant damage was reported.

Heavy rainfall over the San Antonio, Tex., area on the 5th-6th and 12th-13th caused considerable flash flooding with heavy property damage and six deaths. The heavier rainfall occurred mainly west and north of San Antonio over the Medina and Nueces River basins. Most of the water above the Medina dam was impounded resulting in water coming over the spillway for the first time since 1961. The six deaths resulted when motorists attempted to ford flooded streams. Property damage, including damage to roads and bridges, was estimated at $1 million or more.

The heavy rains over the middle and upper Nueces Basins during the first week of August and near the middle of the month, caused flooding along most of the tributaries and main streams. The rainfall during the first period ranged from 4 to 7 inches in the Nueces Basin. Water from the Nueces, Frio, and Atascosa Rivers combined to cause moderate flooding on the Nueces from Three Rivers, Tex., to Lake Corpus Christi beginning on the 11th and 12th. Rains over

2 to 4 inches on the morning of the 1st caused flash flooding on lower Hondo Creek in Medina County, with a 9-foot rise above Hondo, Tex.

Up to 15 inches of rain on the morning of the 11th in the upper Nueces caused flash flooding on the West Nueces in the Uvalde, Tex., area and above. Very heavy rains on the morning of the 12th caused flash flooding on Hondo and Seco Creeks. Val Verde Creek tributary to Hondo Creek, reported its highest flood since 1919. Extensive flooding isolated the town of D'Hanis on the 13th, cutting off the escape for more than 300 persons, about half the population, who took refuge in second-story buildings. More than 1,000 persons evacuated from D'Hanis and Hondo. Two drownings occurred in Sabinal River near Utopia and one on a flooded road in Medina County. Extensive flooding entered the Frio, augmented by water which came down the Leona River from near Uvalde, and moved down past Derby on the 14th and 15th and reached Fowlerton on the 16th, Tilden on the 17th, Calliham on the 18th, and Three Rivers on the 19th. The flooding on the lower Frio was comparable to that following Hurricane Beulah in September 1967, and was about 3-1/2 feet lower than the flood of 1932. In Tilden, most streets and roads were closed, with water up to 2-1/2 feet deep in city streets, and 200 persons were displaced. Water from the Frio entered the town of Three Rivers and caused some street flooding.

Moderate flooding occurred along the Nueces during most of August. The crests ranged from 7 feet above flood stage at Uvalde, Tex., on the 11th to 17 feet above flood stage near Mathis, Tex., on the 23d. The extreme lower Nueces was in flood for about 4 weeks from early in the second week of August to near the end of the first week of September. At Calallen, Tex., the crest on the 26th was 3.6 feet above flood stage.

Drainage flooding resulted from very heavy rains near the Texas coast in the first week. The heaviest rainfall totaled 14 inches at Robstown on the 2d and 3d and caused extensive street flooding and evacuation of 400 persons from their homes. Flash flooding occurred repeatedly from rains ranging up to 7 to 9 inches in Corpus Christi and in the area within about 25 miles. Streets were heavily flooded in parts of Corpus Christi on the 2d and again on the 5th, with up to 3 feet of water on many residential streets. Damage was extensive to automobiles.

The total damages in the Nueces Basin were estimated at $1.7 million. There were three deaths as a direct result of floods.

GULF OF CALIFORNIA DRAINAGE

Colorado Basin--Flash floods were frequent during August in the San Pedro River basin, and in the vicinity of Tucson, Ariz. Sharp rises occurred in one or both of these areas on 26 days. Flooding occurred at other points in southeastern Arizona but the frequency of floods in those areas was not as high. Several small streams in the Tucson area, that generally have flow only once every 2 or 3 years, had as many as four peaks during August. The U. S. Geological Survey reported the highest flow during 6 to 10 years of record at 13 stations in southeastern Arizona.

Thirteen people were stranded in Harquahala Valley, 70 miles west of Phoenix, Ariz., on the 19th as flood water runoff from the Big Horn Mountains threatened to rip structures from foundations during the evening. One rancher reported the flooding was the worst he had ever seen in the valley. In Tucson, Ariz., runoff water was estimated to be the worst in 13 years causing extensive damage to county roads and city streets. Heavy rain through the Mohave Valley during the late night of the 19th closed all highways as flash floods occurred in almost every wash. Damage was estimated at $100,000.

Heavy rain on the 20th in Casa Grande isolated some subdivision homes. The Gila River near Coolidge, Ariz., ran bankfull due to 1.55 inches of rain in 1-1/2 hours. Runoff from Sacaton and Superstition Mountains closed many county roads. Heavy rain in the Wenden, Ariz., area turned washes and roadways into swirling turbulent waves of water. Sections of Bright Angel Trail in Grand Canyon National Park washed out. Casa Grande was flooded again early on the evening of the 21st. Heavy flooding occurred at Safford, Pima, and Thatcher, Ariz., due to heavy rain (1.89 inches at Safford in 55 minutes). Many road closures were reported in Maricopa County. Local flooding occurred in Somerton, Ariz.

The total damages from flash floods in Arizona during August were estimated at around $2 million by the Soil Conservation.

GREAT BASIN

Flash flooding occurred at many places throughout Utah and at a few places in Nevada during August. The most damaging flood in Utah occurred in the vicinity of Minersville on the 21st, when a diversion canal was damaged by debris. A school and several residences were flooded. This overflow resulted from 2.2 inches of rain that occurred within a 45-minute period.

Thundershower activity caused flash flooding at Genoa, Nev., on the 5th. Flood damages were estimated at many thousands of dollars.

ALASKA

Heavy rainfall on Aug. 6-9 caused major flooding on the Matanuska and Susitna Rivers.

The Matanuska River near Palmer, Alaska, crested at a record stage of 13.3 feet on the 10th. This was the highest stage recorded at Palmer since records began in 1949. The previous highest stage was 12 feet recorded in 1949. Analysis of the flood hydrograph for the Matanuska River revealed that a natural earth dam had burst in the upper headwaters of Granite Creek. This lake breakout resulted in additional huge volume of waters that surged across the flood plain of the Matanuska River causing major erosion and high water damages.

The Susitna River exceeded flood stage near Sunshine, Alaska, on the 10th. The main flood damage was the washing out of railroad tracks. Washouts were reported by the Alaska Railroad at Houston, Alaska, near the Little Susitna River and in two areas along the Susitna River.

The heavy rainfall on the 6th-9th in the Anchorage, Alaska, area caused damage to Ship Creek Bridge near Ft. Richardson's main gate on the Glenn Highway. The bridge was closed by the Highway Department. The U. S. Army installed a Bailey bridge to maintain traffic. A dirt access road was washed out by Peters Creek near Mile 21 on the Glenn Highway, isolating three homes.

Damage from flash flooding in south-central Alaska was quite extensive. Because of the steep gradient of the Matanuska River, streamflow velocities were extremely high causing erosional damage, such as highway and bridge abutment washouts, as well as to the flood plain. There were approximately 124 houses,

trailer homes, and business establishments that suffered some degree of flood damage. The Alaska Disaster Office estimated the total flood damage at $5.8 million, making this Alaska's second most damaging flood.

Heavy rainfall on the north and west sides of the Alaska range caused minor flooding on the Kuskokwim and Tanana Rivers between the 10th-14th. These minor overflows were due to rainfall that came from the same storm that caused major flooding along the Matanuska and Susitna Rivers.

The Kuskokwim River exceeded flood stage at Nikolai, Alaska, during the evening of the 10th and crested 24 hours later 0.5 foot above flood stage. Approximately one-half of the village was under water. At McGrath, the river crested at a stage of 21.5 feet (near bankfull) on the 15th. The crest moved downstream slowly, reaching the Bethel area on the 20th. The Tanana River crested at Big Delta at 67.5 feet, 0.5 foot below flood stage on the 11th. The crest moved downstream reaching Harding Hill on the 12th and Nenana on the 13th. The crest at Nenana was almost 1 foot above flood stage. There was no reported damage at Nenana and although water entered houses at Nikolai, the extent of damage is not known.

PUERTO RICO

Heavy rains over the eastern portion of Puerto Rico on the 23d-24th caused flooding along the Humacao, Valenciano, Gurabo, and Munabo Rivers early on the 24th.

The heavy rains were due to a tropical depression that moved through the northeastern portion of the island on the 24th. The heaviest rainfall was centered around Humacao and the southeastern coastal areas, where 6.7 inches occurred late on the 23d and early on the 24th. A total of 9.19 inches fell during the week ending the 27th. Less than 1 inch occurred in the western portion of the island and little or none in the northwestern coastal plain. The tropical depression, after passing Puerto Rico, later developed into tropical storm Doria that caused heavy rains and major flooding in New Jersey.

Some residents of Juncos and Gurabo were evacuated by the Civil Defense. Minor damages were reported to houses and agriculture in this area.

FLOOD STAGE DATA

(All dates in August unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From—	To—	Crest * Stage	Date
	Ft.			Ft.	
ATLANTIC SLOPE DRAINAGE					
Ramapo: Mahwah, N. J.	8	28	29	10.8	28
Pompton Lakes, N. J.	2	28	29	3.0	28
Pompton: Pompton Plains, N. J.	12	28	29	H15.5	28
Passaic: Chatham, N. J.	6	28	Sept. 3	8.2	28
Little Falls, N. J.	7	28	31	8.2	29
Millstone: Blackwells Mills, N. J.	7	27	29	18.7	28
Raritan: Manville, N. J.	12	27	29	23.8	28
Bound Brook, N. J.	8	27	29	H19.5	28
Assunpink Creek:					
Trenton, N. J.	7	27	29	13.5	28
North Branch Rancocas Creek:					
Pemberton, N. J.	2.7	27	30	4.2	28
Neshaminy Creek:					
Langhorne, Pa.	9	27	28	14.8	28
Brandywine Creek:					
Chadds Ford, Pa.	9	27	28	11.5	28
Lynches: Effingham, S. C.	14	24	25	14.8	24
Little Pee Dee:					
Galivants Ferry, S. C.	9	21	26	# 9.8	23
Waccamaw: Conway, S. C.	7	18	Sept. 1	# 8.0	19
Pee Dee: Peedee, S. C.	19	20	22	#19.5	21-22
North Fork Edisto:					
Orangeburg, S. C.	8	July 31	4	9.7	2
		17	24	# 9.3	19
Edisto: Givhans Ferry State Park, S. C.	10	6	12	#10.5	8
		18	Sept. 2	#12.8	23-24
Savannah: Clyo, Ga.	11	20	27	#12.3	24-25
Ogeechee: Eden, Ga.	9	23	23	# 9.0	23
Oconee: Milledgeville, Ga.	20	17	17	24.2	17
Satilla: Waycross, Ga.	16	20	24	16.5	21
EAST GULF OF MEXICO DRAINAGE					
Apalachicola:					
Blountstown, Fla.	15	2	7	E17.4	4
Pearl: Jackson, Miss.	18	July 29	5	23.9	July 31
Bogalusa, La.	15	2	9	15.95	4
MISSISSIPPI SYSTEM					
Ohio Basin					
Licking: Salversville, Ky.	19	4	5	21.0	5

River and station	Flood stage	Above flood stages -dates From—	To—	Crest * Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM - Continued					
White Basin					
Cache: Patterson, Ark.				7.5	July 27
	7	July 26	16	8.5	7
Red Basin					
Wichita: Wichita Falls, Tex.	18	15	16	20.4	15
Sulphur: Hagansport, Tex.	14	15	15	45.5	15
WEST GULF OF MEXICO DRAINAGE					
San Saba: San Saba, Tex.	24	2	2	29	2
Llano: Llano, Tex.	12	12	13	M	M
Navidad: Ganado, Tex.	21	6	8	23.0	7
Lavaca: Edna, Tex.	21	6	7	22.9	7
Turkey Creek:					
Crystal City, Tex.	8	2	9	12.3	4
		13	21	14.6	15
Atascosa: Whitsett, Tex.	20	7	8	23.5	7
Frio: Derby (Nr.), Tex.	6	3	5	8.4	4
		7	7	7.1	7
		13	21	23.0	15
Tilden, Tex.	12	7	12	20.6	8
		17	27	30.45	17
Calliham, Tex.	12	9	11	19.85	9
		17	27	36.2	18
Nueces: Uvalde 9 SW, Tex.	11	11	12	18.1	11
Crystal City, Tex.	4	12	18	15.0	13
Asherton (Nr.), Tex.	20	3	6	27.5	5
		14	17	30.0	15
Cotulla, Tex.	15	5	9	18.1	5
		14	23	22.8	17
Tilden 11 S, Tex.	14	9	Sept. 4	20.1	10
				22.05	21
Three Rivers 2 S, Tex.	25	11	Sept. 1	33.0	15
				40.5	23
Mathis 3 SW, Tex.	15	8	Sept. 3	26.0	14
				32.1	23
Calallen, Tex.	7	7	7	7.0	7
		9	Sept. 5	8.7	17
				10.6	26
ALASKA					
Matanuska: Palmer (nr.), Alaska	U	M	M	13.33	10
Susitna: Sunshine, Alaska	60	M	M	62.2	10
Kuskokwim: Nikolai, Alaska	98	10	11	98 5	11
Tanana: Nenana, Alaska	12	11	14	12 8	13

* Provisional

\# Highest Stage Observed

M Missing

U Unknown

H High water mark

_ Exceeded previous maximum stage of record

RAWINSONDE DATA

Average monthly values

Columns: Standard pressure surface (mb); No. of observations; Dynamic height; Temperature; Dew Point †; Resultant Wind: Direction, Speed M.p.s.

ALBANY, N. Y. — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	66	15.9	14.1	25	.9
1000	31	148			27	1.2
950	31	586	16.5	10.3	30	3.9
900	31	1,046	14.6	7.6	30	5.1
850	31	1,527	12.1	3.6	30	5.7
800	31	2,034	10.1	-1.2	29	6.8
750	31	2,569	7.8	-4.7	29	8.4
700	31	3,135	4.7	-8.7	28	8.9
650	31	3,735	1.5	-11.4	28	10.9
600	31	4,376	-2.0	-16.0	28	12.1
550	31	5,063	-6.1	-20.7	27	11.7
500	31	5,802	-10.6	-25.4	27	12.9
450	31	6,605	-15.8	-30.3	27	14.5
400	31	7,482	-22.0	-36.6	26	15.8
350	31	8,454	-28.7	-42.1	27	18.3
300	30	9,535	-37.3	-49.4	27	20.0
250	30	10,769	-46.9		27	21.8
200	30	12,219	-55.1		28	23.8
175	30	13,067	-57.9		27	21.2
150	30	14,032	-60.4		27	18.1
125	30	15,166	-61.1		27	13.9
100	29	16,552	-59.7		27	8.7
80	29	17,956	-57.4		28	4.0
70	29	18,803	-55.8		28	1.8
60	29	19,788	-54.5		05	.7
50	29	20,960	-53.1		08	2.4
40	29	22,404	-51.4		08	4.7
30	27	24,284	-48.5		08	6.2
25	23	25,496	-46.5		09	8.0
20	22	26,982	-44.6		09	8.6
15	19	28,923	-42.4		09	10.3
10	8	31,683	-38.8			
7						
5						

ALBUQUERQUE, N. MEX. — 841 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	1,619	17.1	11.0	04	1.1
1000	31	110				
950	31	562				
900	31	1,033				
850	31	1,526				
800	31	2,045	16.8	7.0	15	.4
750	31	2,592	13.6	4.0	21	.2
700	31	3,170	9.7	2.0	32	.9
650	31	3,782	5.7	-2.1	01	1.5
600	31	4,432	.9	-6.0	03	3.3
550	31	5,125	-4.0	-11.1	03	4.3
500	31	5,872	-8.3	-19.5	02	3.9
450	31	6,682	-13.2	-27.2	03	4.0
400	31	7,570	-18.6	-34.4	02	4.6
350	31	8,555	-25.7	-42.0	01	5.7
300	31	9,650	-34.4	-48.3	36	6.9
250	31	10,899	-44.3		36	9.3
200	30	12,361	-54.8		36	10.1
175	30	13,204	-60.4		36	9.1
150	30	14,153	-65.7		36	6.6
125	30	15,250	-69.5		01	4.4
100	29	16,584	-67.4		05	3.5
80	27	17,938	-64.5		07	5.9
70	27	18,760	-62.2		08	7.1
60	27	19,718	-60.0		08	8.4
50	27	20,864	-57.6		09	10.6
40	27	22,282	-55.0		09	11.6
30	24	24,138	-52.1		09	14.2
25	22	25,316	-50.2		09	15.0
20	22	26,782	-47.6		09	16.5
15	18	28,692	-45.4		09	16.8
10	16	31,420	-41.9		09	18.7
7	5	33,859	-37.9			
5						

AMARILLO, TEXAS — 894 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	30	1,095	17.5	13.8	20	3.2
1000	30	121				
950	30	569				
900	30	1,035				
850	30	1,525	18.2	12.5	21	7.4
800	30	2,045	15.3	9.5	22	4.7
750	30	2,590	12.0	5.5	19	1.7
700	30	3,164	8.0	1.4	12	1.6
650	30	3,772	4.1	-3.1	10	1.4
600	30	4,419	.1	-7.9	09	1.4
550	30	5,112	-3.8	-15.6	09	1.5
500	30	5,858	-8.3	-19.8	07	.7
450	30	6,669	-13.2	-27.1	35	.9
400	30	7,556	-19.2	-32.7	36	2.0
350	30	8,539	-26.1	-40.0	36	3.0
300	30	9,632	-34.6	-47.9	36	3.9
250	30	10,879	-44.8		01	4.4
200	30	12,337	-55.2		36	5.3
175	28	13,174	-59.6		35	5.2
150	28	14,127	-64.2		36	5.5
125	28	15,234	-67.2		01	4.8
100	26	16,579	-66.6		05	4.2
80	24	17,942	-63.2		07	5.4
70	24	18,768	-61.0		08	7.5
60	24	19,730	-59.3		08	8.3
50	24	20,878	-57.1		09	9.9
40	24	22,298	-54.9		09	12.3
30	24	24,151	-51.5		09	14.3
25	24	25,340	-49.6		09	16.3
20	24	26,810	-47.5		09	16.6
15	24	28,726	-44.3		09	16.9
10	14	31,464	-41.5			
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* ANCHORAGE, ALASKA — 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	45	11.1	8.5	15	2.6
1000	31	72			16	3.2
950	31	502	11.0	6.4	18	2.2
900	31	952	8.3	4.4	19	1.6
850	31	1,422	5.4	2.0	17	2.7
800	31	1,915	2.5	-.9	16	3.5
750	31	2,435	-.3	-3.6	17	3.6
700	31	2,985	-3.2	-8.1	19	3.3
650	31	3,568	-6.3	-12.7	21	3.9
600	31	4,191	-9.8	-16.6	23	4.3
550	31	4,858	-13.8	-20.8	23	5.0
500	31	5,576	-18.4	-26.2	24	5.5
450	31	6,354	-23.5	-31.8	25	6.6
400	31	7,205	-29.5	-37.3	25	7.7
350	31	8,147	-36.5	-43.3	25	9.3
300	31	9,195	-44.6	-44.3	26	10.1
250	31	10,391	-53.3		26	10.5
200	31	11,828	-51.4		26	9.0
175	31	12,699	-49.9		26	7.8
150	31	13,707	-50.1		26	7.2
125	30	14,894	-50.3		25	6.1
100	30	16,349	-50.4		26	5.0
80	30	17,806	-50.2		26	2.8
70	30	18,680	-49.7		25	2.3
60	29	19,684	-49.6		24	1.7
50	28	20,879	-49.4		25	1.2
40	28	22,343	-48.9		17	.9
30	25	24,240	-47.4		10	1.8
25	21	25,450	-46.6		12	.8
20	15	26,927	-46.0		11	1.2
15	5	28,858	-43.4			
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* ANNETTE, ALASKA — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	30	37	12.4	11.2	13	3.1
1000	30	111			13	2.8
950	30	541	10.3	8.3	15	6.0
900	30	990	8.1	5.7	16	7.4
850	30	1,460	5.8	2.6	17	7.0
800	30	1,955	3.9	-1.0	18	6.2
750	30	2,478	1.5	-5.1	19	5.9
700	30	3,031	-1.5	-9.3	18	6.5
650	30	3,618	-5.0	-12.8	19	6.2
600	30	4,243	-8.7	-18.6	19	7.8
550	30	4,912	-12.9	-22.7	19	7.4
500	30	5,632	-17.6	-27.5	20	7.7
450	30	6,413	-23.0	-33.9	20	7.7
400	30	7,266	-29.0	-40.7	20	7.3
350	30	8,209	-36.3	-44.4	21	7.7
300	30	9,257	-44.4	-50.0	22	8.2
250	30	10,462	-49.7		22	10.0
200	30	11,915	-51.6		22	11.7
175	30	12,783	-51.3		22	10.5
150	30	13,783	-51.8		22	9.6
125	30	14,962	-53.0		23	8.0
100	30	16,400	-53.2		23	7.0
80	30	17,839	-52.8		22	4.6
70	30	18,702	-52.4		23	4.0
60	29	19,702	-52.3		22	2.4
50	28	20,882	-52.1		21	1.3
40	28	22,331	-51.2		14	1.1
30	28	24,208	-49.6		08	2.1
25	27	25,403	-48.5		07	2.4
20	25	26,883	-46.9		07	3.5
15	24	28,814	-44.4		08	4.5
10	19	31,548	-40.9		08	4.9
7	16	33,992	-36.3		09	7.4
5	10	36,356	-32.1			

ATHENS, GEORGIA — 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	246	20.3	19.4	03	1.5
1000	31	147				
950	31	593	21.1	17.6	05	2.0
900	31	1,061	18.6	14.8	04	1.0
850	31	1,550	15.7	10.3	34	.5
800	31	2,063	13.0	7.3	27	1.3
750	31	2,604	10.2	3.2	27	2.0
700	31	3,175	6.9	-1.3	27	2.4
650	31	3,782	4.0	-6.5	26	3.3
600	31	4,429	.7	-10.7	25	4.1
550	31	5,123	-3.3	-17.2	25	3.8
500	31	5,870	-8.0	-21.9	24	4.1
450	31	6,682	-12.8	-28.2	24	4.1
400	31	7,570	-18.9	-33.2	24	5.1
350	31	8,554	-25.8	-41.2	25	5.9
300	31	9,649	-34.3	-49.7	26	6.7
250	31	10,898	-44.4		25	8.0
200	31	12,355	-56.1		26	8.5
175	30	13,193	-61.8		27	7.8
150	30	14,134	-67.3		27	5.8
125	30	15,225	-69.8		29	2.0
100	30	16,563	-66.2		06	1.7
80	30	17,926	-63.3		08	4.7
70	30	18,750	-61.5		08	6.9
60	30	19,711	-59.3		08	9.9
50	30	20,861	-56.7		09	11.6
40	30	22,284	-54.1		09	13.1
30	28	24,142	-51.0		09	14.4
25	27	25,332	-49.6		09	15.8
20	27	26,801	-47.2		09	17.4
15	26	28,715	-44.7		09	18.6
10	20	31,453	-40.0		09	20.3
7	5	33,874	-38.0			
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* BARROW, ALASKA — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	8	.2	-.7	33	.8
1000	31	110	-.5	-1.8	31	.9
950	31	520	-.6	-3.1	29	2.0
900	31	952	-1.0	-5.2	28	2.4
850	31	1,408	-2.1	-6.4	28	3.1
800	31	1,888	-3.9	-8.7	28	3.8
750	31	2,396	-6.2	-12.5	28	4.5
700	31	2,933	-9.0	-14.6	27	5.6
650	31	3,504	-12.3	-18.0	27	6.5
600	31	4,112	-15.8	-22.7	27	7.2
550	31	4,763	-19.7	-27.7	27	7.1
500	31	5,464	-24.2	-32.6	27	8.4
450	31	6,224	-29.7	-37.5	26	9.4
400	31	7,053	-36.0	-42.6	26	9.9
350	31	7,970	-42.8	-45.7	26	10.5
300	31	8,992	-49.8		26	10.8
250	31	10,174	-52.0		26	10.7
200	31	11,639	-46.7		27	8.6
175	31	12,526	-46.5		27	7.9
150	31	13,550	-46.3		27	6.9
125	31	14,761	-46.5		27	5.8
100	31	16,242	-46.6		27	5.1
80	31	17,722	-46.6		27	3.6
70	29	18,610	-46.3		27	2.9
60	29	19,635	-46.3		27	2.0
50	29	20,847	-46.1		27	1.2
40	29	22,332	-46.0		32	.3
30	29	24,249	-45.2		02	.2
25	27	25,455	-44.7		08	1.1
20	14	26,950	-44.1		10	1.0
15						
10						
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BARTER IS., ALASKA — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	15	1.3	.4	28	1.2
1000	31	94	1.2	-.3	28	2.2
950	31	509	2.0	-1.8	29	3.1
900	31	945	1.1	-4.0	28	3.8
850	31	1,403	-.5	-6.6	28	5.2
800	31	1,886	-2.6	-9.6	28	5.5
750	31	2,397	-4.8	-12.4	28	6.3
700	31	2,936	-7.9	-14.5	28	7.0
650	31	3,509	-10.8	-19.0	28	7.4
600	31	4,121	-14.3	-23.4	28	8.5
550	31	4,776	-17.9	-27.5	27	9.2
500	31	5,483	-22.4	-31.3	27	10.6
450	31	6,249	-27.8	-36.8	27	10.8
400	31	7,085	-34.0	-43.4	27	12.8
350	31	8,009	-40.7	-47.8	26	14.4
300	31	9,040	-47.9		26	16.0
250	31	10,230	-51.5		26	15.1
200	30	11,696	-46.6		26	12.5
175	30	12,583	-46.0		26	11.3
150	30	13,610	-45.8		26	10.1
125	30	14,823	-46.0		26	8.4
100	30	16,309	-46.0		26	6.7
80	30	17,794	-45.8		26	4.9
70	30	18,684	-45.8		26	3.6
60	30	19,712	-45.6		27	2.7
50	30	20,928	-45.2		27	1.8
40	29	22,423	-45.0		26	.4
30	28	24,343	-44.3		08	1.1
25	27	25,560	-43.6		08	1.4
20	27	27,064	-42.6		09	1.8
15	24	29,024	-40.4		09	2.0
10	22	31,819	-36.1		09	2.8
7	5	34,309	-32.1			
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BETHEL, ALASKA — 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	25	39	8.9	7.8	28	1.3
1000	26	65			26	1.6
950	26	490	8.3	4.4	26	1.1
900	26	935	6.3	2.0	20	1.4
850	26	1,402	3.9	-1.3	20	1.7
800	26	1,893	1.5	-5.1	21	1.2
750	26	2,411	-1.3	-9.1	20	1.0
700	26	2,958	-4.1	-11.6	12	.6
650	26	3,540	-7.2	-16.5	20	.4
600	26	4,160	-10.7	-20.6	23	1.2
550	26	4,824	-14.7	-24.5	23	2.1
500	26	5,539	-19.3	-28.1	24	2.9
450	26	6,315	-24.6	-33.9	25	3.6
400	26	7,162	-30.7	-40.9	25	5.1
350	26	8,100	-37.5	-45.6	25	6.3
300	26	9,144	-45.3		25	8.4
250	26	10,341	-51.9		25	10.3
200	26	11,790	-49.7		26	10.8
175	26	12,666	-48.7		26	10.0
150	26	13,679	-49.0		27	9.2
125	26	14,875	-49.5		27	7.5
100	26	16,336	-49.6		27	6.1
80	26	17,797	-49.5		27	4.4
70	24	18,670	-49.2		27	2.7
60	23	19,685	-49.3		28	1.3
50	23	20,881	-49.4		27	.8
40	23	22,345	-48.8		07	.4
30	23	24,244	-46.8		09	1.1
25	22	25,453	-46.2		09	1.7
20	20	26,951	-44.8		08	2.2
15	17	28,884	-42.5		09	3.5
10	5	31,719	-39.5			
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* BISMARCK, N. DAK. — 956 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	503	14.4	11.1	11	1.7
1000	31	117				
950	31	554			14	1.8
900	31	1,017	19.2	8.5	20	3.2
850	31	1,508	17.5	5.1	25	2.4
800	31	2,023	14.2	1.3	29	3.0
750	31	2,565	11.0	-3.6	29	4.6
700	31	3,137	7.4	-7.8	30	6.0
650	31	3,743	3.5	-10.9	30	7.2
600	31	4,388	-.4	-16.4	31	8.1
550	31	5,078	-4.9	-21.5	31	8.0
500	31	5,820	-9.9	-26.5	31	8.2
450	31	6,624	-15.5	-31.6	30	9.4
400	31	7,502	-22.1	-36.8	30	10.9
350	31	8,472	-29.5	-43.1	30	12.4
300	31	9,550	-38.2	-50.3	31	13.6
250	31	10,781	-47.1		30	15.8
200	31	12,231	-54.7		31	18.6
175	31	13,081	-57.4		30	17.8
150	31	14,048	-60.4		30	14.3
125	31	15,179	-62.1		30	11.0
100	31	16,564	-60.6		31	7.0
80	31	17,959	-58.7		32	4.4
70	31	18,801	-57.1		35	2.7
60	31	19,781	-55.3		03	2.3
50	31	20,951	-53.2		05	2.6
40	31	22,393	-51.5		06	3.4
30	30	24,276	-48.7		07	5.0
25	28	25,482	-47.0		08	5.7
20	28	26,969	-44.3		08	7.2
15	26	28,907	-41.9		09	7.0
10	25	31,675	-38.3		09	10.0
7	17	34,152	-33.4		08	12.2
5	8	36,546	-29.8			

BOISE, IDAHO — 914 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	871	19.7	5.8	13	2.8
1000	31	86				
950	31	535				
900	31	1,004	23.4	5.5	13	1.9
850	31	1,503	23.2	2.0	15	.5
800	31	2,028	19.8	-.4	23	1.1
750	31	2,580	15.7	-3.2	24	2.1
700	31	3,160	11.3	-7.1	24	3.5
650	31	3,774	6.6	-9.9	24	4.9
600	31	4,424	1.3	-12.5	23	5.8
550	30	5,118	-4.1	-16.2	23	6.3
500	30	5,862	-9.7	-21.1	24	7.0
450	30	6,668	-14.8	-28.1	23	7.8
400	30	7,548	-21.2	-34.4	24	9.6
350	30	8,523	-28.3	-39.7	24	11.7
300	30	9,608	-36.4	-47.3	24	14.6
250	30	10,848	-45.5		24	17.2
200	30	12,305	-54.8		24	19.2
175	30	13,151	-59.0		24	17.7
150	30	14,108	-63.2		24	12.3
125	30	15,223	-65.2		23	8.0
100	30	16,583	-64.2		22	4.7
80	30	17,958	-61.3		18	1.5
70	30	18,791	-59.5		13	1.5
60	30	19,761	-57.5		09	2.5
50	30	20,918	-55.6		08	3.7
40	30	22,346	-53.6		08	4.5
30	30	24,208	-50.9		08	6.9
25	30	25,400	-49.2		08	7.9
20	29	26,873	-47.0		08	8.5
15	29	28,787	-45.0		09	9.9
10	24	31,513	-41.2		09	12.1
7	11	33,976	-37.3			

BOOTHVILLE, LA. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	1	25.5	23.6	09	.3
1000	31	128	26.3	23.9	06	.3
950	31	580	23.2	20.6	02	.5
900	31	1,051	20.1	17.1	10	.1
850	31	1,543	16.8	13.2	19	.3
800	31	2,058	14.1	9.9	20	.7
750	31	2,601	11.1	6.3	25	.9
700	31	3,175	8.0	1.1	23	1.4
650	31	3,784	4.8	-2.5	26	1.2
600	31	4,433	1.3	-7.2	26	1.2
550	31	5,129	-2.7	-12.4	25	1.0
500	31	5,878	-7.3	-17.1	21	.7
450	31	6,692	-12.3	-23.2	25	.6
400	31	7,582	-18.0	-29.7	22	.7
350	31	8,570	-24.9	-35.6	22	1.6
300	31	9,669	-33.4	-44.5	21	1.9
250	31	10,923	-43.6		18	2.3
200	30	12,385	-55.6		17	2.0
175	30	13,224	-62.1		16	2.0
150	30	14,160	-69.3		14	1.6
125	30	15,236	-72.3		07	1.9
100	30	16,560	-68.5		08	5.9
80	30	17,908	-65.1		08	7.5
70	30	18,727	-62.6		08	10.5
60	30	19,682	-60.7		08	12.8
50	29	20,824	-58.1		09	15.4
40	28	22,238	-55.9		09	16.8
30	27	24,080	-52.5		09	18.1
25	26	25,264	-50.6		09	19.4
20	25	26,726	-47.9		09	21.5
15	21	28,630	-45.2		09	23.0
10	11	31,349	-41.6			
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* BROWNSVILLE, TEXAS — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	7	23.8	21.8	12	.4
1000	31	124	25.2	23.5	16	2.3
950	31	574	22.3	20.3	17	6.5
900	31	1,044	19.9	15.1	17	6.3
850	31	1,536	17.3	9.7	16	5.7
800	31	2,051	14.3	6.1	15	5.0
750	31	2,594	11.3	1.3	15	4.7
700	31	3,167	7.8	-3.4	15	4.5
650	31	3,775	4.3	-8.3	14	4.1
600	31	4,422	.6	-12.1	14	3.3
550	31	5,115	-3.4	-16.5	14	2.8
500	31	5,863	-7.8	-21.6	13	2.3
450	31	6,675	-12.6	-26.3	12	2.7
400	31	7,564	-18.6	-31.6	12	2.7
350	31	8,549	-25.6	-38.0	11	2.1
300	31	9,646	-33.9	-47.1	09	2.0
250	31	10,896	-44.1		08	1.6
200	31	12,354	-56.1		04	1.1
175	31	13,191	-62.3		04	1.1
150	31	14,128	-68.5		05	1.5
125	31	15,208	-72.3		06	3.6
100	30	16,527	-69.3		08	7.0
80	29	17,866	-66.9		08	10.8
70	29	18,679	-64.0		09	12.4
60	29	19,628	-61.8		09	13.6
50	29	20,764	-59.5		08	16.1
40	28	22,168	-57.4		08	18.0
30	27	24,003	-53.6		09	21.5
25	25	25,179	-51.4		09	22.2
20	25	26,641	-47.9		09	22.9
15	20	28,558	-44.7		09	23.1
10	14	31,298	-40.9		09	26.1
7	5	33,754	-38.4			

BUFFALO, N. Y. — 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	218	16.1	13.6	21	2.3
1000	31	151				
950	31	590	17.0	11.2	26	4.1
900	31	1,050	14.6	7.5	27	5.0
850	31	1,531	12.0	3.5	27	6.5
800	31	2,038	10.0	-2.5	28	7.1
750	31	2,572	7.7	-5.6	28	8.3
700	31	3,138	4.8	-9.6	28	8.3
650	31	3,739	1.6	-13.4	28	9.5
600	31	4,379	-2.0	-18.3	28	10.0
550	31	5,066	-6.3	-23.9	28	10.5
500	31	5,804	-11.3	-28.6	28	11.7
450	30	6,602	-16.6	-33.6	28	12.3
400	30	7,477	-22.7	-38.1	28	13.0
350	30	8,446	-29.8	-44.9	27	14.4
300	30	9,523	-37.9	-51.3	27	15.6
250	30	10,755	-47.1		27	18.6
200	30	12,205	-54.8		27	20.6
175	30	13,053	-57.9		27	18.5
150	29	14,016	-59.8		27	16.7
125	29	15,153	-60.5		28	14.6
100	28	16,548	-59.8		28	9.4
80	28	17,949	-57.7		29	4.7
70	28	18,796	-55.7		30	2.0
60	28	19,780	-54.4		36	.9
50	27	20,953	-53.2		08	2.9
40	27	22,396	-51.9		08	5.3
30	27	24,274	-48.5		08	6.4
25	27	25,479	-46.8		08	7.0
20	23	26,970	-44.8		09	8.4
15	20	28,903	-42.4		09	10.2
10	9	31,667	-38.5			
7						

CAPE HATTERAS, N. C. — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Direction	Speed M.p.s.
SURFACE	31	4	23.4	21.4	01	.8
1000	31	153	24.2	21.2	36	.9
950	31	602	21.7	17.6	32	1.1
900	31	1,070	18.8	14.5	28	1.8
850	31	1,560	16.1	9.7	27	2.7
800	31	2,074	13.5	6.4	26	3.3
750	31	2,615	10.8	1.5	26	3.7
700	31	3,188	7.9	-3.2	26	4.0
650	31	3,797	4.9	-7.9	26	4.2
600	31	4,446	1.4	-13.5	26	4.8
550	31	5,141	-2.7	-17.9	26	5.5
500	31	5,890	-7.4	-23.5	26	6.0
450	31	6,704	-12.1	-28.4	26	6.0
400	31	7,595	-18.0	-33.5	27	5.7
350	31	8,582	-25.1	-40.4	27	6.5
300	31	9,680	-33.5	-48.0	27	7.0
250	31	10,933	-43.6		27	9.0
200	31	12,396	-55.1		27	10.9
175	31	13,238	-60.7		28	10.5
150	31	14,184	-66.3		28	8.9
125	31	15,282	-68.2		28	5.1
100	31	16,629	-65.3		34	1.7
80	30	17,999	-61.9		08	2.7
70	30	18,830	-60.0		08	4.5
60	30	19,796	-58.2		08	7.4
50	30	20,951	-55.9		09	9.9
40	29	22,380	-53.1		09	12.1
30	29	24,251	-49.8		09	14.6
25	28	25,452	-47.8		09	15.2
20	26	26,931	-45.2		09	15.8
15	24	28,861	-43.1		09	16.8
10	19	31,618	-39.9		09	18.7
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Columns: Standard pressure surface (mb); No of observations; Dynamic height; Temperature; Dew Point †; Resultant Wind: Direction, Speed M.P.H.

• CARIBOU, MAINE — 99[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	191	13.2	10.6	26	1.7
1000	31	115				
950	31	548	13.2	8.4	27	5.0
900	31	1,003	11.9	6.2	27	7.2
850	31	1,479	9.1	3.2	27	8.4
800	31	1,980	6.7	-2.0	27	9.3
750	31	2,508	4.3	-5.3	27	11.0
700	31	3,067	1.8	-10.1	27	12.4
650	31	3,661	-1.7	-13.5	27	12.9
600	31	4,294	-5.2	-17.5	27	14.3
550	31	4,972	-9.1	-22.1	27	16.5
500	31	5,704	-13.6	-26.7	27	17.8
450	31	6,497	-18.7	-32.1	27	17.7
400	31	7,365	-24.8	-38.2	27	19.1
350	31	8,326	-31.6	-43.5	27	19.8
300	31	9,395	-39.6	-50.0	26	21.5
250	30	10,621	-48.1		26	25.0
200	29	12,064	-53.8		26	25.4
175	29	12,917	-55.6		26	23.9
150	29	13,899	-56.4		26	19.4
125	28	15,058	-56.5		26	15.9
100	27	16,474	-56.0		26	9.2
80	27	17,900	-54.1		26	5.2
70	27	18,758	-53.8		27	3.3
60	26	19,751	-53.0		25	1.3
50	26	20,930	-51.9		21	.5
40	26	22,380	-50.7		09	1.3
30	26	24,265	-48.5		09	3.7
25	26	25,469	-46.8		09	5.3
20	26	26,955	-44.9		08	6.0
15	25	28,890	-42.7		09	7.0
10	21	31,657	-38.2		10	9.3
7	12	34,112	-34.6			
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CHARLESTON, S. C. — 1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	13	23.2	21.8	02	1.1
1000	31	146	23.7	22.0	36	.5
950	31	596	22.1	19.1	25	1.2
900	31	1,065	19.4	16.1	25	1.6
850	31	1,556	16.4	12.6	24	1.8
800	31	2,071	13.7	8.7	25	1.9
750	31	2,613	10.8	4.6	25	2.2
700	31	3,186	8.1	-.1	25	2.6
650	31	3,795	4.8	-4.2	25	2.9
600	31	4,444	1.2	-8.1	26	3.3
550	31	5,139	-2.8	-14.1	25	3.6
500	31	5,889	-7.1	-21.4	25	3.5
450	31	6,703	-11.6	-26.5	25	3.2
400	31	7,596	-17.6	-32.7	25	3.0
350	31	8,585	-24.6	-40.0	27	2.7
300	31	9,685	-33.1	-48.2	27	3.9
250	31	10,940	-43.1		28	3.7
200	31	12,405	-55.1		29	4.0
175	31	13,246	-61.3		30	5.1
150	31	14,188	-67.2		30	4.0
125	30	15,280	-69.5		27	1.2
100	30	16,618	-66.8		06	2.3
80	26	17,978	-63.1		07	5.0
70	28	18,803	-61.6		08	7.4
60	28	19,764	-59.3		08	10.4
50	28	20,914	-56.7		09	13.4
40	27	22,339	-53.5		09	14.7
30	27	24,205	-50.1		09	16.2
25	26	25,400	-48.8		09	16.7
20	23	26,875	-46.3		09	17.6
15	22	28,790	-44.3		09	19.8
10	14	31,539	-40.5		09	24.1

CHATHAM, MASS. — 1015 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	16	18.7	16.3	26	2.3
1000	31	140	19.0	13.9	25	[illegible]
950	31	581	17.9	10.3	26	4.7
900	31	1,042	15.8	5.8	25	5.7
850	31	1,526	13.6	1.2	26	6.1
800	31	2,035	11.2	-1.6	26	7.7
750	31	2,571	8.4	-6.5	27	8.5
700	31	3,138	5.1	-9.5	26	9.2
650	31	3,739	1.9	-12.9	26	10.2
600	31	4,381	-1.7	-17.0	26	11.2
550	31	5,069	-5.4	-20.6	26	12.2
500	31	5,610	-9.9	-25.5	26	13.9
450	31	6,615	-15.3	-30.9	26	15.1
400	31	7,494	-21.4	-36.1	26	15.7
350	31	8,469	-28.2	-42.3	26	17.8
300	31	9,553	-36.7	-49.3	26	18.6
250	[illegible]	[illegible],739	-46.4		26	20.3
200	30	12,240	-55.4		27	20.2
175	30	13,084	-59.3		27	20.5
150	30	14,041	-62.7		27	17.3
125	30	15,163	-62.9		26	12.7
100	30	16,542	-60.9		27	7.1
80	30	17,938	-58.3		26	3.0
70	30	18,782	-56.6		23	.9
60	29	19,761	-55.6		10	1.6
50	29	20,927	-54.0		09	4.2
40	29	22,366	-52.1		09	6.0
30	29	24,241	-49.4		09	8.0
25	29	25,441	-47.5		09	9.0
20	29	26,924	-45.6		09	10.3
15	26	28,852	-43.2		09	12.4
10	21	31,596	-39.6		10	14.8
7	12	34,071	-35.6			

CHIHUAHUA, MEXICO — 858 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	1,428	17.3	14.4	19	.1
1000	31	99				
950	31	549				
900	31	1,019				
850	31	1,511	18.0	13.1	20	.5
800	31	2,030	16.3	10.3	[illegible]	1.5
750	31	2,577	12.9	7.8	[illegible]	1.9
700	31	3,154	9.1	4.0	12	1.8
650	31	3,765	5.2	-.5	08	2.4
600	31	4,415	1.3	-5.5	07	2.8
550	31	5,110	-2.7	-10.8	08	2.0
500	31	5,861	-7.0	-17.0	05	1.6
450	31	6,675	-11.9	-21.3	[illegible]	1.5
400	31	7,567	-17.8	-28.4	[illegible]	2.2
350	31	8,556	-24.7	-36.8	03	3.0
300	31	9,656	-33.2	-45.4	01	4.0
250	31	10,909	-43.6		36	5.9
200	31	12,373	-54.9		35	7.7
175	31	13,215	-60.7		35	7.6
150	31	14,160	-67.1		36	5.8
125	31	15,249	-71.1		04	5.3
100	31	16,574	-69.2		07	6.6
80	30	17,918	-65.9		07	9.7
70	30	18,733	-63.7		08	12.2
60	30	19,684	-61.7		09	13.9
50	30	20,820	-59.0		09	16.0
40	30	22,226	-56.9		09	18.5
30	29	24,065	-53.0		09	19.5
25	29	25,245	-50.6		09	20.7
20	25	26,705	-48.4		09	22.8
15	21	28,606	-45.1		08	22.6
10	9	31,321	-42.7			

• COLD BAY, ALASKA — 1007 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	[illegible]	[illegible]	6.9	[illegible]	3.0
1000	30	86			[illegible]	3.1
950	30	[illegible]	7.2	5.0	27	6.1
900	30	954	5.6	3.8	28	6.3
850	30	1,421	4.0	1.5	27	[illegible]
800	30	1,913	2.3	-2.6	27	8.4
750	30	2,433	.2	-5.7	27	8.9
700	30	2,985	-2.1	-10.5	27	[illegible]
650	30	3,570	-5.2	-15.5	27	10.3
600	30	4,195	-8.7	-20.2	27	10.8
550	30	4,865	-12.8	-24.6	27	11.0
500	30	5,585	-17.3	-29.9	27	11.7
450	30	6,367	-22.4	-36.2	27	14.9
400	30	7,223	-28.1	-41.8	28	16.1
350	30	8,171	-34.7	-44.4	28	[illegible]
300	[illegible]	9,229	-41.9	-45.3	27	17.4
250	30	10,448	-47.4		27	18.3
200	30	11,911	-50.7		27	17.4
175	30	12,780	[illegible]		28	16.7
150	29	13,775	-51.5		28	13.9
125	29	14,956	-52.4		27	10.9
100	29	16,398	-52.6		27	8.0
80	29	17,841	-52.2		29	4.9
70	26	18,708	-51.9		28	3.0
60	26	19,708	-51.6		27	2.8
50	26	20,892	-51.3		25	1.2
40	25	22,345	-50.0		17	.1
30	24	24,230	-48.2		11	.9
25	24	25,435	-47.0		12	1.7
20	24	26,919	-45.4		10	1.3
15	22	28,843	-44.1		10	2.7
10	22	31,580	-41.4		07	1.8
7	16	34,027	-38.1		07	5.0
5	12	36,382	-35.7			

DAYTON, OHIO — 984 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	298	15.8	14.5	09	.4
1000	31	160				
950	31	599	18.3	12.8	24	1.1
900	31	1,061	16.0	9.5	29	2.3
850	31	1,545	13.3	4.3	28	3.5
800	31	2,054	11.7	-3.1	29	4.0
750	31	2,592	9.2	-7.5	28	4.3
700	31	3,160	6.1	-10.7	28	4.7
650	31	3,764	2.9	-14.6	27	5.8
600	31	4,408	-.6	-18.3	27	5.8
550	31	5,098	-4.8	-22.2	28	6.7
500	31	5,840	-9.8	-26.7	28	7.4
450	31	6,645	-15.1	-32.7	28	8.1
400	31	7,524	-21.4	-36.5	28	8.7
350	31	8,498	-28.5	-41.8	28	10.2
300	31	9,592	-36.5	-50.0	28	12.4
250	31	10,820	-45.9		27	15.3
200	31	12,273	-55.6		28	18.5
175	31	13,115	-60.2		28	17.2
150	31	14,069	-63.1		28	13.3
125	31	15,187	-64.3		28	8.1
100	31	16,554	-63.2		29	5.1
80	31	17,937	-60.1		34	2.2
70	31	18,774	-58.4		04	1.3
60	30	19,748	-56.6		06	3.2
50	29	20,910	-54.8		08	5.2
40	29	22,343	-52.9		08	7.0
30	29	24,214	-49.8		09	8.3
25	28	25,411	-48.2		08	9.0
20	28	26,890	-45.8		08	11.5
15	25	28,816	-43.8		09	12.5
10	12	31,583	-40.4			
7						

DEL RIO, TEXAS — 978 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	314	22.2	20.7	11	3.1
1000	31	123				
950	31	571	21.8	19.9	15	6.3
900	31	1,041	19.9	17.0	16	7.8
850	31	1,533	16.9	14.3	16	6.9
800	31	2,049	14.1	9.8	17	6.1
750	31	2,592	11.6	4.7	17	4.5
700	31	3,167	8.5	-.2	19	2.8
650	31	3,776	4.6	-3.1	21	1.8
600	31	4,424	.7	-8.0	19	1.3
550	31	5,118	-3.1	-14.1	21	1.4
500	31	5,866	-7.9	-19.7	18	1.9
450	31	6,678	-12.7	-24.8	17	2.3
400	30	7,567	-18.9	-30.5	20	2.4
350	30	8,551	-25.8	-36.8	21	2.1
300	30	9,645	-34.6	-44.4	21	2.0
250	30	10,893	-44.4		23	2.6
200	30	12,352	-55.3		29	2.3
175	29	13,197	-61.2		02	.3
150	29	14,140	-66.8		02	1.4
125	28	15,231	-70.0		05	3.9
100	28	16,560	-68.6		07	5.9
80	28	17,908	-64.9		08	8.5
70	28	18,728	-62.8		08	10.7
60	28	19,681	-61.0		09	12.7
50	27	20,821	-58.5		09	14.8
40	26	22,231	-56.4		09	16.6
30	25	24,075	-51.8		09	18.9
25	24	25,261	-49.9		09	20.0
20	24	26,729	-47.3		09	20.7
15	21	28,645	-44.2		09	21.9
10	18	31,397	-40.1		09	24.0
7	8	33,810	-37.5			

DENVER, COLO. — 840 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	1,611	15.4	9.9	21	2.5
1000	31	106				
950	31	555				
900	31	1,023				
850	31	1,513				
800	31	2,031	18.0	5.7	25	1.8
750	31	2,583	15.9	2.0	27	.6
700	31	3,164	11.6	-.8	30	1.2
650	31	3,779	6.7	-3.4	34	1.8
600	31	4,430	1.4	-7.2	34	2.8
550	31	5,124	-3.7	-13.0	35	3.9
500	31	5,871	-8.4	-20.8	35	4.4
450	31	6,680	-13.7	-25.7	35	4.4
400	31	7,566	-19.6	-32.0	35	5.4
350	31	8,546	-26.9	-39.1	34	7.1
300	31	9,636	-35.4	-47.0	33	8.7
250	31	10,881	-44.7		33	11.1
200	31	12,341	-54.8		33	12.9
175	31	13,185	-59.7		33	12.8
150	31	14,138	-64.2		34	9.3
125	31	15,245	-66.9		34	5.0
100	31	16,595	-65.5		36	2.8
80	31	17,961	-63.0		06	3.6
70	31	18,787	-60.4		07	4.5
60	31	19,752	-58.5		08	5.6
50	30	20,905	-56.2		08	6.6
40	29	22,331	-53.7		09	7.9
30	28	24,193	-50.7		08	10.5
25	27	25,387	-48.8		09	11.5
20	26	26,857	-47.1		09	12.5
15	25	28,773	-44.7		08	14.1
10	20	31,511	-40.8		09	16.4
7	7	33,957	-37.7			

DODGE CITY, KANS. — 92[illegible] MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	791	18.6	14.2	19	3.0
1000	31	123				
950	31	569				
900	31	1,036	20.6	14.5	20	7.4
850	31	1,530	19.1	10.5	21	7.9
800	31	2,050	16.1	7.3	20	4.7
750	31	2,595	12.3	4.0	18	2.9
700	31	3,170	8.0	1.1	15	1.9
650	31	3,778	4.1	-3.9	13	1.4
600	31	4,424	.0	-10.3	17	.7
550	31	5,116	-4.1	-18.0	19	.5
500	31	5,861	-8.6	-24.2	19	.5
450	31	6,671	-13.4	-30.0	30	.8
400	31	7,557	-19.3	-35.2	32	1.2
350	31	8,538	-26.7	-41.6	33	2.6
300	31	9,628	-35.6	-47.0	33	4.2
250	31	10,870	-45.5		33	7.0
200	31	12,325	-55.3		33	7.6
175	31	13,169	-59.6		34	7.0
150	31	14,123	-63.9		34	6.2
125	30	15,230	-67.1		35	4.9
100	29	16,582	-65.7		03	3.5
80	28	17,945	-63.5		04	4.4
70	27	18,770	-61.1		07	5.4
60	27	19,732	-59.2		08	6.2
50	26	20,880	-57.1		08	7.7
40	24	22,304	-54.5		08	9.3
30	21	24,161	-51.5		08	11.3
25	20	25,352	-49.9		09	13.0
20	19	26,821	-47.1		09	14.0
15	16	28,733	-45.1		09	15.1
10	6	31,452	-42.7			

EL PASO, TEXAS — 883 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	1,193	19.9	14.6	11	.3
1000	31	103				
950	31	555				
900	31	1,027				
850	31	1,521	19.9	11.8	13	2.1
800	31	2,042	16.9	8.8	15	2.8
750	31	2,590	13.3	[illegible]	12	1.3
700	31	3,167	9.0	3.2	05	1.4
650	31	3,777	4.6	.4	03	3.2
600	31	4,425	.3	-4.8	03	3.9
550	31	5,118	-3.8	-12.3	04	3.3
500	31	5,865	-8.0	-19.9	03	3.0
450	31	6,677	-12.7	-25.6	02	2.5
400	31	7,565	-18.7	-33.3	01	3.6
350	31	8,550	-25.7	-38.9	01	5.0
300	31	9,645	-34.3	-46.6	01	6.8
250	31	10,895	-44.3		36	9.2
200	31	12,355	-55.5		36	9.8
175	31	13,195	-60.9		01	9.3
150	31	14,140	-66.9		01	7.6
125	30	15,231	-70.4		04	6.4
100	30	16,559	-68.6		07	6.0
80	29	17,904	-66.0		07	7.2
70	28	18,718	-63.9		08	9.3
60	28	19,668	-61.6		08	12.3
50	28	20,806	-58.8		09	13.5
40	28	22,214	-56.7		09	14.2
30	25	24,048	-53.3		09	18.0
25	25	25,227	-51.5		09	18.7
20	25	26,685	-49.1		09	20.0
15	25	28,590	-45.6		09	19.4
10	14	31,306	-42.8		09	[illegible]

ELY, NEV. — 812 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	1,908	12.7	5.7	20	3.7
1000	31	120				
950	31	567				
900	31	1,034				
850	31	1,522				
800	31	2,035	17.2	7.2	19	2.6
750	31	2,587	16.2	2.9	20	1.1
700	31	3,169	12.3	-.4	24	1.5
650	29	3,786	7.5	-2.7	25	1.8
600	29	4,440	2.2	-6.3	23	.9
550	29	5,136	-3.1	-11.2	20	.5
500	29	5,884	-8.4	-16.1	25	1.5
450	29	6,694	-13.4	-24.6	25	2.8
400	29	7,580	-19.3	-31.6	24	4.3
350	29	8,563	-25.9	-37.4	25	6.2
300	29	9,658	-34.3	-45.1	24	8.0
250	28	10,908	-44.1		24	11.0
200	28	12,371	-54.3		24	13.0
175	28	13,217	-59.7		24	11.9
150	28	14,167	-65.2		25	9.1
125	28	15,269	-67.8		24	4.3
100	27	16,615	-65.9		16	1.7
80	27	17,981	-62.7		11	2.8
70	27	18,809	-60.5		10	3.6
60	27	19,773	-58.6		09	5.0
50	24	20,929	-55.9		09	6.1
40	23	22,354	-54.2		08	7.7
30	20	24,216	-50.7		09	10.2
25	20	25,408	-48.9		09	10.7
20	17	26,886	-46.6		09	11.9
15	16	28,809	-44.1		09	13.1
10	[illegible]	31,554	-39.9		09	16.6
7	11	34,019	-36.6			

EMPALME, MEXICO — 1009 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	12	25.9	22.8	04	1.4
1000	31	94	26.2	22.5	07	.8
950	31	547	24.5	19.7	14	2.0
900	31	1,021	22.3	16.0	15	1.8
850	31	1,517	19.3	14.0	13	2.1
800	31	2,037	16.4	11.1	11	2.5
750	31	2,585	13.3	6.8	11	3.0
700	31	3,163	9.9	1.3	10	3.1
650	31	3,775	6.0	-1.3	11	3.0
600	30	4,428	1.8	-4.9	10	1.9
550	30	5,125	-2.3	-10.3	06	1.9
500	30	5,876	-6.7	-16.7	04	2.5
450	30	6,692	-11.4	-22.1	03	2.5
400	30	7,586	-17.1	-29.1	04	2.5
350	30	8,578	-24.0	-36.4	05	2.4
300	30	9,681	-32.4	-44.5	07	2.8
250	30	10,939	-42.8		06	3.8
200	30	12,405	-54.9		04	4.2
175	29	13,247	-61.1		04	3.2
150	29	14,189	-67.9		05	2.8
125	29	15,273	-72.1		06	3.2
100	29	16,587	-70.4		08	6.2
80	27	17,923	-66.9		08	9.6
70	26	18,736	-64.5		08	12.0
60	26	19,684	-62.2		09	14.2
50	26	20,818	-59.6		09	15.6
40	26	22,221	-57.5		09	17.7
30	25	24,056	-53.4		09	20.2
25	25	25,237	-50.7		09	20.8
20	24	26,697	-49.0		09	22.4
15	22	28,604	-45.0		09	22.0
10	9	31,343	-40.1			

• FAIRBANKS, ALASKA — 992 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	135	10.5	6.6	34	1.2
1000	31	66				
950	31	495	10.5	5.7	31	.4
900	31	944	8.1	3.0	24	1.4
850	31	1,413	5.0	.2	23	2.4
800	31	1,906	1.7	-1.9	24	3.4
750	31	2,423	-1.6	-6.2	24	4.7
700	31	2,970	-4.4	-11.5	25	5.0
650	31	3,550	-7.7	-15.9	25	5.4
600	31	4,169	-11.3	-19.8	25	5.4
550	31	4,832	-15.5	-24.8	26	6.1
500	31	5,544	-20.4	-29.0	25	7.2
450	31	6,317	-25.7	-33.3	25	7.5
400	31	7,160	-31.8	-39.0	25	9.7
350	31	8,093	-38.6	-43.9	25	10.8
300	31	9,132	-46.4		26	12.4
250	31	10,322	-53.7		26	14.4
200	30	11,763	-50.2		26	11.0
175	30	12,637	-49.4		26	10.1
150	30	13,649	-48.8		26	8.9
125	29	14,845	-49.1		26	7.6
100	29	16,310	-49.2		26	6.6
80	29	17,774	-49.0		26	3.9
70	29	18,652	-48.7		[illegible]	2.5
60	29	19,666	-48.6		25	2.7
50	29	20,865	-48.5		25	1.8
40	28	22,338	-48.2		25	.6
30	28	24,239	-46.9		11	1.0
25	28	25,449	-46.3		11	1.1
20	27	26,930	-45.4		06	1.6
15	24	28,861	-43.3		06	2.3
10	14	31,614	-39.4		08	2.7
7	8	34,084	-35.7			

FLINT, MICH. — 990 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	236	14.3	12.0	25	1.2
1000	31	152				
950	31	589	16.9	11.0	28	3.6
900	31	1,049	14.7	7.9	30	4.7
850	31	1,531	12.2	2.4	29	5.5
800	31	2,038	10.5	-3.4	29	6.3
750	31	2,573	8.0	-7.2	28	7.6
700	31	3,139	5.1	-10.8	28	8.1
650	31	3,740	1.6	-15.4	28	8.9
600	31	4,381	-2.0	-19.3	28	9.4
550	31	5,067	-6.1	-24.3	29	9.9
500	31	5,806	-10.9	-28.5	29	11.1
450	31	6,607	-16.4	-33.6	29	12.2
400	31	7,481	-23.0	-38.9	29	12.1
350	31	8,449	-30.1	-44.5	29	13.3
300	31	9,525	-38.1	-50.3	28	14.3
250	31	10,757	-46.8		28	17.0
200	31	12,208	-54.9		28	19.2
175	31	13,057	-57.2		28	17.2
150	31	14,026	-59.8		29	13.7
125	31	15,162	-61.0		29	10.5
100	31	16,550	-60.3		30	7.3
80	31	17,948	-58.4		31	3.7
70	31	18,792	-56.6		33	2.4
60	31	19,775	-54.8		04	1.8
50	31	20,946	-52.9		07	3.8
40	31	22,391	-51.3		08	4.8
30	31	24,271	-48.9		08	6.6
25	31	25,477	-47.2		08	7.2
20	30	26,961	-45.1		09	8.7
15	26	[illegible],896	-42.5		09	10.1
10	20	31,643	-39.1			

FORT WORTH, TEXAS — 995 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	31	180	22.3	20.1	19	1.2
1000	31	133				
950	31	582	22.7	18.1	20	4.6
900	31	1,052	20.3	15.0	20	4.7
850	31	1,544	17.0	12.5	20	4.0
800	31	2,059	14.1	7.9	20	2.8
750	31	2,602	11.0	3.3	20	2.2
700	31	3,174	7.4	-1.3	19	2.2
650	31	3,781	3.8	-6.7	19	2.4
600	31	4,428	.3	-11.0	21	2.9
550	31	5,121	-3.6	-15.8	21	3.2
500	31	5,868	-8.1	-20.5	21	2.8
450	31	6,679	-12.9	-26.7	22	3.5
400	31	7,566	-18.9	-34.0	23	3.8
350	31	8,551	-25.8	-40.7	24	3.8
300	31	9,646	-34.3	-47.4	24	4.9
250	31	10,896	-43.9		24	5.4
200	31	12,357	-55.1		25	5.6
175	31	13,199	-60.7		25	5.1
150	31	14,146	-65.6		28	2.5
125	31	15,247	-67.7		03	2.2
100	31	16,593	-66.5		07	4.4
80	31	17,954	-63.7		07	6.4
70	31	18,777	-61.7		08	8.4
60	31	19,737	-59.5		09	10.1
50	31	20,885	-57.2		09	11.7
40	31	22,303	-55.0		09	13.1
30	29	24,152	-52.4		09	16.1
25	29	25,337	-50.2		09	18.3
20	29	26,804	-47.2		09	20.0
15	27	28,723	-44.2		09	19.2
10	20	31,462	-41.2		09	20.9

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT. 933 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	18.0	6.1	09	2.9
1000	31	95				
950	31	540				
900	31	1,006	21.8	6.1	17	3.2
850	31	1,502	20.8	2.8	24	3.4
800	31	2,023	17.3	.5	27	3.9
750	31	2,570	13.3	-1.8	28	4.9
700	31	3,145	9.0	-4.6	28	6.2
650	31	3,754	4.7	-7.5	29	7.2
600	31	4,401	-.3	-11.0	29	8.3
550	31	5,091	-4.9	-17.0	29	9.1
500	31	5,833	-9.9	-21.7	28	9.4
450	31	6,638	-15.3	-27.8	28	10.9
400	31	7,518	-21.4	-35.4	28	11.8
350	31	8,491	-28.9	-41.1	29	12.3
300	31	9,572	-37.4	-48.2	28	13.9
250	31	10,805	-46.9		29	17.3
200	31	12,256	-55.0		29	20.3
175	31	13,104	-58.0		28	19.0
150	31	14,069	-60.6		29	15.1
125	31	15,200	-61.6		28	11.1
100	31	16,586	-60.5		29	7.0
80	31	17,983	-58.3		31	2.7
70	31	18,827	-56.7		32	1.6
60	31	19,809	-55.3		36	1.4
50	31	20,976	-53.7		07	2.2
40	31	22,418	-51.6		07	2.6
30	30	24,293	-48.8		08	3.7
25	29	25,498	-47.1		09	4.2
20	27	26,982	-45.2		08	4.1
15	25	28,907	-42.9		09	6.2
10	21	31,665	-39.0		10	5.6
7	11	34,122	-35.5			

GRAND JUNCTION, COLO. 854 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	19.6	9.2	12	2.9
1000	31	83				
950	31	537				
900	31	1,011				
850	31	1,507	20.8	8.0	12	3.1
800	31	2,032	19.6	6.1	14	3.7
750	31	2,585	16.2	3.5	19	1.5
700	31	3,167	12.0	.7	25	1.6
650	31	3,784	7.7	-1.9	29	.9
600	31	4,438	2.6	-5.5	34	1.3
550	31	5,135	-2.8	-10.0	32	1.3
500	31	5,883	-8.0	-16.1	33	1.6
450	31	6,695	-13.0	-23.2	33	2.2
400	31	7,583	-18.9	-31.3	33	3.0
350	31	8,567	-25.9	-37.4	31	4.2
300	31	9,662	-34.1	-44.6	31	6.8
250	31	10,914	-43.8		32	9.5
200	31	12,377	-54.8		31	10.2
175	31	13,220	-60.2		31	8.8
150	31	14,170	-65.4		31	7.1
125	31	15,269	-68.5		32	3.3
100	31	16,611	-66.8		34	.7
80	31	17,971	-63.1		08	3.3
70	31	18,797	-61.3		08	4.0
60	31	19,758	-59.3		08	6.1
50	30	20,909	-56.1		09	7.3
40	30	22,334	-54.2		08	8.1
30	29	24,192	-51.5		09	10.3
25	27	25,378	-49.6		09	11.3
20	25	26,849	-47.1		09	11.8
15	23	28,764	-44.7		09	13.0
10	14	31,498	-40.4			
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*** GREAT FALLS, MONT. 888 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,118	17.0	5.4	23	3.1
1000	31	93				
950	31	540				
900	31	1,007				
850	31	1,498	20.4	2.7	24	3.0
800	31	2,019	17.4	.3	26	2.7
750	31	2,567	13.7	-2.3	26	4.5
700	31	3,143	9.4	-4.8	25	5.7
650	31	3,753	4.7	-8.2	25	6.4
600	31	4,399	-.2	-12.0	25	7.7
550	31	5,090	-5.0	-16.9	25	9.0
500	31	5,832	-10.1	-23.1	26	8.6
450	31	6,636	-15.5	-29.5	26	9.3
400	31	7,513	-22.0	-35.8	25	10.6
350	31	8,484	-29.3	-41.9	25	11.7
300	31	9,564	-37.6	-49.5	25	14.6
250	31	10,797	-46.7		26	18.4
200	31	12,249	-54.8		26	18.5
175	31	13,098	-57.8		27	17.9
150	31	14,062	-60.9		27	14.4
125	31	15,190	-62.7		27	10.7
100	31	16,567	-61.8		26	5.9
80	31	17,959	-59.1		27	2.4
70	31	18,799	-57.5		29	1.0
60	31	19,776	-55.8		05	1.1
50	31	20,942	-54.3		09	2.6
40	31	22,380	-52.2		07	3.5
30	31	24,255	-48.9		08	4.2
25	31	25,457	-47.6		09	5.2
20	31	26,936	-46.1		08	6.2
15	29	28,865	-43.6		09	7.8
10	25	31,619	-39.4		09	9.6
7	18	34,100	-35.0		09	10.8

GREEN BAY, WIS. 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	210	13.2	10.6	28	1.0
1000	31	143				
950	31	579	16.1	11.1	27	2.8
900	31	1,038	14.5	6.2	28	4.3
850	31	1,520	12.2	1.4	29	5.3
800	31	2,026	10.3	-4.7	29	5.8
750	31	2,561	7.7	-8.2	29	6.4
700	31	3,126	4.5	-12.5	29	7.4
650	31	3,726	1.4	-18.1	29	8.1
600	31	4,366	-2.2	-22.5	29	9.4
550	31	5,052	-6.4	-26.6	30	10.1
500	31	5,790	-11.3	-31.0	30	10.9
450	31	6,590	-16.8	-36.2	30	12.0
400	31	7,463	-23.2	-40.7	30	12.9
350	31	8,429	-30.6	-46.0	30	13.3
300	31	9,502	-39.0	-53.5	30	13.5
250	31	10,729	-47.6		29	15.1
200	31	12,177	-54.3		29	16.7
175	31	13,030	-56.2		30	16.1
150	31	14,002	-59.2		30	13.1
125	31	15,141	-60.6		30	10.8
100	31	16,531	-59.8		30	7.3
80	31	17,931	-57.8		32	4.1
70	31	18,777	-56.6		33	2.5
60	31	19,758	-55.1		01	2.2
50	29	20,927	-53.0		04	2.3
40	28	22,372	-51.6		07	3.7
30	28	24,251	-49.2		08	5.5
25	28	25,451	-47.6		08	6.2
20	27	26,933	-45.2		08	7.2
15	27	28,864	-42.9		08	8.0
10	22	31,610	-39.3		09	7.6
7	5	34,059	-35.8			

GREENSBORO, N. C. 987 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	18.6	18.2	32	.5
1000	31	157				
950	31	601	20.6	16.4	35	1.4
900	31	1,068	18.4	13.1	33	1.5
850	31	1,556	15.3	10.3	30	2.2
800	31	2,069	12.8	6.5	28	3.3
750	31	2,609	10.3	-.6	28	4.2
700	31	3,181	7.7	-5.7	27	4.3
650	31	3,788	4.7	-10.7	27	4.3
600	31	4,437	1.0	-15.3	27	4.7
550	31	5,131	-2.9	-21.0	27	5.2
500	31	5,880	-7.3	-26.1	27	5.6
450	31	6,693	-12.6	-30.5	27	6.6
400	31	7,582	-18.6	-34.5	26	7.2
350	31	8,567	-25.6	-41.3	26	9.2
300	31	9,663	-33.9	-49.5	26	11.1
250	31	10,914	-43.7		27	11.7
200	31	12,376	-55.2		27	13.5
175	31	13,217	-60.7		28	13.9
150	31	14,165	-65.4		28	10.3
125	31	15,269	-66.9		28	6.0
100	31	16,624	-64.4		31	2.1
80	31	18,000	-61.0		06	2.2
70	30	18,832	-59.4		07	4.2
60	29	19,802	-57.3		08	6.7
50	29	20,962	-55.0		09	8.8
40	29	22,396	-52.5		09	10.7
30	29	24,271	-49.0		09	12.5
25	28	25,466	-47.3		09	13.7
20	27	26,947	-45.4		09	14.2
15	25	28,875	-43.2		09	16.1
10	18	31,624	-39.9		09	18.0
7						

GUADALUPE IS., MEXICO 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	23	20.5	18.1	34	4.3
1000	26	112	20.1	17.0	34	3.7
950	26	556	22.2	8.0	34	2.4
900	26	1,028	23.2	3.6	36	1.6
850	26	1,524	21.3	3.3	03	1.2
800	26	2,046	17.9	3.4	05	1.7
750	26	2,595	14.4	1.6	05	2.1
700	26	3,174	10.5	-2.5	06	2.7
650	26	3,787	6.7	-6.7	06	3.1
600	26	4,439	2.5	-12.7	06	3.3
550	26	5,137	-1.4	-19.4	06	2.2
500	26	5,890	-5.8	-26.3	06	1.6
450	26	6,708	-10.4	-30.8	12	.9
400	26	7,604	-17.0	-34.2	14	1.7
350	26	8,595	-24.2	-41.3	17	2.0
300	26	9,696	-33.0	-49.8	21	3.6
250	24	10,953	-42.9		19	3.4
200	24	12,422	-54.0		16	4.7
175	24	13,268	-59.9		15	5.3
150	24	14,216	-66.3		14	5.0
125	24	15,306	-71.0		14	3.4
100	23	16,633	-68.3		07	4.5
80	22	17,986	-65.4		07	8.5
70	22	18,803	-62.9		07	10.9
60	22	19,756	-61.2		07	12.8
50	22	20,897	-57.9		07	13.7
40	21	22,321	-56.1		07	15.4
30	18	24,169	-52.2		07	17.0
25	16	25,343	-50.4		08	18.9
20	15	26,808	-48.0			
15	10	28,730	-44.7			
10						
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*** GUAM, MARIANA IS. 998 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	24.2	23.2	08	1.3
1000	31	96				
950	31	547	23.0	19.5	09	2.6
900	31	1,018	20.2	15.8	09	2.6
850	31	1,510	17.3	12.9	09	2.9
800	31	2,027	14.7	9.7	09	3.2
750	31	2,571	12.0	6.2	09	3.8
700	31	3,147	8.9	1.9	09	3.8
650	31	3,757	5.2	-2.3	09	3.6
600	31	4,407	1.3	-5.2	09	3.5
550	31	5,103	-2.7	-9.1	10	3.5
500	31	5,853	-7.1	-14.3	09	2.6
450	31	6,667	-12.1	-21.4	09	2.1
400	31	7,560	-17.5	-29.1	09	1.9
350	31	8,547	-24.2	-36.6	08	1.5
300	31	9,652	-32.5	-45.5	07	1.4
250	31	10,910	-42.8		06	2.0
200	31	12,376	-55.1		04	5.5
175	31	13,214	-62.3		05	8.9
150	30	14,149	-70.3		05	10.2
125	29	15,216	-76.9		06	11.3
100	27	16,494	-76.1		08	12.5
80	26	17,802	-71.1		09	13.1
70	24	18,600	-68.7		09	13.9
60	24	19,531	-65.6		09	14.4
50	24	20,650	-61.9		09	13.0
40	23	22,039	-59.1		09	13.1
30	23	23,853	-56.0		09	14.5
25	22	25,027	-52.5		09	13.0
20	21	26,472	-50.4		09	15.7
15	19	28,356	-49.1		09	20.3
10	16	31,040	-45.0		09	28.2
7	12	33,428	-42.5		09	37.4
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HILO, HAWAII 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	21.4	18.0	26	1.7
1000	31	147	22.4	18.4	27	.7
950	31	592	19.0	16.7	07	2.1
900	31	1,055	15.8	13.5	07	3.9
850	31	1,539	12.7	9.3	07	3.8
800	31	2,047	10.9	2.8	08	4.2
750	31	2,585	9.7	-4.5	09	3.5
700	31	3,155	7.3	-10.5	10	3.7
650	31	3,762	4.8	-15.5	10	2.8
600	31	4,410	1.7	-20.8	09	2.8
550	31	5,107	-1.7	-24.6	07	2.9
500	31	5,859	-6.5	-28.7	05	1.7
450	31	6,674	-11.9	-32.7	34	.7
400	31	7,563	-18.8	-37.5	28	2.3
350	31	8,546	-26.5	-42.6	27	4.6
300	31	9,637	-35.4	-50.3	26	7.4
250	31	10,880	-45.6		26	11.7
200	31	12,331	-56.6		25	14.6
175	31	13,168	-61.9		25	14.2
150	31	14,109	-67.0		24	10.7
125	30	15,199	-71.7		22	5.3
100	30	16,511	-72.6		10	3.4
80	27	17,834	-68.6		09	9.5
70	27	18,640	-66.0		09	12.5
60	25	19,580	-64.0		09	14.8
50	25	20,704	-61.6		09	17.0
40	24	22,099	-58.1		09	18.4
30	24	23,926	-54.6		09	19.3
25	23	25,099	-52.7		09	20.6
20	23	26,550	-49.7		10	20.8
15	18	28,444	-46.6		09	22.9
10	15	31,155	-42.9		09	27.3
7	11	33,551	-40.4			
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HUNTINGTON W. VA. 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	17.6	16.2	11	.5
1000	31	154				
950	31	596	19.4	15.0	24	1.4
900	31	1,061	17.5	11.8	26	2.0
850	31	1,548	14.6	6.3	27	3.1
800	31	2,059	12.5	.1	27	3.6
750	31	2,598	10.1	-4.3	26	4.4
700	31	3,169	6.9	-9.5	26	4.9
650	31	3,775	3.7	-12.6	26	5.2
600	31	4,420	-.3	-17.3	27	5.2
550	31	5,111	-4.1	-22.2	27	5.4
500	31	5,856	-8.7	-26.7	27	6.9
450	31	6,664	-14.3	-31.5	27	8.1
400	31	7,547	-20.2	-36.3	27	9.2
350	31	8,526	-27.2	-42.3	27	10.8
300	31	9,615	-35.6	-50.5	27	12.7
250	31	10,859	-44.9		27	15.3
200	31	12,317	-55.2		27	17.3
175	31	13,159	-60.4		27	16.8
150	31	14,110	-64.0		28	12.7
125	30	15,223	-65.3		27	7.2
100	30	16,584	-63.5		29	3.5
80	30	17,964	-60.4		02	1.7
70	30	18,800	-58.7		05	2.4
60	30	19,773	-56.9		07	4.9
50	30	20,933	-54.9		08	7.2
40	30	22,368	-52.4		09	8.8
30	25	24,239	-49.5		09	9.7
25	24	25,438	-47.8		09	11.0
20	22	26,914	-45.6		09	12.4
15	19	28,843	-43.0		09	14.0
10	8	31,605	-39.7			
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*** INTERNATIONAL FALLS, MINN. 974 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	11.3	9.8	19	1.0
1000	31	131				
950	31	564	15.0	10.6	23	2.7
900	31	1,023	14.2	8.0	27	4.2
850	31	1,504	11.6	3.3	29	4.0
800	31	2,010	9.6	-1.5	30	5.0
750	31	2,545	7.2	-6.0	30	6.0
700	31	3,109	4.0	-8.6	30	6.7
650	30	3,710	.8	-13.5	30	8.3
600	30	4,348	-3.0	-16.1	30	9.5
550	30	5,032	-7.4	-20.3	30	10.5
500	30	5,768	-12.3	-26.1	30	11.3
450	30	6,565	-17.5	-32.0	30	11.5
400	30	7,436	-23.7	-38.7	31	12.9
350	30	8,401	-31.1	-44.4	31	15.0
300	30	9,471	-39.8	-50.3	31	16.9
250	30	10,694	-48.7		31	17.9
200	30	12,139	-54.8		31	18.5
175	30	12,991	-56.2		31	18.9
150	30	13,967	-57.7		31	15.8
125	30	15,114	-59.0		31	12.4
100	30	16,516	-58.3		31	9.1
80	30	17,925	-56.6		32	5.7
70	30	18,775	-55.4		34	4.1
60	30	19,762	-54.1		36	2.3
50	30	20,936	-52.5		02	2.3
40	30	22,382	-51.3		05	2.6
30	30	24,266	-48.3		09	3.5
25	28	25,474	-47.0		08	4.7
20	27	26,960	-44.8		08	5.1
15	25	28,885	-42.7		09	6.5
10	23	31,640	-39.0		09	8.2
7	18	34,127	-34.3		09	8.6
5	6	36,494	-29.4			

JACKSON, MISS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	21.8	21.6	08	.4
1000	31	143	21.9	20.8	10	.4
950	31	591	22.5	18.7	18	.7
900	31	1,061	19.7	15.4	22	1.1
850	31	1,552	16.5	11.8	24	1.4
800	31	2,067	13.6	8.4	25	1.8
750	31	2,608	10.6	2.6	26	1.8
700	31	3,181	7.4	-1.9	25	1.6
650	31	3,788	4.3	-6.9	25	1.0
600	31	4,436	.7	-10.9	24	1.3
550	31	5,129	-3.4	-15.4	25	1.7
500	31	5,877	-7.9	-19.7	24	2.2
450	31	6,689	-12.8	-25.7	26	2.0
400	31	7,578	-18.7	-31.3	26	3.1
350	31	8,563	-25.7	-38.9	25	4.0
300	31	9,658	-34.0	-46.2	25	4.8
250	31	10,909	-43.9		24	6.7
200	31	12,370	-55.5		25	6.9
175	31	13,209	-61.5		25	6.5
150	31	14,151	-67.5		25	4.9
125	31	15,239	-70.1		27	.8
100	31	16,574	-67.0		07	3.8
80	31	17,933	-63.7		08	6.1
70	31	18,757	-61.7		08	8.1
60	31	19,717	-59.7		08	10.2
50	31	20,863	-57.2		09	12.6
40	31	22,282	-55.1		09	13.9
30	30	24,133	-52.0		08	15.9
25	30	25,320	-50.0		08	17.7
20	29	26,786	-47.4		09	19.4
15	25	28,703	-44.4		09	20.0
10	18	31,451	-40.7		09	21.5
7	5	33,930	-35.6			
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JOHN F. KENNEDY INT. AP NY 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	5	21.1	14.3	30	1.9
1000	28	140	19.8	12.4	31	2.6
950	28	582	18.3	9.2	30	4.0
900	28	1,043	15.6	6.7	29	4.5
850	28	1,527	13.9	1.8	28	6.0
800	28	2,037	11.9	-3.9	28	7.2
750	28	2,575	9.3	-7.6	27	8.1
700	28	3,143	6.1	-10.4	27	9.2
650	28	3,746	2.8	-13.9	27	10.1
600	28	4,390	-.8	-18.9	27	11.5
550	28	5,080	-4.7	-23.8	27	13.1
500	28	5,823	-9.3	-28.0	27	14.0
450	27	6,628	-14.5	-33.0	27	15.6
400	27	7,510	-20.7	-37.6	27	15.4
350	26	8,487	-27.6	-43.8	27	17.3
300	26	9,574	-36.0	-51.7	27	19.0
250	26	10,815	-45.7		27	20.7
200	26	12,269	-55.1		28	21.8
175	25	13,113	-59.7		27	21.6
150	24	14,073	-63.1		27	18.7
125	24	15,192	-63.7		27	14.6
100	24	16,568	-60.9		28	7.4
80	22	17,964	-57.8		27	1.8
70	22	18,810	-56.1		23	.4
60	22	19,793	-55.0		09	2.9
50	22	20,962	-53.8		09	6.1
40	21	22,404	-51.7		09	7.8
30	21	24,284	-48.1		09	9.2
25	21	25,489	-47.0		09	11.1
20	19	26,975	-45.0		09	11.7
15	18	28,906	-42.6		09	13.9
10	10	31,675	-37.7			
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JOHNSTON IS., PACIFIC AREA 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	26.3	22.2	09	6.8
1000	31	128	24.5	21.1	09	7.1
950	31	577	20.8	19.3	09	8.3
900	31	1,044	18.0	15.3	09	8.8
850	31	1,532	15.2	11.7	09	8.2
800	31	2,044	12.7	6.0	09	7.0
750	31	2,584	10.3	.2	09	5.5
700	31	3,157	8.2	-8.5	09	4.6
650	31	3,766	5.5	-12.9	08	4.2
600	31	4,416	2.1	-19.5	08	3.3
550	31	5,113	-2.2	-23.0	09	2.2
500	31	5,862	-7.2	-27.0	11	1.5
450	31	6,675	-12.6	-31.1	19	.8
400	31	7,563	-19.0	-34.3	25	1.5
350	30	8,547	-26.0	-42.5	26	3.9
300	30	9,641	-34.8	-49.9	27	6.3
250	30	10,887	-44.8		26	8.8
200	30	12,340	-56.7		26	12.6
175	30	13,175	-62.9		26	14.6
150	30	14,111	-68.1		26	13.0
125	29	15,199	-70.4		25	6.4
100	29	16,519	-71.9		10	3.0
80	28	17,841	-68.9		09	10.7
70	28	18,645	-66.2		09	12.9
60	28	19,585	-64.2		09	14.3
50	28	20,708	-61.5		09	15.0
40	28	22,101	-58.4		09	16.5
30	28	23,926	-54.4		09	17.2
25	28	25,101	-51.9		09	17.5
20	28	26,555	-49.4		09	20.3
15	24	28,451	-47.3		09	24.2
10	23	31,157	-43.4		09	28.6
7	6	33,556	-41.6			
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KEY WEST, FLA. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	26.9	23.6	14	1.5
1000	31	132	26.2	22.9	14	1.9
950	31	585	23.3	19.8	14	2.8
900	31	1,055	20.5	15.4	14	2.7
850	31	1,548	17.7	10.7	14	2.1
800	31	2,065	14.7	7.0	14	2.0
750	31	2,602	11.6	2.6	14	2.0
700	31	3,184	8.5	-3.2	15	1.5
650	31	3,788	4.9	-6.5	12	1.7
600	31	4,442	1.1	-10.9	11	2.4
550	31	5,129	-2.8	-16.9	10	2.3
500	31	5,887	-7.4	-22.1	10	2.5
450	31	6,689	-12.5	-27.5	10	3.2
400	31	7,590	-18.7	-33.2	08	3.5
350	31	8,572	-25.9	-41.2	07	4.4
300	31	9,669	-34.5	-50.1	07	5.7
250	31	10,917	-44.7		06	7.5
200	31	12,371	-56.8		05	9.4
175	31	13,204	-63.2		06	9.9
150	31	14,139	-68.9		06	9.3
125	31	15,220	-71.7		07	7.2
100	31	16,542	-69.9		07	7.7
80	31	17,881	-66.7		08	11.6
70	31	18,692	-64.5		08	14.0
60	31	19,639	-61.9		09	17.5
50	30	20,775	-59.5		09	19.6
40	29	22,179	-57.0		09	20.4
30	29	24,023	-52.0		09	21.7
25	29	25,210	-49.9		09	22.8
20	29	26,679	-47.2		09	22.8
15	26	28,598	-44.0		08	25.3
10	24	31,345	-40.8		09	30.7
7	18	33,788	-36.7		09	30.0
5	6	36,120	-35.5			

KING SALMON, ALASKA 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	10.1	7.9	20	1.3
1000	31	63			20	2.6
950	31	490	9.1	6.8	25	2.0
900	31	937	7.1	4.7	26	1.8
850	31	1,405	4.5	2.4	22	2.7
800	31	1,898	2.4	-.3	23	4.0
750	31	2,418	.1	-4.0	22	4.1
700	31	2,969	-2.6	-8.0	23	4.4
650	31	3,554	-5.6	-11.9	23	4.9
600	31	4,178	-9.3	-15.7	24	4.1
550	31	4,846	-13.3	-21.3	23	2.8
500	31	5,565	-18.0	-26.3	25	3.1
450	31	6,345	-23.1	-31.0	26	3.8
400	31	7,198	-29.0	-36.7	26	3.2
350	31	8,142	-36.0	-42.8	27	4.1
300	31	9,193	-43.5	-44.0	27	5.1
250	31	10,401	-49.6		27	7.7
200	31	11,856	-50.2		28	10.4
175	31	12,729	-49.7		28	8.7
150	30	13,743	-50.3		27	8.5
125	30	14,931	-51.0		28	7.7
100	29	16,389	-51.2		28	5.9
80	29	17,842	-50.8		28	4.3
70	29	18,712	-50.5		28	3.4
60	29	19,718	-50.4		26	2.6
50	29	20,909	-50.0		29	1.3
40	28	22,376	-49.3		07	.5
30	26	24,270	-47.6		09	1.7
25	23	25,477	-46.6		08	2.2
20	19	26,968	-45.5		09	2.5
15	8	28,922	-43.0			
10						
7						
5						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

KOROR, CAROLINE IS. + 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	30	27.7	24.3	13	1.0
1000	31	93	26.8	22.6	13	1.0
950	31	542	23.5	19.5	13	2.2
900	31	1,014	20.6	15.8	12	3.0
850	31	1,507	17.7	11.9	11	3.2
800	31	2,024	15.1	8.8	11	3.4
750	31	2,569	12.2	5.2	11	3.8
700	31	3,145	9.2	1.2	11	4.3
650	31	3,756	5.6	-1.5	10	5.3
600	31	4,407	2.0	-5.6	10	5.5
550	31	5,105	-1.7	-10.7	09	5.5
500	31	5,858	-5.9	-15.8	09	5.8
450	31	6,677	-10.6	-21.8	09	5.6
400	31	7,573	-16.2	-29.0	09	5.4
350	31	8,568	-23.0	-35.9	10	5.9
300	31	9,676	-31.6	-44.4	09	6.6
250	31	10,938	-42.0		08	8.3
200	31	12,409	-54.5		07	11.0
175	31	13,251	-61.4		06	11.5
150	31	14,190	-68.6		07	12.4
125	31	15,264	-75.3		08	12.7
100	31	16,550	-75.8		08	11.2
80	30	17,863	-69.6		09	9.7
70	29	18,664	-66.6		09	9.1
60	27	19,603	-64.2		09	8.4
50	27	20,728	-60.4		08	5.6
40	27	22,127	-58.3		10	4.5
30	24	23,949	-53.9		10	6.1
25	24	25,126	-51.5		09	5.7
20	22	26,582	-49.2		10	5.6
15	21	28,475	-47.2		10	9.0
10	19	31,169	-45.3		10	17.8
7	12	33,573	-41.0			
5						

KOTZEBUE, ALASKA 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	26	5	8.8	6.3	32	3.2
1000	26	72	8.7	3.1	32	2.3
950	26	495	7.2	1.3	14	.1
900	26	940	4.8	-.7	17	.6
850	26	1,433	1.9	-3.9	16	1.0
800	26	1,891	-.3	-6.9	17	.9
750	26	2,405	-2.6	-12.8	21	.9
700	26	2,950	-5.5	-17.3	23	1.6
650	26	3,528	-8.7	-20.1	23	2.1
600	26	4,144	-12.3	-24.3	23	2.6
550	26	4,804	-16.7	-27.0	23	3.2
500	26	5,513	-21.6	-32.2	24	4.0
450	25	6,283	-27.1	-36.5	24	5.1
400	25	7,121	-33.3	-42.8	24	6.5
350	25	8,049	-40.1	-45.5	23	9.0
300	25	9,082	-47.3		24	11.4
250	25	10,273	-51.0		25	12.2
200	25	11,743	-46.5		25	10.5
175	25	12,630	-46.3		26	9.9
150	25	13,653	-46.6		26	8.7
125	25	14,863	-46.9		26	7.2
100	23	16,346	-47.1		26	6.3
80	23	17,824	-46.8		26	5.1
70	23	18,710	-46.6		26	3.6
60	23	19,733	-46.7		26	2.6
50	22	20,946	-46.8		26	1.3
40	22	22,427	-46.4		04	.3
30	21	24,350	-44.8		08	1.6
25	21	25,572	-44.1		09	1.8
20	21	27,073	-43.1		07	1.8
15	18	29,033	-40.7		09	3.3

KWAJALEIN, MARSHALL IS. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	26.7	[illegible]	09	[illegible]
1000	31	99	26.0	23.1	08	4.6
950	31	553	22.7	20.4	09	6.4
900	31	1,020	19.7	17.1	09	7.1
850	31	1,511	17.0	14.1	09	7.4
800	31	2,029	14.7	10.6	09	7.6
750	31	2,573	11.9	6.8	09	7.8
700	31	3,149	8.7	3.1	09	7.9
650	31	3,759	5.2	-1.1	09	8.6
600	31	4,409	1.6	-5.5	09	8.3
550	31	5,106	-2.4	-10.8	09	7.3
500	31	5,857	-6.8	-16.8	09	6.6
450	31	6,673	-11.5	-22.8	08	6.5
400	31	7,566	-17.6	[illegible]	09	4.1
350	31	8,552	-24.5	-35.5	09	2.7
300	31	9,656	-33.1	-43.1	10	1.7
250	31	10,911	-43.4	-51.5	24	.7
200	31	12,371	-56.1	-63.4	26	3.4
175	31	13,206	-63.2		26	4.6
150	30	14,137	-70.5		28	5.7
125	29	15,200	-76.6		29	4.3
100	29	16,482	-77.1		09	4.4
80	29	17,783	-71.1		09	8.3
70	29	18,580	-68.1		09	8.0
60	29	19,513	-65.3		10	6.5
50	28	20,634	-61.8		09	5.4
40	28	22,023	-58.9		08	6.7
30	28	23,840	-56.2		08	7.3
25	28	25,003	-54.5		09	7.5
20	27	26,443	-51.4		09	8.9
15	27	28,321	-49.5		08	11.2
10	25	31,002	-46.1		09	22.4
7	20	33,406	-41.8		09	31.3
5	16	35,701	-39.3		09	40.4

LAKE CHARLES, LA. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	[illegible]	[illegible]	03	1.5
1000	31	136	24.6	22.0	03	.9
950	31	586	[illegible]	19.1	06	.7
900	31	1,056	[illegible]	16.1	01	1.3
850	31	1,547	16.5	12.1	21	1.2
800	31	2,062	13.7	[illegible]	24	1.1
750	31	2,604	10.6	2.2	24	1.3
700	31	3,176	7.3	-3.4	22	1.2
650	31	3,783	4.1	[illegible]	23	1.2
600	31	4,429	.4	-10.3	23	1.3
550	31	5,122	-3.7	[illegible]	22	2.0
500	31	[illegible]	-7.9	[illegible]	21	1.6
450	31	6,681	-12.8	[illegible]	24	1.4
400	31	7,570	-18.6	-34.1	22	1.3
350	31	8,555	-25.5	-40.7	21	2.0
300	31	9,652	-33.8	-48.4	21	2.4
250	31	[illegible]	-44.0		21	3.4
200	31	12,364	-55.4		21	3.3
175	31	13,204	-61.1		21	3.2
150	31	14,147	-67.7		22	2.3
125	31	15,235	-70.7		10	1.0
100	31	16,571	-67.1		08	5.3
80	31	17,930	-63.8		08	7.8
70	31	18,753	-62.0		08	9.7
60	31	19,712	-59.7		08	12.2
50	31	20,856	-57.6		09	14.6
40	31	22,274	-55.4		09	16.1
30	31	24,124	-51.9		09	18.6
25	31	25,312	-49.5		09	19.7
20	31	26,781	-47.4		09	21.2
15	30	28,699	-44.2		09	22.4
10	21	31,441	-40.2		09	23.0
7	5	33,651	-39.3			

LANDER, WYO. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,697	16.4	3.1	23	2.2
1000	31	99				
950	31	551				
900	31	1,021				
850	31	1,514				
800	31	2,034	19.0	[illegible]	[illegible]	1.9
750	31	2,586	16.0	-1.2	32	1.6
700	31	3,167	12.1	-3.2	27	1.2
650	31	3,783	7.2	-5.6	27	2.9
600	31	4,435	1.8	-8.5	27	3.8
550	31	5,130	-3.9	-12.5	26	3.7
500	31	5,875	-9.2	-18.8	27	4.1
450	31	6,682	[illegible]	-21.5	28	3.7
400	31	7,567	-19.9	-34.9	28	4.2
350	31	8,546	-27.3	-41.3	28	6.4
300	31	9,634	-35.7	-48.4	29	9.4
250	31	10,877	-45.2		28	12.9
200	31	12,333	-55.3		28	14.7
175	31	13,176	-59.8		29	13.0
150	31	14,128	-64.6		29	10.9
125	30	15,234	-66.6		28	6.2
100	31	16,589	-64.8		29	2.7
80	29	17,959	-62.3		01	.5
70	29	18,790	-59.9		07	2.2
60	27	19,758	-57.8		09	3.8
50	27	20,915	-55.2		08	4.6
40	27	22,346	-53.3		08	5.4
30	27	24,211	-50.6		08	7.4
25	25	25,403	-48.8		08	7.7
20	24	26,873	-46.4		09	8.9
15	20	28,790	-44.6		09	[illegible]
10	15	31,513	-41.9			

LIHUE KAUAI, HAWAII * 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	36	24.6	20.7	06	3.6
1000	31	158	23.4	19.7	06	4.7
950	31	605	19.8	17.7	07	6.9
900	31	1,070	16.5	14.3	07	7.7
850	31	1,555	13.2	10.6	08	8.1
800	31	2,063	10.7	4.5	08	7.8
750	31	2,600	9.2	-6.8	08	6.8
700	31	3,170	7.1	-13.4	09	5.1
650	31	3,776	4.3	-20.5	09	3.6
600	31	4,424	1.4	-24.3	09	2.4
550	31	5,119	-2.4	-28.1	08	1.1
500	31	5,868	-7.5	-32.6	30	.7
450	31	6,679	-13.2	-36.4	26	2.6
400	31	7,564	-20.2	-41.0	26	5.0
350	31	8,542	-27.8	-46.3	26	7.2
300	31	9,627	-36.6	-53.0	26	9.4
250	31	10,863	-46.9		26	12.2
200	31	12,306	-57.7		25	15.8
175	31	13,140	-61.6		25	13.7
150	31	14,088	-65.1		24	10.3
125	30	15,189	-68.8		22	4.3
100	30	16,517	-70.1		10	4.6
80	30	17,852	-67.3		09	9.9
70	30	18,662	-65.3		09	13.0
60	30	19,605	-63.3		09	15.4
50	30	20,732	-61.0		09	17.9
40	30	22,130	-57.6		09	18.9
30	30	23,962	-54.1		09	21.3
25	30	25,137	-52.2		09	22.2
20	30	26,593	-48.9		09	22.9
15	27	28,494	-46.5		09	24.6
10	25	31,209	-42.6		09	27.7
7	22	33,635	-39.2		09	31.0
5	17	35,976	-34.6		09	31.5
4	6	37,554	-32.7			

LITTLE ROCK, ARK. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	79	20.9	19.6	23	.1
1000	29	140	21.9	19.9	15	.2
950	29	588	21.9	17.1	16	1.0
900	29	1,056	19.1	13.7	20	1.3
850	29	1,546	16.0	[illegible]	23	1.0
800	29	2,060	13.4	3.9	25	1.5
750	29	2,601	10.9	-2.6	26	1.0
700	29	3,173	7.7	[illegible]	29	.8
650	29	3,780	4.3	-9.2	25	.9
600	29	4,427	.5	-12.7	26	.9
550	29	5,120	-3.6	-17.3	22	1.0
500	28	5,869	-7.9	-21.7	28	1.0
450	28	6,680	-13.4	-27.0	25	1.9
400	28	7,566	-19.7	-32.8	27	2.3
350	28	8,547	-26.6	-38.2	28	3.8
300	28	9,638	-34.9	-46.7	29	4.5
250	28	10,885	-44.4		28	5.9
200	28	12,346	-55.0		27	7.1
175	28	13,189	-60.3		27	6.5
150	28	14,137	-65.9		27	4.0
125	28	15,237	-67.8		33	1.5
100	27	16,581	-66.4		04	3.2
80	27	17,945	-63.1		07	4.9
70	27	18,770	-61.3		08	5.9
60	27	19,733	-58.8		08	7.6
50	27	20,886	-56.3		09	9.8
40	27	22,309	-54.5		09	10.9
30	27	24,163	-51.8		09	13.5
25	26	25,351	-49.7		08	15.7
20	26	26,822	-46.8		09	17.8
15	26	28,737	-44.8		09	18.6
10	15	31,476	-40.9			

MCGRATH, ALASKA 995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	103	10.8	9.6	31	.4
1000	31	64				
950	31	493	10.5	6.3	23	.5
900	31	942	8.0	3.9	22	1.3
850	31	1,412	5.1	1.3	21	2.2
800	31	1,905	2.3	-1.8	20	2.3
750	31	2,424	-.6	-5.6	20	2.3
700	31	2,973	-3.8	-9.4	22	3.2
650	31	3,555	-6.8	-13.0	22	3.4
600	31	4,176	-10.4	-17.8	23	3.9
550	31	4,841	-14.8	-22.4	22	5.0
500	31	5,556	-19.5	-28.2	24	6.4
450	31	6,330	-24.8	-33.9	24	6.9
400	31	7,177	-30.9	-40.3	24	8.5
350	31	8,115	-37.4	-44.6	24	10.8
300	31	9,159	-45.1		24	13.5
250	31	10,355	-52.7		25	15.8
200	31	11,799	-49.9		25	12.7
175	31	12,676	-48.7		26	10.8
150	31	13,690	-48.7		26	9.6
125	31	14,888	-49.0		26	7.6
100	31	16,353	-48.9		26	5.9
80	30	17,820	-48.8		26	3.8
70	29	18,693	-48.6		26	3.2
60	29	19,707	-48.5		26	2.4
50	29	20,908	-48.2		24	1.3
40	29	22,380	-47.9		17	.4
30	25	24,282	-46.4		10	1.8
25	23	25,494	-45.7		09	1.8
20	19	26,973	-44.6		09	2.3
15	10	28,888	-42.6			

MAJURO, MARSHALL IS. + 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	27.8	23.8	08	3.3
1000	31	102	25.6	19.9	09	3.6
950	31	552	22.8	17.8	09	4.9
900	31	1,023	20.2	14.9	10	5.9
850	31	1,515	17.5	11.9	09	6.8
800	31	2,032	15.0	8.3	09	7.6
750	31	2,576	12.3	4.8	09	8.0
700	31	3,152	9.3	.6	09	7.9
650	31	3,764	6.0	-3.4	09	7.7
600	31	4,416	2.5	-7.5	09	7.8
550	31	5,115	-1.3	-12.8	09	7.6
500	31	5,869	-5.6	-17.9	10	6.5
450	31	6,688	-10.2	-22.9	10	6.3
400	31	7,587	-15.6	-29.2	10	4.6
350	31	8,583	-22.7	-36.4	10	3.4
300	31	9,692	-31.3	-44.5	10	2.5
250	31	10,957	-41.4		03	.1
200	30	12,430	-53.9		28	2.6
175	30	13,275	-60.7		28	4.3
150	30	14,217	-68.0		29	6.2
125	30	15,298	-73.1		28	2.7
100	30	16,598	-74.6		09	5.2
80	30	17,917	-68.3		09	6.4
70	30	18,725	-64.8		09	5.3
60	30	19,672	-62.4		09	4.6
50	30	20,806	-59.4		10	3.9
40	30	22,214	-56.1		11	2.8
30	30	24,055	-53.0		10	3.3
25	29	25,239	-50.2		10	3.5
20	28	26,702	-48.4		10	4.8
15	26	28,607	-46.0		09	7.8
10	21	31,310	-43.7		10	14.9
7	8	33,694	-41.0			

MEDFORD, OREG. * 968 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	401	15.5	9.9	29	.4
1000	31	123				
950	31	561	17.3	10.0	28	.8
900	31	1,024	17.1	7.8	26	1.0
850	31	1,511	15.7	4.2	16	1.3
800	31	2,024	14.5	-.9	19	3.4
750	31	2,567	11.4	-5.1	20	6.8
700	31	3,139	7.7	-10.3	20	8.2
650	31	3,746	4.0	-15.8	21	9.1
600	31	4,392	.1	-20.8	21	10.0
550	31	5,082	-4.7	-24.1	21	11.1
500	31	5,824	-10.3	-28.8	22	12.0
450	31	6,627	-15.9	-33.2	22	12.9
400	31	7,504	-22.0	-39.6	23	13.1
350	31	8,475	-29.2	-46.0	23	14.0
300	31	9,555	-37.6	-52.2	22	16.1
250	31	10,789	-46.5		22	18.1
200	31	12,243	-54.4		22	20.5
175	31	13,093	-57.6		22	20.6
150	31	14,057	-61.2		23	17.4
125	31	15,183	-63.0		22	12.1
100	31	16,557	-62.1		21	6.5
80	31	17,942	-60.3		18	2.9
70	31	18,778	-58.7		14	2.4
60	31	19,750	-57.2		12	2.8
50	31	20,908	-55.5		09	3.7
40	31	22,336	-53.6		08	5.2
30	31	24,199	-51.0		09	7.5
25	31	25,389	-49.4		09	8.3
20	29	26,858	-47.2		09	9.3
15	29	28,773	-44.9		09	10.8
10	27	31,497	-41.4		09	12.5
7	25	33,941	-37.2		09	12.8
5	14	36,289	-32.5		09	15.8

MERIDA, MEXICO 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	11	22.5	22.1	09	1.0
1000	31	122	24.2	22.7	11	3.7
950	31	573	23.2	18.6	12	6.9
900	31	1,044	20.7	14.4	11	7.0
850	31	1,537	17.9	10.3	11	6.6
800	31	2,054	15.0	5.8	11	5.8
750	31	2,598	11.9	1.7	11	5.4
700	31	3,172	8.4	-2.3	11	5.8
650	31	3,781	4.7	-5.4	11	5.0
600	31	4,429	.9	-10.3	10	4.8
550	31	5,123	-3.0	-14.5	09	4.8
500	31	5,872	-7.5	-19.4	08	5.0
450	31	6,686	-12.3	-23.7	08	4.6
400	31	7,576	-18.3	-30.2	08	4.2
350	31	8,563	-25.0	-36.5	08	4.2
300	31	9,661	-33.5	-46.1	08	3.5
250	31	10,914	-43.6		08	3.3
200	30	12,373	-55.6		07	2.2
175	30	13,213	-61.5		06	2.6
150	29	14,153	-67.7		06	3.5
125	29	15,239	-71.2		06	4.4
100	29	16,559	-70.5		07	8.7
80	29	17,895	-66.8		09	12.4
70	29	18,706	-64.9		09	13.8
60	29	19,652	-62.0		09	15.7
50	29	20,789	-59.1		09	17.2
40	28	22,199	-56.5		09	18.9
30	28	24,038	-52.8		09	20.7
25	26	25,221	-50.3		09	20.3
20	25	26,689	-47.1		09	19.6
15	20	28,604	-44.6		08	23.6
10	12	31,338	-40.9			
7						

MIAMI, FLA. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	25.4	23.4	16	.1
1000	31	137	25.9	22.5	15	1.1
950	31	588	22.8	19.5	16	2.9
900	31	1,059	20.1	15.6	16	3.0
850	31	1,550	17.2	11.9	16	2.4
800	31	2,067	14.3	8.6	15	2.2
750	31	2,610	11.4	4.5	14	2.0
700	31	3,184	8.4	.2	13	1.7
650	31	3,793	4.9	-4.0	14	2.1
600	31	4,442	1.2	-8.5	14	2.2
550	31	5,137	-2.8	-13.6	14	2.3
500	31	5,886	-7.1	-20.0	13	1.7
450	31	6,701	-11.9	-25.1	11	2.9
400	31	7,592	-17.9	-32.1	09	3.6
350	31	8,579	-25.0	-38.9	08	4.2
300	31	9,679	-33.2	-47.7	08	4.9
250	31	10,934	-43.5		06	5.9
200	31	12,396	-55.2		05	7.6
175	31	13,236	-61.4		06	8.7
150	31	14,178	-67.3		06	8.0
125	31	15,267	-70.6		07	7.1
100	31	16,595	-68.4		08	7.2
80	31	17,941	-65.9		08	10.3
70	31	18,756	-63.5		08	12.6
60	30	19,707	-61.2		09	16.0
50	30	20,847	-58.3		09	19.4
40	29	22,260	-55.6		10	19.6
30	28	24,110	-51.7		09	20.2
25	27	25,302	-48.9		09	21.0
20	27	26,774	-46.6		09	21.4
15	24	28,691	-43.9		09	23.3
10	19	31,432	-40.0		09	29.6
7	7	33,849	-35.4			

MIDLAND, TEXAS 917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	874	19.0	16.7	15	1.8
1000	31	125				
950	31	572				
900	31	1,039	19.6	16.7	17	4.1
850	31	1,532	18.1	13.2	18	6.2
800	31	2,050	15.2	[illegible]	17	3.8
750	31	2,595	11.9	4.4	16	1.5
700	31	3,169	7.7	.6	11	.6
650	31	3,777	4.1	-3.6	07	.4
600	31	4,424	.6	-9.8	05	.3
550	31	5,118	-3.2	-14.9	19	1.0
500	31	5,866	-7.9	-20.4	21	.9
450	31	6,678	-12.6	-27.9	25	1.2
400	31	7,566	-19.0	-33.8	35	.8
350	31	8,548	-26.4	-40.1	35	1.8
300	31	9,641	-34.9	-46.3	36	2.0
250	31	10,888	-44.5		36	3.4
200	30	12,345	-55.4		36	3.2
175	30	13,187	-60.7		01	3.3
150	30	14,135	-65.6		01	4.4
125	30	15,233	-68.9		03	4.7
100	28	16,568	-68.0		07	5.8
80	26	17,923	-64.3		08	7.1
70	25	18,743	-62.6		08	8.8
60	25	19,698	-60.8		08	10.9
50	25	20,838	-58.8		09	13.1
40	25	22,248	-56.1		09	15.1
30	24	24,095	-52.7		09	18.1
25	24	25,280	-50.0		09	18.8
20	24	26,747	-47.6		09	19.9
15	23	28,663	-44.4		09	19.7
10	19	31,399	-41.6		09	[illegible]

MONTERREY, MEXICO 964 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	423	21.8	20.8	13	.1
1000	28	125				
950	28	573	21.7	20.1	11	1.3
900	28	1,042	19.3	17.6	13	4.3
850	28	1,534	17.6	13.6	13	5.9
800	28	2,052	15.2	9.2	14	5.6
750	28	2,597	12.3	4.1	15	4.2
700	28	3,172	8.9	.2	16	2.6
650	28	3,782	5.1	-3.4	16	1.8
600	28	4,432	1.2	-7.8	16	1.6
550	28	5,127	-2.7	-12.3	14	2.0
500	28	5,877	-7.1	-16.9	14	2.5
450	28	6,691	-12.2	-22.2	14	2.1
400	28	7,582	-18.1	-28.2	13	1.1
350	28	8,570	-24.9	-35.6	15	.8
300	28	9,669	-33.4	-43.3	28	.9
250	28	10,922	-43.8		31	2.4
200	27	12,382	-55.6		31	2.5
175	27	13,221	-61.6		33	[illegible]
150	27	14,161	-68.0		01	2.1
125	25	15,247	-71.6		05	2.4
100	25	16,557	-69.8		07	7.2
80	26	17,908	-66.3		08	10.8
70	24	18,722	-64.2		08	12.4
60	25	19,671	-62.1		08	[illegible]
50	25	20,804	-60.3		08	16.8
40	24	22,206	-57.7		09	18.6
30	24	24,037	-53.4		08	21.4
25	24	25,216	-51.3		08	21.7
20	21	26,675	-48.3		09	[illegible]
15	16	28,583	-45.8		08	22.1
10	6	31,315	-41.4			

MONETT, MO. 967 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	438	18.3	17.1	15	1.7
1000	31	150				
950	31	593	20.9	17.4	18	2.3
900	31	1,061	19.1	[illegible]	23	2.7
850	31	1,551	16.0	8.3	25	1.6
800	31	2,064	13.6	.7	27	.8
750	31	2,605	10.8	-3.5	26	.9
700	31	3,176	7.3	-6.7	23	.8
650	31	3,783	3.7	[illegible]	24	.9
600	31	4,428	-.1	-16.8	13	.4
550	31	5,120	-3.9	-20.5	20	[illegible]
500	31	5,865	-8.8	-25.3	13	1.3
450	31	6,673	[illegible]	-30.7	23	1.5
400	31	7,556	-20.4	-34.8	24	2.7
350	31	8,535	-27.3	-41.6	25	3.8
300	31	9,623	-35.7	-48.0	26	5.7
250	31	10,867	-45.1		26	7.8
200	30	12,322	-55.6		26	9.0
175	30	13,163	-60.4		26	7.7
150	30	14,114	-64.2		28	4.9
125	30	15,223	-66.6		32	3.7
100	31	16,578	-64.8		33	2.9
80	31	17,946	-62.5		05	3.9
70	31	18,775	-60.3		08	4.9
60	30	19,743	-57.9		08	6.2
50	31	20,899	-55.8		09	8.1
40	31	22,326	-53.8		09	9.6
30	29	24,188	-51.3		09	11.9
25	29	25,374	-49.5		09	13.7
20	28	26,846	-46.6		09	15.2
15	27	28,773	-44.0		09	15.9
10	27	31,509	-40.8		09	18.4

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MONTGOMERY, ALA. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	57	21.6	20.8	04	.7
1000	31	144	22.6	21.2	06	.8
950	31	593	22.5	19.2	07	1.2
900	31	1,063	19.9	16.1	06	.5
850	31	1,555	16.8	12.4	15	.6
800	31	2,070	14.0	8.6	20	.6
750	31	2,613	10.9	4.1	20	1.2
700	31	3,186	7.6	-.8	22	1.7
650	31	3,794	4.4	-4.6	23	2.1
600	31	4,441	1.0	-10.2	24	2.5
550	31	5,136	-2.8	-14.9	24	2.5
500	31	5,886	-7.2	-19.3	25	2.6
450	31	6,700	-12.2	-25.7	25	2.6
400	31	7,591	-18.0	-32.0	24	3.7
350	31	8,578	-24.9	-38.0	25	4.9
300	31	9,677	-33.4	-47.1	24	5.4
250	31	10,931	-43.3		25	6.6
200	31	12,395	-55.0		26	6.5
175	31	13,236	-61.1		26	5.9
150	30	14,178	-67.4		26	4.1
125	30	15,268	-70.0		02	.6
100	30	16,604	-66.5		08	3.6
80	30	17,966	-63.0		08	6.4
70	30	18,792	-61.1		08	8.6
60	30	19,755	-58.9		09	10.4
50	30	20,907	-56.2		09	12.8
40	30	22,333	-54.0		09	14.3
30	30	24,194	-50.5		09	16.2
25	30	25,387	-49.1		09	17.4
20	29	26,859	-46.5		09	20.0
15	26	28,783	-43.5		09	20.7
10	19	31,537	-39.3		09	21.7
7	5	33,946	-37.6			

NASHVILLE, TENN. 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	180	19.6	18.7	06	.4
1000	31	148				
950	31	593	21.1	16.8	21	.9
900	31	1,061	18.5	14.0	24	1.8
850	31	1,549	15.4	9.8	27	2.5
800	31	2,062	12.8	4.2	28	2.4
750	31	2,602	9.9	-1.3	28	2.7
700	31	3,172	7.0	-8.1	27	3.1
650	31	3,778	3.9	-12.0	27	3.0
600	31	4,424	.3	-15.5	27	3.1
550	31	5,117	-3.7	-20.2	27	3.4
500	31	5,863	-8.2	-26.2	27	4.3
450	31	6,673	-13.6	-30.1	26	4.7
400	31	7,558	-19.7	-35.9	27	5.0
350	31	8,538	-26.8	-42.2	27	6.0
300	31	9,629	-34.8	-50.4	27	7.9
250	31	10,877	-44.2		26	10.6
200	31	12,337	-55.3		26	12.3
175	31	13,178	-60.9		27	11.7
150	31	14,124	-66.1		27	9.5
125	31	15,224	-67.2		28	4.4
100	31	16,574	-65.6		33	1.2
80	31	17,941	-62.2		05	2.9
70	30	18,770	-60.4		06	4.8
60	30	19,735	-58.3		08	7.1
50	30	20,889	-55.9		08	8.6
40	30	22,318	-53.5		09	10.4
30	29	24,182	-51.1		09	12.3
25	29	25,373	-49.0		08	13.9
20	29	26,846	-46.7		09	16.1
15	26	28,767	-44.4		09	16.7
10	24	31,508	-40.8		09	18.6
7	7	33,974	-36.6			

*** NOME, ALASKA 1008 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	7.5	2.9	01	2.0
1000	31	73			03	1.3
950	31	498	7.4	2.2	05	.9
900	31	941	4.8	.6	10	.3
850	31	1,405	2.5	-2.9	36	.5
800	31	1,894	.4	-6.1	32	.9
750	31	2,409	-2.1	-10.2	28	1.3
700	31	2,955	-5.0	-15.1	28	2.0
650	31	3,534	-8.1	-19.3	28	2.5
600	31	4,152	-11.7	-23.7	28	3.1
550	31	4,813	-16.1	-26.6	27	3.6
500	31	5,524	-21.0	-30.5	26	4.1
450	31	6,294	-26.2	-35.2	27	4.9
400	31	7,136	-32.4	-41.5	27	5.8
350	31	8,067	-39.2	-45.8	26	7.3
300	31	9,103	-46.8		25	9.9
250	31	10,294	-52.3		25	12.3
200	31	11,747	-48.4		25	9.7
175	31	12,628	-48.0		25	9.2
150	31	13,644	-48.1		26	8.0
125	31	14,845	-48.4		26	7.2
100	31	16,314	-48.5		26	5.8
80	31	17,783	-48.3		26	4.4
70	31	18,663	-48.2		26	3.1
60	31	19,679	-48.1		26	2.1
50	31	20,882	-48.0		25	1.0
40	30	22,349	-47.9		23	.7
30	30	24,253	-46.5		07	.9
25	30	25,465	-46.0		08	1.9
20	30	26,954	-44.9		08	2.4
15	27	28,900	-42.7		08	2.6
10	23	31,660	-39.4		07	2.7
7	11	34,130	-36.1			

NORTH PLATTE, NEBR. 919 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	847	15.7	12.6	12	1.6
1000	31	125				
950	31	567				
900	31	1,030	19.3	13.2	18	3.2
850	31	1,524	19.9	9.3	21	5.9
800	31	2,045	17.1	6.1	22	4.4
750	31	2,592	13.3	3.2	23	3.0
700	31	3,168	9.0	-.9	25	2.4
650	31	3,778	4.7	-5.6	26	2.1
600	31	4,425	.2	-11.0	29	1.3
550	31	5,117	-4.4	-16.7	31	2.5
500	31	5,862	-8.8	-24.1	30	3.0
450	31	6,670	-13.8	-29.3	31	3.4
400	31	7,555	-20.2	-36.5	32	4.1
350	31	8,533	-27.3	-41.3	32	6.0
300	31	9,621	-36.1	-48.3	32	8.3
250	31	10,861	-45.7		32	11.6
200	31	12,318	-54.7		32	13.2
175	31	13,165	-58.5		32	12.2
150	31	14,124	-62.9		33	9.6
125	31	15,240	-65.1		33	6.8
100	31	16,602	-63.7		35	5.0
80	31	17,979	-61.0		04	2.5
70	31	18,812	-59.8		05	3.0
60	30	19,781	-57.6		06	4.1
50	30	20,939	-54.9		08	5.5
40	29	22,374	-52.9		08	6.5
30	29	24,243	-50.1		08	8.5
25	28	25,443	-48.4		08	9.9
20	26	26,920	-46.2		09	11.5
15	23	28,851	-43.3		09	12.4
10	12	31,609	-39.8			

OAKLAND, CALIF. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	6	14.8	13.1	25	1.5
1000	31	118	14.4	12.7	25	1.5
950	31	553	17.1	7.5	28	3.3
900	31	1,019	22.3	-2.3	29	4.7
850	31	1,514	21.3	-6.0	26	2.6
800	31	2,035	18.3	-9.0	22	2.5
750	31	2,584	14.7	-11.1	21	3.6
700	31	3,161	10.6	-14.0	20	4.6
650	31	3,774	6.6	-15.9	19	5.9
600	31	4,425	1.9	-18.0	19	6.3
550	31	5,120	-3.2	-22.4	20	6.0
500	31	5,866	-8.6	-28.2	21	6.5
450	31	6,674	-14.3	-34.0	22	7.1
400	31	7,556	-20.7	-39.3	22	8.4
350	31	8,533	-27.7	-45.0	22	10.7
300	31	9,620	-35.7	-52.2	22	13.6
250	31	10,864	-44.9		22	15.3
200	31	12,325	-54.1		22	16.7
175	31	13,173	-59.0		22	15.5
150	31	14,128	-63.9		22	12.9
125	31	15,236	-66.7		22	8.0
100	31	16,589	-65.3		18	4.0
80	30	17,954	-62.8		12	3.0
70	30	18,783	-60.0		11	4.4
60	30	19,749	-58.5		10	5.5
50	29	20,901	-56.5		09	7.0
40	28	22,323	-54.4		09	8.6
30	28	24,178	-51.9		09	12.1
25	28	25,365	-49.8		09	12.7
20	27	26,832	-47.4		09	13.4
15	25	28,744	-45.5		09	14.4
10	18	31,467	-42.4		09	17.0

OMAHA, NEBR. 969 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	17.8	15.0	17	1.8
1000	31	135				
950	31	577	20.0	14.3	19	3.8
900	31	1,045	20.0	11.2	22	6.2
850	31	1,536	17.6	7.4	25	5.2
800	31	2,052	14.5	4.0	26	3.9
750	31	2,595	11.2	-.3	28	4.3
700	31	3,167	7.7	-5.9	28	4.2
650	31	3,774	3.9	-11.2	28	4.7
600	31	4,420	-.2	-15.9	28	4.6
550	31	5,111	-4.2	-21.8	28	4.3
500	31	5,856	-8.9	-26.2	28	4.5
450	31	6,663	-14.4	-31.5	28	5.0
400	31	7,545	-20.7	-36.2	29	4.9
350	31	8,522	-27.8	-42.0	30	6.6
300	31	9,608	-36.4	-49.6	30	8.4
250	31	10,846	-46.0		30	10.6
200	30	12,297	-54.4		30	12.4
175	30	13,146	-58.0		30	11.2
150	30	14,109	-61.5		31	8.5
125	30	15,232	-64.1		31	7.1
100	29	16,600	-62.3		34	5.2
80	29	17,983	-60.5		01	3.1
70	29	18,818	-58.8		04	3.5
60	29	19,791	-56.4		05	4.0
50	29	20,953	-54.9		07	5.1
40	27	22,392	-52.7		08	6.9
30	26	24,261	-50.0		08	8.3
25	25	25,461	-48.1		09	9.4
20	24	26,944	-45.6		09	10.3
15	22	28,867	-43.5		08	11.3
10	16	31,598	-40.5			
7						
5						

+ PAGO PAGO, AMERICAN SAMOA 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.6	22.7	10	4.8
1000	31	125	25.6	18.5	10	5.8
950	31	575	22.0	16.4	09	7.4
900	31	1,043	18.5	12.9	08	7.8
850	31	1,532	16.0	8.2	08	7.8
800	31	2,046	14.3	2.6	09	6.6
750	31	2,589	11.9	-3.0	09	5.1
700	31	3,163	8.6	-8.1	09	3.8
650	31	3,772	5.6	-12.5	09	2.6
600	31	4,422	2.1	-17.8	10	1.7
550	31	5,119	-2.1	-21.7	01	.3
500	31	5,869	-6.8	-25.8	29	.8
450	31	6,684	-12.2	-30.8	24	3.0
400	31	7,573	-18.2	-35.8	24	5.1
350	31	8,561	-24.9	-42.3	25	7.5
300	31	9,660	-33.2	-49.6	24	10.4
250	31	10,914	-43.3		25	13.4
200	31	12,379	-54.7		25	13.6
175	31	13,222	-60.9		25	13.0
150	31	14,165	-67.2		26	12.3
125	31	15,250	-72.4		26	9.7
100	31	16,556	-73.8		27	5.7
80	31	17,868	-69.9		27	5.4
70	31	18,671	-65.9		27	5.9
60	31	19,614	-63.1		28	6.4
50	31	20,742	-60.8		28	7.5
40	31	22,141	-57.5		28	8.4
30	31	23,975	-53.3		28	9.1
25	31	25,155	-50.9		28	7.8
20	30	26,620	-48.1		28	8.1
15	28	28,528	-44.8		28	7.4
10	18	31,262	-41.0			

*** PEORIA, ILL. 994 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	200	16.4	13.8	09	.5
1000	31	152				
950	31	593	19.4	12.9	25	1.7
900	31	1,058	17.0	10.8	27	3.4
850	31	1,543	14.4	4.4	29	3.7
800	31	2,054	12.1	1.2	29	4.0
750	31	2,592	9.6	-3.2	29	4.3
700	31	3,162	6.5	-8.3	29	4.4
650	31	3,766	3.1	-13.7	29	5.4
600	31	4,410	-.8	-18.4	29	6.0
550	31	5,100	-4.8	-23.2	29	6.1
500	31	5,843	-9.4	-27.6	29	7.2
450	31	6,649	-14.8	-32.3	29	7.8
400	31	7,529	-21.5	-36.8	29	8.6
350	30	8,504	-28.6	-43.2	28	9.2
300	30	9,586	-36.8	-50.9	29	11.4
250	30	10,823	-46.5		28	13.3
200	30	12,273	-55.8		28	17.5
175	30	13,116	-59.6		28	15.0
150	30	14,073	-62.2		29	10.8
125	31	15,195	-63.9		30	7.1
100	30	16,564	-62.8		31	4.4
80	30	17,946	-60.7		36	2.6
70	30	18,782	-58.5		03	3.1
60	30	19,755	-56.6		06	4.0
50	30	20,918	-54.6		08	5.9
40	30	22,353	-52.5		09	6.7
30	29	24,221	-49.9		08	7.6
25	29	25,418	-48.3		08	9.0
20	25	26,895	-46.1		09	11.1
15	24	28,824	-42.8		09	11.6
10	24	31,577	-39.8		09	13.7
7	17	34,041	-36.2		09	17.5
5	5	36,403	-31.3			

*** PITTSBURGH, PA. 977 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	15.7	14.1	27	.6
1000	31	154				
950	31	592	17.6	12.4	27	2.0
900	31	1,054	15.6	8.5	29	4.1
850	31	1,537	12.9	4.5	28	5.9
800	31	2,045	11.1	-1.5	28	6.6
750	31	2,582	8.6	-6.5	28	6.8
700	31	3,149	5.6	-9.7	27	7.4
650	31	3,752	2.4	-12.9	27	7.7
600	31	4,395	-1.1	-17.3	27	8.4
550	31	5,084	-5.2	-22.0	27	9.1
500	31	5,825	-10.1	-27.1	27	9.5
450	31	6,629	-15.5	-31.2	27	10.0
400	31	7,507	-21.9	-35.8	27	11.7
350	31	8,479	-28.9	-42.0	27	12.8
300	31	9,560	-37.0	-51.0	27	15.1
250	31	10,797	-46.1		27	18.4
200	31	12,249	-55.3		27	21.2
175	31	13,093	-59.6		27	19.7
150	31	14,049	-62.6		28	15.0
125	31	15,169	-64.0		27	10.2
100	31	16,540	-62.5		28	6.2
80	31	17,927	-59.4		33	2.0
70	31	18,767	-57.6		36	1.3
60	31	19,744	-56.1		07	2.3
50	31	20,907	-54.6		08	4.5
40	31	22,343	-52.7		08	6.7
30	31	24,216	-49.5		09	8.1
25	29	25,409	-47.9		08	9.4
20	28	26,889	-45.9		09	11.2
15	25	28,817	-43.1		09	12.5
10	24	31,576	-39.6		10	12.9
7	19	34,032	-36.3		09	15.7
5	14	36,380	-31.5			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	27.8	23.8	07	1.4
1000	31	81	26.4	20.4	07	1.5
950	31	533	23.2	17.9	09	3.1
900	31	1,003	20.2	14.4	10	4.9
850	31	1,495	17.3	10.9	10	6.1
800	31	2,012	14.8	7.4	10	6.0
750	31	2,556	12.1	3.5	10	5.6
700	31	3,131	8.9	-.5	10	5.7
650	31	3,742	5.5	-3.8	10	6.8
600	31	4,392	1.9	-7.3	09	7.1
550	30	5,089	-1.8	-12.2	09	6.8
500	30	5,842	-5.8	-16.1	09	6.3
450	30	6,661	-10.6	-24.4	09	5.9
400	30	7,557	-16.4	-29.7	09	4.2
350	30	8,552	-23.2	-37.5	09	3.5
300	30	9,659	-31.5	-45.9	10	2.0
250	30	10,921	-42.0		14	1.0
200	30	12,392	-54.3		19	1.0
175	30	13,235	-61.2		23	2.0
150	30	14,174	-69.0		24	2.5
125	30	15,249	-74.8		25	.8
100	29	16,538	-75.1		09	6.8
80	29	17,852	-69.0		09	7.5
70	29	18,657	-66.3		09	6.7
60	29	19,597	-63.5		09	5.1
50	29	20,726	-60.5		10	3.5
40	29	22,125	-57.9		10	2.9
30	28	23,956	-54.1		10	3.5
25	26	25,133	-51.9		10	4.1
20	25	26,589	-49.5		10	5.1
15	23	28,485	-47.6		10	7.9
10	14	31,187	-45.2		09	16.5
7	7	33,616	-39.9			

PORTLAND, MAINE 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	17.0	13.3	28	1.7
1000	31	131	17.3	12.1	29	2.6
950	31	570	17.5	8.1	29	4.3
900	31	1,031	15.4	5.1	29	4.8
850	31	1,514	13.1	-.1	28	6.0
800	31	2,021	10.3	-4.1	28	7.2
750	31	2,555	7.7	-7.6	28	9.0
700	31	3,120	4.2	-10.3	27	11.1
650	31	3,720	1.1	-14.8	27	11.6
600	31	4,359	-2.8	-18.9	27	13.0
550	31	5,044	-6.7	-23.4	27	15.1
500	31	5,782	-11.2	-26.5	27	16.2
450	31	6,532	-16.3	-31.3	27	17.4
400	31	7,459	-22.3	-38.2	26	18.0
350	31	8,429	-29.2	-43.8	27	19.5
300	31	9,510	-37.2	-50.5	26	21.9
250	31	10,746	-46.1		27	22.5
200	31	12,201	-54.6		27	23.8
175	31	13,050	-57.5		27	22.2
150	31	14,018	-59.6		26	19.9
125	30	15,156	-59.8		26	15.5
100	30	16,555	-58.3		27	8.6
80	28	17,964	-56.2		26	4.2
70	28	18,817	-54.4		26	2.3
60	27	19,808	-53.4		23	.1
50	27	20,985	-52.5		09	2.2
40	27	22,433	-50.7		08	4.7
30	26	24,319	-47.7		09	6.6
25	25	25,524	-46.3		09	6.9
20	23	27,006	-44.7		08	7.9
15	19	28,938	-42.5		09	8.7
10	17	31,689	-39.6			
7	5	34,153	-34.1			
5						

*** QUILLAYUTE, WASH. 1009 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	58	12.0	10.9	09	.6
1000	31	132	13.0	11.5	10	.4
950	31	565	13.4	8.4	21	1.1
900	31	1,020	12.6	3.0	22	2.6
850	31	1,499	11.2	.6	21	4.2
800	31	2,003	9.1	-4.1	21	5.7
750	31	2,536	6.8	-7.7	22	7.6
700	31	3,099	3.5	-8.9	21	8.8
650	31	3,697	.2	-12.1	21	10.0
600	31	4,334	-3.7	-16.6	21	11.3
550	31	5,016	-8.0	-21.6	22	12.9
500	31	5,750	-12.9	-26.6	22	14.3
450	31	6,546	-18.2	-31.1	22	15.6
400	31	7,414	-24.9	-36.2	22	16.4
350	31	8,374	-32.1	-42.6	22	18.1
300	31	9,442	-39.7	-50.6	22	20.8
250	31	10,666	-47.8		22	24.6
200	31	12,119	-53.2		22	23.9
175	31	12,975	-55.2		22	22.2
150	31	13,955	-57.1		22	18.8
125	31	15,105	-58.6		22	13.7
100	31	16,510	-58.0		22	8.5
80	31	17,918	-56.7		22	5.1
70	31	18,767	-55.8		20	2.5
60	29	19,750	-55.3		15	1.4
50	29	20,917	-54.1		14	1.3
40	29	22,355	-52.3		10	2.5
30	29	24,228	-49.9		09	3.8
25	28	25,420	-48.7		08	4.7
20	28	26,893	-46.9		08	5.1
15	27	28,608	-44.5		09	6.2
10	23	31,561	-40.9		09	9.0
7	15	34,034	-36.2		10	8.8
5	7	36,372	-32.4			

RAPID CITY, S. DAK. 905 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	966	16.2	9.1	18	.6
1000	31	109				
950	31	553				
900	31	1,017	18.1	9.6	20	.9
850	31	1,511	20.9	6.9	21	4.1
800	31	2,034	18.6	4.0	22	3.6
750	31	2,584	14.4	.0	26	2.4
700	31	3,162	10.1	-3.7	29	2.8
650	31	3,774	5.9	-9.2	31	4.2
600	31	4,424	1.3	-14.8	32	5.1
550	31	5,117	-3.6	-19.7	32	5.1
500	31	5,863	-8.8	-24.8	31	5.0
450	31	6,671	-14.3	-30.6	31	5.3
400	31	7,553	-20.8	-36.0	31	6.4
350	31	8,529	-27.9	-43.1	31	8.6
300	30	9,614	-36.8	-50.5	31	11.4
250	30	10,851	-46.1		31	14.6
200	30	12,304	-55.2		31	16.6
175	30	13,149	-59.1		31	15.4
150	30	14,106	-63.2		31	12.7
125	29	15,222	-64.5		31	8.4
100	29	16,590	-62.9		32	5.4
80	29	17,973	-60.3		35	2.6
70	29	18,809	-59.0		03	2.2
60	29	19,780	-57.1		06	2.8
50	28	20,942	-54.8		07	3.4
40	27	22,375	-52.0		07	5.2
30	26	24,248	-49.3		08	6.3
25	24	25,446	-47.8		08	7.6
20	22	26,927	-45.4		09	8.9
15	18	28,857	-43.5		08	8.8
10	10	31,588	-39.3			

ST CLOUD, MINN. 980 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	316	13.7	11.7	13	.9
1000	31	142				
950	31	578	16.8	11.9	21	2.2
900	31	1,040	15.9	8.9	25	3.6
850	31	1,524	13.8	3.7	27	3.9
800	31	2,033	12.2	-4.5	28	4.6
750	31	2,572	9.5	-7.2	28	5.6
700	31	3,141	6.3	-9.6	29	7.1
650	31	3,745	2.6	-12.9	29	7.5
600	31	4,387	-1.3	-16.6	29	7.9
550	31	5,075	-5.8	-20.7	29	8.9
500	31	5,815	-10.6	-26.3	29	9.5
450	31	6,617	-16.1	-32.3	30	9.8
400	31	7,493	-22.8	-38.6	31	9.5
350	31	8,461	-30.1	-45.5	31	10.6
300	31	9,535	-39.1	-51.5	31	12.6
250	31	10,762	-47.9		31	14.9
200	31	12,211	-54.3		31	17.4
175	31	13,063	-56.5		30	16.8
150	31	14,034	-59.5		31	14.4
125	31	15,170	-61.2		30	11.2
100	31	16,558	-60.3		32	7.7
80	31	17,955	-58.5		33	3.7
70	31	18,798	-57.0		36	3.2
60	31	19,778	-55.6		01	2.9
50	30	20,948	-53.8		06	2.9
40	30	22,388	-51.7		07	3.7
30	29	24,268	-49.3		08	5.3
25	26	25,469	-47.7		09	6.3
20	26	26,948	-45.6		09	7.2
15	25	28,876	-43.3		08	8.0
10	15	31,649	-39.1			

*** ST PAUL IS., ALASKA 1009 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	6.1	5.9	32	2.5
1000	31	87			31	2.9
950	31	507	5.4	4.2	33	3.0
900	31	950	5.3	1.7	33	3.0
850	31	1,416	4.2	-1.1	32	3.3
800	31	1,908	2.5	-4.0	30	3.8
750	31	2,428	.0	-6.9	29	4.2
700	31	2,979	-2.6	-11.2	28	4.5
650	31	3,563	-5.7	-15.0	28	5.3
600	31	4,187	-9.3	-19.2	28	6.7
550	31	4,855	-13.5	-23.9	28	7.2
500	31	5,573	-18.3	-29.6	27	8.0
450	31	6,351	-23.6	-34.9	27	9.6
400	31	7,203	-29.4	-38.6	27	11.6
350	31	8,146	-36.1	-43.3	26	14.4
300	31	9,197	-43.2	-44.9	26	15.7
250	31	10,409	-48.8		25	18.5
200	31	11,870	-49.4		25	16.8
175	31	12,746	-49.3		25	14.5
150	31	13,755	-49.9		25	12.6
125	31	14,945	-50.8		26	10.5
100	31	16,398	-50.9		26	7.9
80	31	17,850	-50.8		26	5.6
70	31	18,720	-50.7		26	4.2
60	31	19,725	-50.7		26	2.8
50	31	20,914	-50.3		25	1.7
40	31	22,373	-49.5		29	.5
30	31	24,266	-47.8		08	.9
25	31	25,472	-46.8		09	1.5
20	31	26,956	-45.3		10	2.5
15	31	28,885	-43.4		09	2.6
10	29	31,638	-39.3		08	3.4
7	19	34,058	-36.2		07	3.3
5	6	36,423	-32.2			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1971

SALEM, ILL. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	174	1[illegible].7	16.0	08	.7
1000	31	147				
950	31	591	20.8	14.1	25	1.0
900	31	1,037	17.9	11.4	31	1.7
850	31	1,544	14.9	6.7	31	2.1
800	31	2,056	12.4	1.7	31	2.4
750	31	2,595	9.9	-4.7	30	2.6
700	31	3,165	7.0	-10.1	30	3.2
650	31	3,771	4.0	-14.9	30	3.3
600	31	4,418	.2	-17.7	30	3.6
550	31	5,109	-4.1	-22.7	29	4.6
500	31	5,854	-8.7	-28.2	29	5.1
450	31	6,662	-14.2	-32.5	28	5.6
400	31	7,545	-20.6	-37.1	28	6.2
350	31	8,522	-27.7	-42.7	28	7.9
300	31	9,608	-36.2	-50.5	28	9.2
250	31	10,849	-45.5		28	11.4
200	31	12,303	-55.5		27	13.5
175	31	13,145	-60.4		27	13.1
150	31	14,096	-64.3		28	10.2
125	30	15,208	-65.1		30	6.3
100	30	16,571	-64.1		32	2.7
80	30	17,949	-61.1		03	2.7
70	30	18,782	-59.5		06	3.5
60	30	19,752	-57.1		07	5.0
50	30	20,912	-55.2		08	7.3
40	30	22,344	-52.9		09	8.3
30	29	24,213	-50.3		09	9.4
25	29	25,407	-48.7		08	10.7
20	27	26,883	-45.9		09	13.4
15	25	28,811	-43.6		09	14.7
10	22	31,566	-40.1		09	16.6
7	9	34,023	-35.9			

SALEM, OREG. — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	61	14.2	11.9	19	1.1
1000	31	131	15.7	12.4	18	.5
950	31	568	15.6	10.9	[illegible]	.8
900	31	1,027	15.3	7.2	28	.6
850	31	1,511	14.0	1.6	22	1.9
800	31	2,021	12.5	-4.1	[illegible]	4.2
750	31	2,560	10.0	-6.6	22	6.1
700	31	3,130	[illegible].9	-10.5	21	9.0
650	31	3,734	3.0	-13.2	21	11.0
600	31	4,378	-1.2	-18.2	21	11.6
550	31	5,066	-5.8	-23.1	22	12.3
500	31	5,805	-11.1	-28.7	22	13.1
450	31	[illegible]	-16.3	-34.6	22	13.9
400	31	7,461	-22.7	-39.0	22	15.0
350	31	8,450	-29.8	-45.3	22	16.5
300	31	9,527	-38.1	-52.2	22	18.7
250	31	10,758	-46.9		22	21.1
200	31	12,210	-54.1		22	22.0
175	31	13,062	-56.6		22	20.8
150	31	14,034	-59.3		22	17.7
125	31	15,171	-61.1		22	12.7
100	31	16,558	-60.1		22	8.1
80	31	17,955	-58.3		20	3.3
70	31	18,799	-57.2		17	2.4
60	30	19,776	-56.1		12	1.7
50	30	20,939	-54.8		10	2.2
40	29	22,374	-52.9		09	4.1
30	27	24,245	-50.1		09	5.3
25	26	25,442	-48.6		08	6.5
20	[illegible]	26,918	-46.3		08	8.0
15	26	28,837	-44.5		09	9.6
10	22	31,589	-40.3		10	10.8
7	[illegible]	34,066	-36.7			

SALT LAKE CITY, UTAH — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	1,288	18.6	8.4	15	3.3
1000	31	94				
950	31	545				
900	31	1,016				
850	31	1,510	22.3	6.0	15	3.3
800	31	2,035	20.4	3.2	19	1.4
750	31	2,589	16.5	.5	26	1.0
700	31	3,171	12.3	-2.5	25	1.5
650	31	3,788	7.4	-5.0	24	1.8
600	31	4,440	2.0	-7.2	22	2.4
550	31	5,136	-3.3	-12.1	[illegible]	2.7
500	31	5,883	-8.4	-17.8	23	3.2
450	31	6,693	-13.5	-24.5	24	3.8
400	31	[illegible]	-19.2	-31.9	25	4.3
350	31	8,562	-26.4	-38.1	25	5.6
300	31	9,655	-34.7	-46.2	26	8.2
250	31	10,903	-44.3		26	11.7
200	31	12,363	-55.0		26	13.2
175	31	13,206	-60.1		27	11.9
150	31	14,156	-65.3		27	8.7
125	31	15,258	-67.8		26	5.0
100	31	16,605	-65.8		24	1.1
80	31	17,968	-62.8		10	1.6
70	31	18,796	-60.7		08	2.8
60	30	19,759	-58.8		08	4.4
50	30	20,911	-56.2		09	5.7
40	30	22,334	-54.4		08	6.3
30	30	24,191	-51.5		08	9.0
25	30	25,380	-49.8		09	9.8
20	30	26,850	-46.8		09	11.1
15	24	28,766	-45.1		09	11.5
10	22	31,504	-41.5		08	14.3
7	9	33,967	-37.4			

SAN DIEGO, CALIF. — 997 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	124	20.0	[illegible]	[illegible]	.7
1000	31	98				
950	31	542	21.4	[illegible]	34	.8
900	31	1,013	23.6	6.5	33	1.6
850	31	1,511	22.7	2.8	32	2.5
800	31	2,036	19.6	[illegible]	34	[illegible]
750	31	2,588	15.6	[illegible]	05	1.2
700	31	3,168	10.9	-1.0	10	2.6
650	31	3,782	6.5	-2.8	10	4.0
600	31	4,434	1.9	[illegible]	10	3.7
550	31	5,130	-2.6	-13.2	09	3.3
500	31	5,880	-7.2	-20.8	08	3.1
450	31	6,694	-12.0	-28.3	[illegible]	1.8
400	31	7,535	-18.2	-34.5	15	1.3
350	31	8,571	-25.1	-40.0	20	2.4
300	31	9,670	-33.6	-47.8	19	4.5
250	31	10,922	-43.5		19	[illegible]
200	31	12,387	-54.7		19	8.2
175	31	13,229	-61.0		18	8.7
150	30	14,175	-67.2		19	6.3
125	[illegible]	15,262	-71.0		17	[illegible]
100	[illegible]	16,589	-69.1		10	5.5
80	[illegible]	17,935	-65.0		08	6.4
70	30	18,753	-62.9		09	[illegible]
60	[illegible]	19,707	-60.7		09	11.0
50	30	20,850	-57.7		09	11.8
40	29	22,263	-56.1		08	14.2
30	28	24,106	-52.9		09	17.5
25	27	25,288	-50.6		09	18.4
20	26	26,752	-48.0		09	18.2
15	25	28,657	-45.6		09	20.1
10	21	31,386	-41.7		09	24.3
7	15	33,833	-36.6			

[illegible], P. R. — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	6	26.4	21.5	14	2.1
1000	31	138	25.2	21.0	10	4.4
950	31	588	22.2	18.4	10	7.8
900	31	1,057	19.3	14.4	10	8.4
850	31	1,547	16.4	9.5	10	8.6
800	31	2,062	14.0	4.5	10	8.3
750	31	2,604	11.1	-1.0	09	7.8
700	31	3,176	7.6	-4.9	09	7.2
650	31	3,783	3.9	-9.6	09	6.3
600	31	4,430	.5	-14.4	09	5.6
550	31	5,123	-3.2	-19.4	08	5.2
500	31	5,871	-7.5	-24.7	09	4.6
450	31	[illegible]	-12.5	-30.6	09	3.6
400	31	7,573	-18.8	-35.8	08	2.7
350	31	8,556	-26.1	-42.4	09	1.6
300	31	9,649	-34.8	-49.5	14	.6
250	31	10,895	-45.0		24	1.3
200	31	12,348	-56.8		27	4.3
175	31	13,183	-62.2		27	4.6
150	31	14,124	-67.4		28	3.2
125	31	15,210	-71.6		02	.9
100	30	16,523	-72.0		08	5.8
80	[illegible]	17,848	-68.5		08	11.4
70	[illegible]	18,654	-65.9		08	14.5
60	29	19,596	-63.3		09	16.3
50	29	20,725	-60.6		09	17.3
40	29	22,126	-57.4		09	17.9
30	28	23,959	-53.5		09	18.5
25	28	25,137	-51.6		09	18.9
20	25	26,592	-49.0		09	21.6
15	23	28,499	-45.1		09	23.1
10	[illegible]	31,231	-40.8			

* SAULT STE MARIE, MICH. — 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	221	11.3	9.8	03	.7
1000	31	141				
950	31	573	13.9	8.7	30	2.5
900	31	1,029	12.2	5.9	30	5.1
850	31	1,506	10.1	1.3	29	6.1
800	31	2,009	7.8	-3.0	29	6.4
750	31	2,539	5.7	-6.9	29	7.2
700	31	3,101	2.8	-9.8	29	7.8
650	31	3,697	-.6	-14.3	29	9.0
600	31	4,333	-3.7	-18.5	29	10.6
550	31	5,015	-7.9	-23.3	29	11.4
500	31	5,749	-12.6	-29.1	29	13.1
450	31	6,546	-17.9	-33.7	29	14.3
400	31	7,415	-24.3	-39.4	29	15.0
350	31	8,377	-31.6	-45.5	29	15.7
300	31	9,446	-39.9	-51.2	29	17.7
250	31	10,670	-48.3		29	20.1
200	31	12,118	-53.9		30	20.4
175	31	12,973	-55.4		30	17.7
150	31	13,952	-57.1		29	14.6
125	31	15,102	-58.2		30	12.5
100	31	16,508	-57.8		30	9.0
80	31	17,921	-56.2		30	4.8
70	31	18,771	-54.9		31	3.6
60	30	19,760	-53.5		34	2.1
50	30	20,938	-52.0		02	1.5
40	30	22,388	-50.5		06	2.9
30	28	24,272	-48.4		07	4.2
25	27	25,475	-47.0		08	5.3
20	26	26,962	-45.3		09	6.9
15	23	28,894	-42.8		09	7.9
10	21	31,656	-39.1		09	9.1
7	19	34,113	-34.9		09	10.4
5	11	36,459	-31.2			

* SHEMYA, ALASKA — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	38	7.5	6.4	22	.4
1000	30	104			05	.5
950	30	526	6.0	4.4	24	1.0
900	30	968	4.9	1.3	28	1.0
850	30	1,434	4.1	-3.0	27	1.9
800	30	1,926	2.8	-6.5	26	2.4
750	30	2,447	1.0	-10.6	25	3.1
700	30	2,999	-1.4	-15.9	25	3.9
650	30	3,587	-4.2	-17.6	27	3.9
600	30	4,214	-7.5	-20.7	28	5.8
550	30	4,887	-11.6	-23.4	27	6.7
500	30	5,611	-16.0	-29.3	27	8.1
450	30	6,397	-21.4	-33.9	27	10.2
400	30	7,254	-27.7	-38.9	27	11.8
350	30	8,204	-34.6	-43.8	26	11.4
300	30	9,260	-42.7	-42.0	26	13.8
250	30	10,471	-49.8		26	17.5
200	30	11,926	-50.2		26	17.7
175	29	12,789	-50.8		26	16.2
150	29	13,791	-51.8		26	14.0
125	28	14,974	-52.4		26	12.0
100	27	16,411	-53.0		26	8.2
80	27	17,852	-52.3		26	5.8
70	27	18,717	-51.8		26	[illegible]
60	25	19,721	-51.8		26	2.6
50	25	20,904	-51.5		21	.4
40	25	22,356	-50.7		12	.7
30	24	24,237	-49.1		10	2.0
25	22	25,442	-48.0		09	3.4
20	22	26,920	-46.2		09	3.0
15	18	28,862	-43.4		08	5.8
10	15	31,603	-40.1		09	6.7
7	12	34,043	-36.8			
5	5	36,419	-33.8			

* SHREVEPORT, LA. — 100[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	79	22.1	20.6	16	.7
1000	31	141	22.1	20.3	15	.7
950	31	589	22.0	18.2	19	2.0
900	31	1,058	19.0	15.2	20	1.3
850	31	1,547	15.8	10.5	24	1.0
800	31	2,061	12.8	6.7	[illegible]	1.0
750	31	2,601	9.9	1.6	29	1.0
700	31	3,171	6.7	-1.9	30	1.3
650	31	3,776	3.3	-7.3	26	1.4
600	31	4,422	-.2	-11.8	24	2.1
550	31	5,113	-4.3	-15.6	24	2.0
500	31	5,859	-8.6	-19.7	22	2.4
450	31	6,668	-13.7	-24.2	22	2.5
400	31	7,553	-19.6	-30.2	23	3.3
350	30	8,537	-26.2	-37.1	24	3.9
300	30	9,630	-34.7	-45.1	24	4.7
250	30	10,877	-44.6		25	5.4
200	30	12,333	-56.0		26	6.6
175	30	13,171	-62.1		25	6.1
150	30	14,111	-67.4		25	4.2
125	30	15,201	-69.9		35	.2
100	3	16,537	-67.1		07	4.2
80	30	17,894	-64.0		08	6.3
70	30	18,717	-61.6		08	8.0
60	29	19,678	-59.6		09	9.8
50	29	20,825	-57.0		09	12.6
40	29	22,244	-55.3		09	14.0
30	28	24,079	-52.5		08	17.0
25	28	25,253	-50.6		09	19.1
20	23	26,726	-47.7		09	20.6
15	18	28,644	-45.0		09	18.9
10	15	31,374	-41.5		09	23.4
7	9	33,810	-38.5			

SPOKANE, WASH. — 930 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	720	17.3	4.0	15	2.2
1000	31	96				
950	31	540				
900	31	1,006	21.7	6.5	22	2.7
850	31	1,500	19.8	2.7	24	4.3
800	31	2,019	16.0	.0	23	4.8
750	31	2,564	12.0	-1.9	23	5.6
700	31	3,137	8.0	-4.9	23	7.6
650	31	3,744	3.8	-9.2	23	9.6
600	31	4,389	-.6	-14.3	23	10.6
550	31	5,078	-5.4	-19.4	23	11.1
500	31	5,819	-10.5	-25.8	23	12.4
450	31	6,622	-15.6	-30.8	23	13.4
400	31	7,500	-22.0	-34.9	23	13.7
350	3.	8,471	-29.4	-41.0	23	15.4
300	31	9,550	-37.6	-48.7	23	17.5
250	31	10,784	-46.5		24	20.9
200	31	12,237	-54.1		24	22.1
175	31	13,089	-56.5		24	20.5
150	31	14,061	-59.1		24	16.7
125	31	15,199	-61.2		24	12.5
100	31	16,588	-59.8		24	7.3
80	31	17,987	-58.7		23	3.2
70	31	18,829	-57.0		21	1.3
60	31	19,809	-55.6		16	.5
50	31	20,976	-53.5		08	1.7
40	30	22,419	-52.0		08	2.9
30	27	24,287	-49.1		08	3.7
25	26	25,488	-47.8		08	4.7
20	25	26,969	-46.2		08	5.4
15	19	28,900	-43.5		08	7.1
10	13	31,662	-39.1			

* SWAN ISLAND, W. I. — 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	10	26.1	23.1	09	[illegible]
1000	31	114	25.6	22.8	09	5.1
950	31	565	22.4	19.8	10	6.6
900	31	1,035	19.7	15.4	[illegible]	7.4
850	31	1,526	16.8	10.8	11	7.8
800	31	2,041	14.1	6.9	11	7.9
750	31	2,584	11.2	2.9	11	7.8
700	31	3,157	7.8	-1.3	11	7.4
650	31	3,765	4.5	-6.2	10	7.0
600	31	4,413	.9	-11.2	10	6.3
550	31	5,107	-3.2	-16.4	11	5.4
500	31	5,855	-7.7	-21.0	10	4.3
450	31	6,667	-12.7	-25.8	09	3.8
400	31	7,556	-18.5	-31.3	07	[illegible]
350	31	8,542	-25.5	-37.8	04	[illegible]
300	31	9,639	-33.9	-46.5	34	2.4
250	31	10,889	-44.2		32	3.3
200	30	12,347	-56.3		31	5.0
175	30	13,183	-62.5		32	4.6
150	30	14,118	-69.2		33	3.2
125	30	15,198	-72.3		05	5.0
100	29	16,506	-72.9		08	8.1
80	29	17,828	-68.8		09	10.4
70	29	18,633	-66.2		09	12.3
60	29	19,572	-64.3		09	14.7
50	28	20,699	-60.8		09	16.4
40	28	22,098	-57.5		09	18.1
30	27	23,928	-53.7		10	19.4
25	27	25,105	-51.7		10	19.2
20	26	26,566	-48.7		09	19.1
15	24	28,470	-45.2		09	23.0
10	23	31,204	-41.7		09	30.4
7	20	33,629	-39.4		10	36.0
5	11	35,967	-34.5			

TAMPA, FLA. — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	8	23.6	22.5	10	1.8
1000	30	137	24.4	22.2	12	1.8
950	30	587	22.9	18.8	16	2.3
900	30	1,058	20.1	15.1	16	1.9
850	30	1,549	17.1	11.7	16	1.6
800	30	2,065	14.5	8.0	15	1.4
750	30	2,609	11.5	3.8	13	1.2
700	30	3,183	8.3	-.5	14	1.3
650	30	3,792	4.8	-4.7	15	1.3
600	30	4,440	1.1	-9.4	15	1.6
550	30	5,135	-2.9	-15.0	16	.7
500	30	5,885	-7.3	-20.7	10	.9
450	30	6,698	-12.2	-26.6	06	1.8
400	30	7,589	-18.0	-33.1	06	2.4
350	30	8,577	-25.1	-39.2	05	2.5
300	30	9,676	-33.3	-47.3	04	4.1
250	30	10,93[illegible]	-43.3		04	4.7
200	30	12,393	-55.3		05	6.4
175	30	13,233	-61.8		06	7.6
150	30	14,172	-68.3		06	6.5
125	30	15,254	-71.9		06	5.2
100	30	16,577	-69.1		08	6.7
80	30	17,924	-65.0		08	9.4
70	30	18,744	-62.5		08	11.7
60	30	19,698	-60.9		09	14.4
50	30	20,839	-58.5		09	18.0
40	28	22,252	-55.7		10	18.0
30	27	24,098	-52.2		09	18.4
25	26	25,285	-49.8		09	20.0
20	25	26,757	-46.8		09	21.1
15	24	28,670	-45.2		09	23.1
10	13	31,405	-40.6			
7						
5						

TOPEKA, KANS. — 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	268	17.7	15.1	15	1.1
1000	31	144				
950	31	586	21.4	14.8	21	5.3
900	31	1,055	19.9	11.6	23	5.4
850	31	1,546	17.2	7.0	24	4.3
800	31	2,061	14.2	3.5	25	3.5
750	31	2,603	10.7	1.0	27	[illegible]
700	31	3,175	7.2	-4.2	26	1.9
650	31	3,780	3.5	-8.7	27	2.7
600	31	4,425	-.2	-14.4	27	3.4
550	31	5,117	-4.3	-20.7	26	[illegible]
500	31	5,861	-9.1	-25.6	28	3.7
450	31	6,668	-14.5	-29.7	28	4.0
400	31	7,550	-20.6	-35.3	28	4.5
350	31	8,527	-27.5	-41.6	29	4.7
300	31	9,614	-35.9	-48.4	29	6.1
250	31	10,857	-45.2		30	6.9
200	30	12,312	-55.0		29	8.6
175	29	13,156	-59.0		30	7.8
150	[illegible]	14,115	-62.5		31	6.0
125	29	15,233	-64.8		32	4.8
100	29	16,597	-63.4		36	3.4
80	29	[illegible]	-61.4		04	3.3
70	29	18,807	-59.1		04	4.2
60	28	19,779	-57.1		08	4.5
50	28	[illegible]	-54.8		08	6.2
40	27	[illegible]	-53.3		08	7.8
30	25	24,238	-50.4		09	9.9
25	24	25,433	-48.5		09	[illegible]
20	23	26,908	-46.0		09	12.5
15	20	28,830	-43.4		08	13.0
10	16	31,581	-39.9		09	13.5
7	[illegible]	34,034	-37.2			

TRUK, CAROLINE IS. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	2	28.4	23.9	09	1.8
1000	31	96	27.3	21.5	09	1.9
950	31	549	23.7	19.0	10	3.8
900	31	1,020	20.6	15.0	10	4.3
850	31	1,513	17.6	11.0	10	5.0
800	31	2,030	15.7	7.4	10	5.4
750	31	2,575	12.4	3.9	09	5.8
700	31	3,151	9.1	-.2	09	5.6
650	31	3,762	5.9	-3.5	09	7.0
600	31	4,413	2.2	-7.7	09	7.5
550	31	5,111	-1.6	-11.8	09	7.1
500	31	5,865	-5.8	-18.0	09	7.1
450	31	6,683	-10.6	-23.6	09	5.8
400	31	7,581	-16.1	-29.8	08	4.3
350	31	8,576	-22.9	-36.7	08	3.8
300	31	9,684	-31.2	-44.8	07	3.1
250	31	10,949	-41.7		06	2.9
200	31	12,421	-54.2		03	3.4
175	31	13,264	-61.1		03	3.0
150	31	14,204	-68.5		04	1.8
125	31	15,278	-75.1		07	1.6
100	31	16,567	-74.6		08	7.8
80	31	17,882	-69.2		09	8.8
70	31	18,686	-66.3		09	7.4
60	31	19,626	-63.5		09	6.7
50	31	20,756	-59.8		09	5.0
40	31	22,159	-57.2		09	3.8
30	31	23,992	-54.3		10	4.2
25	30	25,167	-51.8		09	[illegible]
20	26	26,627	-49.3		10	7.0
15	27	28,522	-47.7		[illegible]	9.7
10	13	31,234	-44.1		[illegible]	19.8
7	7	33,630	-42.0			

* TUCSON, ARIZ. — 924 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	789	22.4	18.3	14	2.1
1000	31	92				
950	31	544				
900	31	1,017	22.8	16.3	13	1.7
850	31	1,514	21.0	12.7	07	.9
800	31	2,038	17.7	10.4	06	1.3
750	31	2,587	14.1	7.5	09	1.8
700	31	3,166	10.0	4.1	11	2.6
650	31	3,779	5.9	.6	11	3.1
600	31	4,429	1.3	-2.7	11	3.4
550	31	5,125	-3.1	-8.1	10	3.4
500	31	5,874	-7.4	-14.0	09	3.2
450	31	6,689	-11.8	-20.8	07	2.1
400	31	7,581	-17.5	-28.0	05	2.4
350	31	8,571	-24.6	-35.1	05	3.5
300	31	9,671	-33.0	-43.3	03	3.2
250	31	10,927	-43.2		01	3.0
200	31	12,390	-55.4		35	4.2
175	31	13,230	-61.4		01	4.3
150	31	14,172	-67.5		04	2.4
125	30	15,259	-71.4		06	3.0
100	30	16,580	-69.7		08	5.2
80	28	17,923	-66.1		08	7.6
70	27	18,738	-63.4		09	9.5
60	27	19,691	-61.0		09	11.0
50	26	20,831	-58.3		09	13.4
40	26	22,242	-56.2		09	14.1
30	[illegible]	24,084	-53.2		09	17.5
25	[illegible]	25,264	-51.4		09	18.2
20	26	26,723	-48.6		09	19.5
15	24	28,623	-46.0		09	18.9
10	23	31,342	-42.1		09	22.6
7	19	33,770	-38.0		09	21.9
5	15	36,099	-33.7			

* VANDENBERG AFB, CALIF. — 1002 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	100	13.5	13.0	31	.5
1000	28	113			31	.6
950	28	549	19.1	8.0	36	3.1
900	28	1,018	23.5	.3	01	3.1
850	28	1,514	21.4	-1.5	35	2.5
800	28	2,036	18.5	-4.4	32	1.6
750	28	2,585	15.2	-8.7	28	.8
700	28	3,165	11.3	-11.1	[illegible]	.8
650	28	3,778	6.8	-11.9	17	2.0
600	28	4,430	2.3	-15.8	17	[illegible]
550	28	5,126	-2.6	-21.0	17	2.9
500	28	5,875	-7.7	-26.1	19	3.5
450	28	6,685	-13.3	-30.8	21	[illegible]
400	28	7,570	-19.7	-37.6	22	[illegible]
350	28	8,551	-26.7	-43.9	22	7.4
300	28	9,642	-34.9	-50.0	21	9.1
250	28	10,889	-44.3		22	11.5
200	28	12,351	-54.4		21	12.3
175	28	13,196	-60.0		21	12.2
150	28	14,144	-65.7		21	10.0
125	28	15,241	-69.2		21	5.2
100	28	16,576	-67.8		14	3.0
80	28	17,931	-64.1		[illegible]	[illegible]
70	28	18,753	-62.1		10	7.0
60	28	19,711	-59.8		[illegible]	8.0
50	27	20,855	-57.7		10	9.1
40	27	22,271	-55.6		[illegible]	[illegible]
30	27	24,117	-52.5		[illegible]	[illegible]
25	25	25,304	-50.5		09	15.9
20	24	26,771	-48.0		10	15.8
15	[illegible]	28,679	-45.6		[illegible]	17.4
10	19	31,397	-42.2		[illegible]	20.1
7	[illegible]	33,831	-37.7		[illegible]	22.5
5	7	[illegible]	-33.1			

* See reference note at end of table

RAWINSONDE DATA

Average monthly values

AUGUST 1971

VICTORIA, TEXAS — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	23.6	22.3	10	.9
1000	31	128	24.7	23.5	15	1.4
950	31	578	22.4	20.0	17	4.7
900	31	1,048	20.0	15.1	17	5.0
850	31	1,540	17.0	11.1	17	4.2
800	31	2,055	14.3	6.2	17	3.4
750	31	2,598	11.0	2.4	17	3.1
700	31	3,170	7.4	-.6	17	2.8
650	31	3,777	4.2	-4.8	17	2.8
600	31	4,425	.5	-8.6	18	2.6
550	31	5,118	-3.1	-13.4	18	2.8
500	31	5,867	-7.4	-17.7	18	2.8
450	31	6,681	-12.3	-23.9	18	2.2
400	31	7,570	-18.4	-29.6	20	2.5
350	31	8,557	-25.2	-37.0	20	2.1
300	31	9,654	-33.8	-45.3	20	2.2
250	30	10,904	-44.0		20	2.6
200	30	12,363	-55.9		23	1.8
175	30	13,201	-61.8		23	2.0
150	29	14,141	-68.0		19	.9
125	29	15,225	-71.5		10	1.5
100	27	16,556	-68.6		08	5.5
80	26	17,904	-65.7		08	9.4
70	26	18,721	-63.4		08	10.5
60	26	19,672	-61.4		09	12.3
50	26	20,811	-58.5		09	15.0
40	26	22,220	-56.8		09	16.5
30	26	24,058	-52.9		09	19.4
25	25	25,238	-50.6		09	20.7
20	25	26,703	-47.7		09	22.3
15	19	28,610	-45.1		09	23.2
10	15	31,337	-41.5			
7						

* WAKE IS., PACIFIC AREA — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	5	27.6	23.7	10	2.9
1000	31	118	26.7	22.8	10	3.1
950	31	571	23.2	20.5	11	4.4
900	31	1,042	20.1	17.2	11	4.0
850	31	1,534	17.1	13.4	11	3.7
800	31	2,050	14.4	10.4	10	2.9
750	31	2,594	11.5	6.8	11	2.2
700	31	3,169	8.4	2.5	12	1.9
650	31	3,779	5.0	-1.1	14	1.4
600	31	4,428	1.3	-6.5	16	1.1
550	31	5,124	-2.8	-10.9	19	1.2
500	31	5,874	-7.2	-16.3	19	1.1
450	31	6,688	-12.1	-22.9	16	.8
400	31	7,579	-18.0	-28.4	10	.7
350	31	8,567	-25.0	-36.1	02	.4
300	31	9,665	-33.4	-44.8	34	.7
250	31	10,918	-43.9		03	1.3
200	31	12,375	-56.3		01	1.6
175	31	13,210	-63.1		35	2.6
150	31	14,144	-69.5		02	3.5
125	30	15,223	-72.6		06	4.2
100	30	16,537	-71.7		08	8.4
80	29	17,863	-69.0		08	12.0
70	27	18,667	-66.3		08	14.2
60	27	19,606	-64.3		09	16.2
50	26	20,732	-61.4		09	17.4
40	25	22,120	-58.6		09	18.5
30	25	23,950	-55.0		09	19.5
25	25	25,120	-52.9		09	20.7
20	24	26,570	-49.4		09	22.8
15	24	28,461	-48.0		09	24.0
10	17	31,168	-43.6		09	30.6
7						

* WALLOPS IS., VA. NASA — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	21.2	19.1	32	1.0
1000	31	150	22.1	18.0	31	1.6
950	31	596	20.3	14.6	31	2.6
900	31	1,061	17.6	11.2	29	2.5
850	31	1,548	14.7	7.5	28	3.2
800	31	2,060	12.5	2.0	27	3.7
750	31	2,599	9.9	-1.5	26	4.4
700	31	3,170	7.4	-7.0	26	5.0
650	31	3,777	4.0	-11.6	27	5.6
600	31	4,423	.6	-16.7	27	6.4
550	31	5,117	-3.4	-20.6	27	7.1
500	31	5,863	-8.2	-24.7	26	7.7
450	31	6,674	-13.4	-29.1	27	9.0
400	31	7,559	-19.5	-34.2	26	10.2
350	31	8,541	-26.4	-40.2	26	10.8
300	31	9,634	-34.9	-47.8	26	12.6
250	31	10,880	-44.6		27	13.7
200	31	12,338	-55.6		27	15.1
175	31	13,180	-60.7		28	14.5
150	31	14,128	-65.3		27	12.2
125	31	15,234	-66.6		27	7.9
100	31	16,590	-64.1		28	4.0
80	31	17,969	-60.6		01	.6
70	31	18,805	-58.8		09	2.5
60	31	19,777	-57.1		09	4.4
50	31	20,937	-54.9		09	7.3
40	31	22,372	-52.4		09	8.8
30	31	24,245	-49.3		09	11.6
25	30	25,445	-47.6		09	11.9
20	30	26,927	-45.5		09	13.0
15	29	28,861	-42.7		09	15.3
10	22	31,628	-38.8		10	16.1
9		34,112	-35.0			

WASHINGTON DULLES INT. AP — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	85	16.7	15.2	31	.6
1000	31	134	18.7	15.7	31	.9
950	31	597	19.5	12.9	31	2.6
900	31	1,061	17.0	10.1	30	3.3
850	31	1,547	14.8	4.1	30	4.2
800	30	2,059	12.6	-.9	29	4.7
750	30	2,598	9.9	-4.1	28	5.5
700	30	3,168	6.9	-7.8	28	6.1
650	30	3,774	3.7	-12.0	28	6.9
600	30	4,420	.2	-16.1	27	7.5
550	30	5,112	-3.8	-20.6	27	8.5
500	29	5,858	-8.8	-25.6	27	9.7
450	29	6,667	-13.9	-30.1	27	10.8
400	29	7,551	-20.1	-35.4	27	12.2
350	29	8,530	-27.1	-41.7	26	13.7
300	29	9,619	-35.5	-49.3	26	16.4
250	29	10,863	-45.1		27	18.2
200	29	12,320	-55.4		27	19.7
175	29	13,162	-60.4		28	17.7
150	29	14,113	-64.3		28	13.5
125	29	15,223	-65.6		27	9.7
100	29	16,586	-62.8		29	5.2
80	28	17,971	-59.7		31	1.3
70	28	18,810	-58.1		07	1.1
60	28	19,784	-56.6		08	3.8
50	28	20,946	-54.9		08	6.0
40	28	22,380	-52.5		08	8.3
30	27	24,255	-48.8		09	9.9
25	25	25,457	-47.3		09	10.6
20	24	26,940	-45.6		09	12.3
15	22	28,871	-42.7		09	13.0
10	18	31,627	-39.5		10	14.1

WAYCROSS, GA. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	44	22.3	21.6	35	.5
1000	31	135	22.6	21.3	01	.2
950	31	584	22.2	19.3	16	.3
900	31	1,054	19.6	16.2	17	1.0
850	31	1,545	16.9	12.2	18	1.2
800	31	2,061	14.1	8.7	18	1.2
750	31	2,603	10.9	5.3	20	1.3
700	31	3,177	7.9	.9	22	1.3
650	31	3,785	4.7	-5.6	22	.9
600	31	4,433	1.2	-9.9	21	1.4
550	30	5,129	-2.8	-15.0	21	1.6
500	30	5,878	-7.1	-21.1	20	1.6
450	30	6,693	-11.8	-27.4	19	1.3
400	30	7,584	-17.8	-33.1	19	.7
350	30	8,573	-24.7	-41.4	18	.3
300	30	9,673	-33.3	-49.2	26	.9
250	30	10,927	-43.4		30	1.0
200	30	12,389	-55.5		31	2.2
175	30	13,228	-61.9		33	2.7
150	30	14,167	-68.2		35	1.3
125	30	15,251	-71.1		06	.8
100	30	16,581	-67.7		08	4.2
80	29	17,934	-64.1		08	7.2
70	29	18,756	-61.8		08	10.2
60	28	19,716	-59.7		08	12.5
50	28	20,862	-57.5		09	14.7
40	28	22,283	-54.1		09	15.7
30	28	24,141	-51.7		09	16.5
25	28	25,328	-50.3		09	18.1
20	26	26,791	-47.6		08	20.1
15	24	28,707	-44.2		09	22.2
10	20	31,456	-39.8		09	23.6
7	7	33,935	-36.7			

WINNEMUCCA, NEV. — 871 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,312	15.8	2.1	08	.7
1000	31	117				
950	31	564				
900	31	1,030				
850	31	1,520	21.4	3.0	06	.4
800	31	2,044	19.5	.6	23	.8
750	31	2,595	15.7	-1.8	23	1.8
700	31	3,175	11.0	-4.2	23	2.9
650	31	3,789	6.1	-6.0	21	4.2
600	31	4,439	1.1	-8.7	20	5.3
550	31	5,131	-4.5	-13.4	21	6.3
500	30	5,875	-10.0	-18.9	22	6.5
450	30	6,679	-15.0	-26.0	23	7.1
400	30	7,561	-20.8	-33.0	23	8.0
350	30	8,537	-27.9	-39.4	23	9.3
300	30	9,623	-36.0	-47.3	22	11.5
250	30	10,864	-45.4		22	15.4
200	30	12,321	-54.8		22	16.8
175	30	13,167	-59.5		23	14.8
150	30	14,120	-64.4		23	11.2
125	30	15,226	-66.9		23	7.6
100	30	16,578	-65.4		21	4.1
80	30	17,945	-62.2		15	2.2
70	29	18,774	-60.3		12	2.6
60	29	19,740	-58.3		10	3.6
50	29	20,895	-55.8		09	4.9
40	28	22,317	-54.3		08	6.3
30	26	24,172	-51.4		08	8.7
25	24	25,367	-49.3		08	9.4
20	24	26,837	-47.4		09	10.5
15	17	28,741	-45.2		09	9.4
10	10	31,477	-42.0			
7						

WINSLOW, ARIZ. — 853 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,487	19.3	13.0	19	1.4
1000	31	95				
950	31	549				
900	31	1,022				
850	31	1,517	18.6	12.1	19	1.3
800	31	2,039	18.0	9.3	22	.7
750	31	2,590	15.1	5.8	31	1.2
700	31	3,171	11.1	2.3	32	.8
650	31	3,786	6.7	-.3	12	.7
600	31	4,438	1.7	-3.2	11	.8
550	31	5,134	-3.1	-8.1	07	1.4
500	31	5,882	-8.3	-14.2	06	2.1
450	31	6,693	-13.0	-21.3	04	1.6
400	31	7,582	-18.4	-30.2	01	1.5
350	31	8,569	-25.3	-37.5	35	2.3
300	31	9,667	-33.5	-45.2	35	2.7
250	31	10,920	-43.6		33	4.5
200	31	12,383	-55.1		33	4.9
175	31	13,224	-61.3		34	4.3
150	31	14,167	-67.5		33	3.2
125	31	15,258	-70.8		01	2.6
100	31	16,583	-69.2		07	3.7
80	31	17,928	-65.7		08	5.0
70	31	18,746	-62.6		08	6.8
60	31	19,702	-60.4		09	7.8
50	31	20,845	-57.8		09	9.3
40	31	22,259	-55.6		09	11.2
30	31	24,103	-53.1		09	14.2
25	31	25,287	-51.2		09	15.3
20	31	26,746	-48.7		09	16.5
15	31	28,648	-46.4		09	16.9
10	31	31,343	-44.2			
7	5	33,707	-41.8			

+ YAP, CAROLINE IS. — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	14	28.1	24.4	10	1.1
1000	30	87	26.7	21.8	11	1.0
950	30	539	23.3	19.0	11	1.8
900	30	1,010	20.2	15.6	11	2.3
850	30	1,502	17.1	11.8	10	2.7
800	30	2,018	14.5	8.6	10	3.0
750	30	2,562	11.8	5.1	10	3.8
700	30	3,137	8.8	1.1	10	4.3
650	30	3,747	5.5	-2.8	10	5.1
600	30	4,398	1.8	-6.8	10	5.1
550	30	5,095	-1.9	-11.7	10	4.9
500	30	5,847	-6.2	-16.7	09	4.3
450	30	6,665	-10.7	-22.7	10	4.1
400	30	7,561	-16.3	-30.2	09	4.6
350	30	8,555	-23.5	-36.7	08	4.5
300	30	9,661	-31.8	-44.7	09	4.8
250	30	10,922	-42.2		07	5.4
200	30	12,390	-54.8		06	7.5
175	29	13,229	-61.7		05	9.0
150	29	14,167	-69.2		06	12.7
125	29	15,239	-75.6		07	13.4
100	28	16,527	-74.9		08	13.1
80	27	17,839	-70.2		08	13.0
70	27	18,639	-67.4		09	12.4
60	27	19,576	-64.2		09	11.2
50	27	20,700	-61.4		09	10.4
40	27	22,093	-58.2		09	9.2
30	27	23,922	-54.2		09	9.3
25	27	25,098	-52.0		09	10.4
20	26	26,552	-49.5		09	12.6
15	24	28,451	-46.3		10	13.7
10	21	31,157	-44.7		09	20.7
7	12	33,572	-41.0			

YUCCA FLAT, NEV. — 881 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	.3				
1000	31	85				
950	31	539				
900	31	1,012				
850	31	1,510	24.0	7.8	32	.3
800	31	2,037	20.7	5.3	19	2.9
750	31	2,592	16.9	2.4	21	2.9
700	31	3,175	12.4	-.2	20	1.5
650	31	3,792	7.4	-2.3	13	1.1
600	31	4,445	2.2	-5.8	11	1.9
550	31	5,141	-3.2	-9.3	14	2.4
500	31	5,889	-8.1	-17.1	17	2.1
450	31	6,701	-12.9	-24.5	21	1.9
400	31	7,589	-18.7	-32.7	23	3.4
350	31	8,574	-25.5	-40.1	23	4.5
300	31	9,670	-34.0	-46.6	22	6.9
250	31	10,921	-43.6		22	10.0
200	31	12,386	-54.4		22	12.3
175	31	13,231	-59.9		22	11.9
150	30	14,180	-66.1		23	9.0
125	30	15,276	-68.9		23	3.1
100	30	16,614	-67.7		14	3.2
80	30	17,972	-63.6		11	3.4
70	30	18,796	-61.4		09	5.8
60	29	19,758	-58.9		09	6.8
50	29	20,908	-56.8		09	8.2
40	26	22,329	-54.7		09	9.7
30	26	24,182	-52.0		09	12.7
25	25	25,372	-50.1		09	13.9
20	23	26,839	-47.9		09	14.5
15	23	28,748	-45.4		09	16.9
10	17	31,465	-43.0			
7						

Note: All observations scheduled at 1200 G.c.t. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun. AUGUST 1971

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Aug.									
1	0.60	0.78	0.88	1.14	1.33	1.04	0.83	0.72	0.63
2	.60	.72	.84	(.97)	1.24	----	----	----	----
3	.66	.75	.87	(.96)	(1.20)	----	----	----	----
4	----	.69	.83	----	1.23	----	----	----	----
6	.65	.74	.85	1.04	1.21	----	----	----	----
7	----	----	----	----	1.22	----	----	----	----
8	.77	.86	.97	1.10	1.30	----	----	----	----
9	----	----	.84	1.07	1.26	----	----	----	----
10	----	----	----	1.04	1.23	----	----	----	----
11	.70	.77	.89	1.01	----	----	----	----	----
12	----	----	----	----	1.30	1.05	----	----	----
13	.82	.90	1.00	1.14	1.33	1.11	.92	.82	.72
14	(.78)	.87	1.00	1.10	----	----	(1.14)	(1.08)	----
15	.83	.93	1.03	1.18	1.29	1.11	.95	.82	.66
16	.69	.81	.91	1.05	1.21	1.06	.91	.77	----
17	.72	.82	.93	1.07	1.29	----	----	----	----
18	.80	.87	.97	1.12	1.31	1.06	.97	.83	.77
19	----	----	.93	1.09	----	----	----	----	----
20	----	----	----	----	1.26	1.08	.87	.70	----
21	.62	.70	.84	.99	1.24	1.10	.90	----	----
22	.69	----	----	----	1.26	----	----	----	----
23	----	----	----	(1.03)	(1.16)	----	----	----	----
25	.70	.82	.95	1.11	1.28	----	----	----	----
26	.77	.89	.99	1.10	1.24	----	.91	.84	.73
27	----	.82	.94	1.12	1.29	----	----	----	----
28	.74	.84	.96	1.08	1.30	1.13	.97	.85	----
29	----	(.74)	(1.04)	----	(1.24)	----	----	----	----
30	.83	.92	1.03	1.13	1.31	1.13	.96	----	----
31	.59	.68	.80	.96	1.15	.98	----	----	----
Averages	0.72	0.81	0.92	1.08	1.26	1.08	0.92	0.79	0.70

TUCSON, ARIZ.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Aug.									
1	----	----	0.88	1.03	1.26	1.04	----	0.70	0.61
2	0.70	0.79	.89	1.04	1.23	.92	0.78	.67	----
3	.55	.64	.75	.93	1.20	----	----	----	----
4	----	----	.82	1.00	1.23	1.02	.82	.68	.60
5	.56	.67	.78	.96	1.19	----	----	----	----
6	----	----	----	----	----	.96	.81	.71	----
7	.63	.73	.85	1.03	1.19	.95	----	----	----
8	----	----	----	.92	1.14	----	----	----	----
9	----	----	----	.86	1.19	----	----	----	----
10	----	----	----	----	1.17	----	----	----	----
11	----	----	.85	----	1.22	----	.79	----	----
12	----	----	----	.89	1.17	1.00	----	.67	.52
13	.65	.75	.88	1.04	1.24	1.01	.89	.75	.65
14	----	----	----	----	1.19	1.00	.85	.68	.62
15	----	----	----	.94	----	.92	----	----	----
16	----	----	----	.91	1.16	.98	----	.60	.49
17	.52	.61	.73	.87	1.07	----	----	----	----
18	.52	.60	.71	.88	----	----	----	----	----
20	.56	.63	----	----	1.16	----	----	----	----
21	----	----	.95	1.10	1.27	1.08	----	----	----
22	----	----	----	1.04	1.26	----	.88	.71	.61
23	.70	.77	.87	1.03	1.29	1.07	.94	.81	.70
24	.58	.68	.82	.99	1.13	----	----	----	----
25	.70	.79	.89	1.09	1.29	1.10	.91	.80	.70
26	.73	.82	.96	1.08	1.28	1.03	----	----	----
27	----	----	.85	----	----	----	----	----	----
28	----	----	----	----	----	1.05	.93	.83	----
30	----	.77	.88	1.03	1.21	----	----	----	----
31	----	----	----	.88	1.10	----	----	----	----
Averages	0.62	0.71	0.84	0.98	1.20	1.01	0.86	0.72	0.61

OMAHA, NEBR.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Aug.									
2	----	HS0.58	HM0.70	HM0.92	----	----	----	----	----
10	0.63	.78	.86	1.01	1.10	HS1.00	HS0.94	HS0.83	HS0.72
11	HM .44	HM .54	HM .68	HM .85	----	----	----	----	----
13	HS .54	----	HS .80	HS .98	----	----	----	----	----
16	----	----	----	----	----	----	HI .59	HI .47	HI .34
17	----	----	----	----	----	HM .80	HI .58	HI .44	HI .36
22	----	----	----	----	HM1.19	HS .94	HS .78	HS .68	HS .57
23	HS .65	HS .74	HS .87	HS1.04	HS1.25	HM .94	HM .76	HM .67	HM .56
24	----	----	----	----	----	----	HS .82	HS .68	HS .62
25	HS .80	HS .88	HS1.02	HS1.10	HS1.34	HS1.12	HS .94	HS .82	HS .70
26	HS .80	HS .87	HS .98	HS1.15	----	----	----	----	----
27	HS .78	HS .90	HS1.04	HS1.16	----	1.16	.91	.74	.61
28	HM .76	HS .86	HS1.00	HS1.12	HS1.30	1.08	.97	.93	.73
29	HM .70	HM .80	HM .92	HM1.10	HM1.32	HM1.01	----	----	----
Averages	0.67	0.77	0.89	1.04	1.25	1.01	0.81	0.75	0.58

MADISON, WIS.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Aug.									
11	S0.64	S0.77	S0.92	S1.13	S1.33	----	----	----	----
15	----	----	----	----	----	----	----	S0.87	S0.77
16	----	----	----	----	S1.33	S1.05	----	S .76	S .64
21	----	M .55	M .70	M .88	----	----	----	----	----
22	----	----	----	S .99	----	----	----	----	----
25	S .73	S .84	S .96	S1.13	----	----	----	----	----
28	S .79	S .86	S1.03	S1.17	S1.33	S1.15	----	S .69	S .56
29	----	S .89	S .98	S1.14	----	----	----	----	----
Averages	0.72	0.78	0.92	1.06	1.33	1.10	----	0.77	0.65

( ) Clouds Present
* Values corresponding to true solar noon
BD Blowing Dust
BN Blowing Sand
D Dust
DI Intense Dust
DM Moderate Dust
DS Slight Dust
F Fog
GF Ground Fog
H Haze
I Intense Haze
HM Moderate Haze
HS Slight
I Intense Haze-indeterminable
K Smoke
KI Intense Smoke
KM Moderate Smoke
KS Slight Smoke
M Moderate Haze-indeterminable
N Sand
S Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

AUGUST 1971

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	751	569	630	623	390	542	531	650	564	524	421	682	706	651	702	680	630	690	608	650	639	523	609	402	529	664	622	638	554	630	602	600
AMES IOWA	574	697	512	399	549	521	438	493	612	559	677	445	615	232	599	629	631	581	487	565	474	594	---	481	629	646	617	613	600	428	462	545
ANNETTE ALASKA	87	192	144	268	610	618	142	594	588	425	230	226	287	237	207	187	214	58	138	61	91	95	110	168	245	313	424	95	339	411	183	258
APALACHICOLA FLORIDA	300	311	627	627	600	621	594	614	522	401	271	612	450	494	403	421	485	560	603	585	526	611	491	412	383	345	494	541	523	275	417	488
ARGONNE NAT. LAB.	630	415	358	202	590	587	394	570	501	469	564	604	537	314	515	585	553	555	334	509	468	547	388	380	581	261	349	560	545	496	392	476
ASTORIA OREGON	---	483	334	277	448	426	630	619	619	566	520	332	366	467	578	550	609	588	371	532	158	558	568	573	593	574	522	201	---	---	---	484
ATLANTA GEORGIA	321	334	553	524	358	399	361	589	463	414	413	514	552	613	580	203	387	525	462	545	342	334	512	446	469	407	542	630	481	298	219	445
BARROW ALASKA	349	352	278	297	545	483	340	532	419	206	433	262	529	528	501	336	258	223	191	201	355	203	472	166	143	111	185	217	236	225	142	313
BETHEL ALASKA	247	265	---	207	166	154	173	160	150	229	551	478	236	376	188	119	190	175	275	253	314	249	265	187	170	114	148	312	406	369	345	251
BISMARCK N.DAK.	741	730	736	705	691	714	703	696	617	615	630	595	638	579	667	655	599	359	665	647	582	649	527	651	635	---	622	603	531	60	174	600
BLUE HILL MASS.	470	521	456	170	675	591	574	632	630	482	384	615	650	655	305	587	631	575	520	431	498	516	486	636	600	523	70	311	545	557	547	511
BOISE IDAHO	687	571	633	664	613	539	605	680	669	701	705	661	653	454	653	520	535	659	651	637	654	603	667	628	580	624	395	560	353	---	---	605
BROOKINGS SOUTH DAK.	589	509	620	682	620	561	471	456	588	518	585	509	522	516	518	523	536	220	548	523	511	518	517	556	561	471	509	515	516	37	358	506
BROWNSVILLE TEXAS	552	534	---	426	---	499	669	631	576	592	614	628	---	---	651	---	594	549	484	510	351	700	734	620	620	629	583	462	592	353	621	568
BURLINGTON VERMONT	540	448	88	427	653	625	615	640	639	482	417	620	544	601	127	692	628	622	618	177	230	390	303	621	389	326	136	94	488	220	630	453
CAPE HATTERAS N.C.	630	660	612	561	435	560	640	557	617	626	605	445	334	587	599	173	129	300	574	520	560	496	433	541	508	118	12	375	462	539	531	475
CARIBOU MAINE	569	346	98	283	501	564	482	538	436	458	307	329	290	435	162	423	410	545	331	326	391	388	79	166	258	512	421	48	419	169	439	359
CHARLESTON S.C.	506	515	395	573	373	378	486	323	379	408	---	492	510	428	77	296	423	539	449	490	491	305	472	274	227	403	382	453	186	236	309	393
CLEVELAND OHIO	570	510	242	310	609	645	625	603	555	---	---	---	---	---	---	656	617	576	494	---	---	---	---	---	363	---	514	301	549	516	409	---
COLUMBIA MISSOURI	724	592	389	329	460	201	169	569	659	633	615	615	593	494	468	569	635	600	582	506	284	603	605	599	434	623	614	591	601	567	486	529
DAVIS CALIFORNIA	686	681	702	711	671	701	704	705	670	649	653	677	681	673	644	670	684	653	672	623	669	647	663	592	617	593	646	597	646	606	633	658
EL CENTRO CALIF. NPF	568	587	576	463	547	563	449	575	422	518	581	583	550	573	570	520	499	526	446	397	306	292	561	548	536	526	518	563	511	555	576	516
EL PASO TEXAS	623	650	682	620*	428	525	565	621	642	570	540	546*	574	503	510	634	611	520	651	615	---	628	588	582	---	---	624	561	600	597	603	586
ELY NEVADA	739	445	504	522	528	537	455	692	690	765	725	685	628*	452*	298	633	590	546	559	572	510	648	735	483	616	416	468	303	547	650	720	570
EPPLEY NEWPORT R.I.	595	575	527	175	583	559	566	600	597	481	405	498	622	602	429	422	623	588	511	468	529	517	498	616	586	546	56	425	541	536	466	508
FAIRBANKS ALASKA	306	461	349	442	279	239	221	144	160	234	461	367	403	392	525	516	450	445	213	130	301	258	324	266	300	331	414	434	403	274	215	331
FORT WORTH TEXAS	377	196	485	406	274	394	335	606	551	627	624	417	242	290	450	426	537	513	553	472	567	601	517	397	198	578	547	555	415	468	554	457
FRESNO CALIFORNIA	669	660	560	677	551	666	683	668	644	535	617	608	641	655	646	650	651	645	646	649	650	649	573	279	578	596	603	507	616	600	616	613
GENEVA NEW YORK	393	311	173	291	537	513	502	512	513	360	464	542	520	476	84	531	529	525	470	314	313	403	368	480	93	296	145	104	455	426	442	390
GLASGOW MONTANA	667	656	576	623	629	617	560	598	549	615	578	583	561	549	469	411	491	586	588	576	592	563	454	587	567	569	536	274	406	181	276	532
GLOUCESTER POINT VA.	647	658	644	515	141	---	---	---	---	---	---	---	---	328	634	416	268	188	415	573	496	466	533	644	632	144	---	535	566	516	541	477
GREAT FALLS MONTANA	655	548	520	623	615	580	620	670	654	600	629	646	642	389	434	546	588	644	633	454	612	389	588	621	517	596	572	505	259	149	271	541
GREENSBORO N.C.	417	437	509	537	160	168	571	447	570	563	302	561	676	597	448	268	114	117	579	566	509	334	537	619	595	315	375	543	587	541	504	454
INDIANAPOLIS INDIANA	682	561	268	187	538	543	509	597	377	555	617	647	589	544	389	595	600	567	529	373	384	389	419	561	310	546	336	537	576	533	416	493
ITHACA NEW YORK	330	389	154	243	636	588	591	597	595	405	333	635	617	574	93	528	613	595	500	226	378	480	456	603	249	358	74	131	475	557	514	436
LAKE CHARLES LA.	319	315	203	93	265	632	608	386	454	524	438	---	578	564	573	570	524	566	384	427	312	282	577	448	451	555	563	298	563	456	241	439
LAKELAND FLORIDA	437	532	515	286	499	621	546	596	349	580	340	549	401	233	159	217	520	580	360	485	534	530	539	389	448	479	398	542	535	597	378	457
LANDER WYOMING	641	648	419	503	620	642	648	382	619	646	592	619	651	636	603	550	537	625	629	594	596	445	613	618	534	363	501	444	301	483	531	556
LARAMIE WYOMING	635	594	616	426	652	634	698	625	394	630	489	473	632	642	686	657	491	501	507	493	590	594	434	634	634	348	564	484	344	463	600	554
LAS VEGAS NEVADA	659	639	521	622	574	438	642	646	622	661	614	611	618	490	611	586	549	579	494	549	498	613	345	579	574	352	479	380	532	561	619	557
LEXINGTON KENTUCKY	433	262	227	256	241	192	462	506	409	488	310	638	617	607	517	461	491	345	474	511	468	244	486	605	418	329	560	353	549	476	348	428
LITTLE ROCK ARKANSAS	579	339	237	293	282	277	454	617	400	568	451	482	583	560	443	497	517	464	549	508	537	233	435	468	511	491	576	553	482	488	476	463
LOS ANGELES CALIF.	670	665	664	561	598	658	676	664	630	647	645	648	485	601	484	622	627	610	562	583	607	601	605	514	639	659	623	614	625	656	615	615
LOS ANGELES CALIF.U	616	587	598	537	496	582	621	612	563	588	491	580	517	560	533	555	554	555	518	507	540	521	537	536	597	619	575	565	591	602	563	562
MADISON WISCONSIN	379	690	678	632	565	607	481	580	607	366	660	598	551	261	493	636	568	576	403	590	527	521	528	342	505	141	554	591	577	412	300	513
MANHATTAN KANSAS	682	646	649	543	382	538	432	510	617	643	636	604	621	631	610	567	609	575	441	530	407	598	529	563	576	575	424	517	591	556	556	560
MATANUSKA ALASKA	203	243	569	472	161	156	178	56	73	215	---	---	---	---	---	---	---	---	---	---	---	---	---	195	225	407	445	377	239	130	368	---
MEDFORD OREGON	653	624	662	637	660	648	627	634	636	627	628	614	639	614	620	613	619	615	589	565	565	432	625	603	605	474	365	496	590	125	291	571
MIAMI FLORIDA	319	546	506	312	257	583	566	473	163	304	528	455	243	363	527	498	524*	555	533	419	429	526	538	554	549	322	360	506	492	535	527	452
MIDLAND TEXAS	147	469	663	678	649	557	607	417	454	457	502	416	507	254	143	394	634	645	642	567	629	606	445	501	580	476	559	596	588	598	608	516
NASHVILLE TENNESSEE	505	328	448	636	500	455	512	561	567	433	375	634	617	609	599	568	547	131	490	521	378	177	307	496	461	307	514	478	564	295	319	462
NEW YORK CENTRAL PRK	200	352	396	115	706	643	645	642	623	519	327	693	583	647	558	644	643	582	191	513	498	499	655	676	571	439	41	539	582	572	335	504
NORTH OMAHA NEBRASKA	619	606	374	272	423	465	304	564	651	633	620	---	609	443	309	544	---	570	522	380	388	606	605	522	588	589	610	627	611	434	401	513
OAK RIDGE TENNESSEE	250	329	440	328	487	342	489	504	430	405	451	618	542	279	563	609	496	344	507	463	449	251	507	466	546	453	488	585	538	503	502	457
OKLAHOMA CITY OKLA.	589	633	567	622	547	172	302	299	594	548	489	406	254	199	315	508	497	537	577	526	552	539	450	510	478	527	555	458	519	506	554	478

SOLAR RADIATION TOTALS – Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

AUGUST 1971

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
PAGE ARIZONA	670	627	540	611	583	567	664	490	402	371	---	602	152	779	572	631	588	618	473	326	389	430	444	468	481	500	510	335	592	367	557	511*
PALMER AAES ALASKA	148	190	498	400	140	113	120	50	70	146	343	357	157	428	472	373	261	238	171	226	432	242	294	98	212	344	404	320	214	133	313	255
PHOENIX ARIZONA	596	586	601	623	612	564	492	612	592	499	582	556	608	596	498	580	552	584	497	374	535	505	519	533	498	578	470	488	554	560	555	548
PORTLAND MAINE	523	217	363	162	641	588	527	580	588	477	304	582	572	596	328	589	574	473	508	426	485	517	373	590	468	429	143	147	471	409	556	458
PROSSER WASHINGTON	573	563	635	594	600	582	555	581	588	612	600	591	576	597	584	575	574	547	546	550	398	271	572	556	540	523	307	507	414	468	294	531
RAPID CITY S.DAK.	578	635	581	560	617	615	629	612	468	591	572	567	272	582	592	556	364	339	436	385	506	551	492	569	547	355	479	518	406	89	369	498
RENO NEVADA	619	590	577	584	399	558	563	531	573	543	462	475	561	567	484	534	555	530	544	573	567	563	547	416	404	438	543	378	537	511	536	525
RICHLAND 25 NW WASH.	658	699	703	671	670	667	599	655	672	694	679	665	657	676	664	656	655	637	626	628	521	642	635	627	510	607	344	568	503	515	270	602
RIVERSIDE CALIFORNIA	725	649	718	548	673	690	730	699	634	668	623	---	638	659	650	650	647	620	649	662	626	598	619	601	657	656	644	621	652	682	650	651
RUSTON LOUISIANA	430	269	329	264	395	451	616	462	277	559	611	401	516	539	513	488	548	498	572	543	554	535	415	487	470	542	555	527	551	523	488	482
SAINT CLOUD MINN.	454	505	617	599	630	602	548	619	619	521	554	548	428	645	659	611	580	431*	584	599	269	527	323	553	362	600	585	575	241	57	243	506
SALT LAKE CITY	709	682	702	607	555	586	686	665	689	698	691	679	675	653	556	644	572	639	660	567	558	541	653	630	373	617	302	253	235	383	609	583
SAN ANTONIO TEXAS	291	91	136	573	190	161	416	506	659	584	273	262	120	614	501	506	621	632	499	481	521	610	521	541	616	508	572	584	518	462	527	455
SANTA MARIA CALIF.	662	649	585	653	600	647	674	680	661	543	593	623	571	618	587	629	646	571	602	579	617	566	606	543	493	517	602	583	623	585	586	603
SAULT STE MARIE MICH	---	641	633	708	662	672	643	618	500	307	704	203	487	195	---	621	524	380	104	480	601	231	604	354	107	310	288	571	528	469	566	473
SEATTLE-TACOMA WASH.	530	621	555	488	615	610	633	644	647	655	648	649	451	575	623	615	606	613	587	387	299	414	591	596	600	583	519	531	326	364	307	545
SPOKANE WASHINGTON	626	642	633	640	584	302	623	610	639	623	629	641	617	617	629	611	614	599	591	459	573	124	604	588	---	565	476	501	523	480	333	556
STERLING VIRGINIA	435	380	501	306	620	716	705	659	641*	509	370	706	702	681	569	460	543	338	435	525	---	256	562	673	617	552	---	580	595	574*	552	544
SWAN ISLAND W.I.	444	566	527	574	429	241	601	526	547	574	592	590	584	547	521	567	512	504	566	579	440	591	547	279	564	553	469	294	564	537	302	507
TALLAHASSEE FLORIDA	388	300	427	531	537	572	373	456	435	435	457	540	521	566	322	286	289	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TAMPA FLORIDA	479	510	362	254	407	564	671	645	463	544	462	459	486	249	492	166	572	622	356	470	513	607	435	372	332	560	482	564	492	523	405	471
WAKE ISLAND PACIFIC	620	629	718	674	674	709	672	612	459	374	561	461	554	80	662	688	590	274	645	639	655	632	595	648	658	666	667	587	637	575	705	591

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.
U Indicates Urban sites.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska — AUGUST 1971

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	67	103	248	199	65	50	52	21	29	87	178	202	83	154	185	198	110	116	70	102	177	98	149	39	103	108	149	91	80	48	145	113

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	NO DATA - MACHINE MALFUNCTION																															

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code ± s Ø Ø Ø defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															Mean O_3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
AMUNDSEN-SCOTT ANTARCTIC	DATA NOT RECEIVED																															
BEDFORD, MASS.	DATA NOT RECEIVED																															
BISMARCK, N, DAK.	00336	00341	00310	00315	00316	00298	00305	00315	00314	00313	00301	00301	00313	00303	00305	00303	00316	05371	00317	00319	00321	00304	00314	00317	00306	00305	00298	00310	00302	-	05319	314
BOULDER, COLO.	-	00336	00331	-	00332	00335	-	-	00334	00328	00326	00319	00310	-	-	00322	00321	06328	00318	00323	-	-	00323	00321	00326	00321	00318	-	-	00308	00321	324
CARIBOU, MAINE	DATA NOT RECEIVED																															
FAIRBANKS, ALASKA	03336	05377	05356	05376	05365	04347	-	-	-	-	00301	05337	03323	04350	00334	00321	05316	-	04327	-	05331	00332	00339	05342	05341	05332	-	00329	-	05335	03326	338
GREEN BAY, WIS.	03361	00369	04361	00368	00376	00336	00341	00341	00352	-	00374	00338	00349	00337	00343	00341	00344	00337	05336	00363	00353	00346	00347	04362	04401	04389	00355	00330	00322	04340	05323	351
HUANCAYO, PERU	00270	00267	00273	00274	00279	00265	00266	00268	00268	00271	00273	00277	00275	00268	00274	00276	00273	00269	00273	00277	00267	00267	00268	00270	00271	00269	00265	00257	00273	-	00270	270
MAUNA LOA, HAWAII	-	-	-	00294	-	-	-	-	00286	-	00293	-	-	-	-	00282	-	00289	-	00299	-	-	00287	-	00290	-	00291	-	-	00281	-	289
NASHVILLE, TENN	-	-	-	00319	00321	00310	00320	00330	00332	00328	00347	00330	00318	-	-	00331	00338	34377	-	-	-	-	00331	36324	00317	00327	00328	00318	00312	34334	03306	327
WALLOPS ISLAND, VA.	00317	00295	00317	00321	06306	00335	00326	00328	00324	00312	00316	00320	00308	00302	00316	03304	03314	04385	00306	-	00319	00334	00317	00300	00295	05315	05308	00311	00320	00314	00316	317

The spectrophotometer measures the total amount of ozone in the atmosphere, i e, the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ø Ø Ø) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g, 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick. The code ± s designates the type of measurement made

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), August



B. Temperature Departure from 30 - Year Mean (°F 1931-60), August 1971.

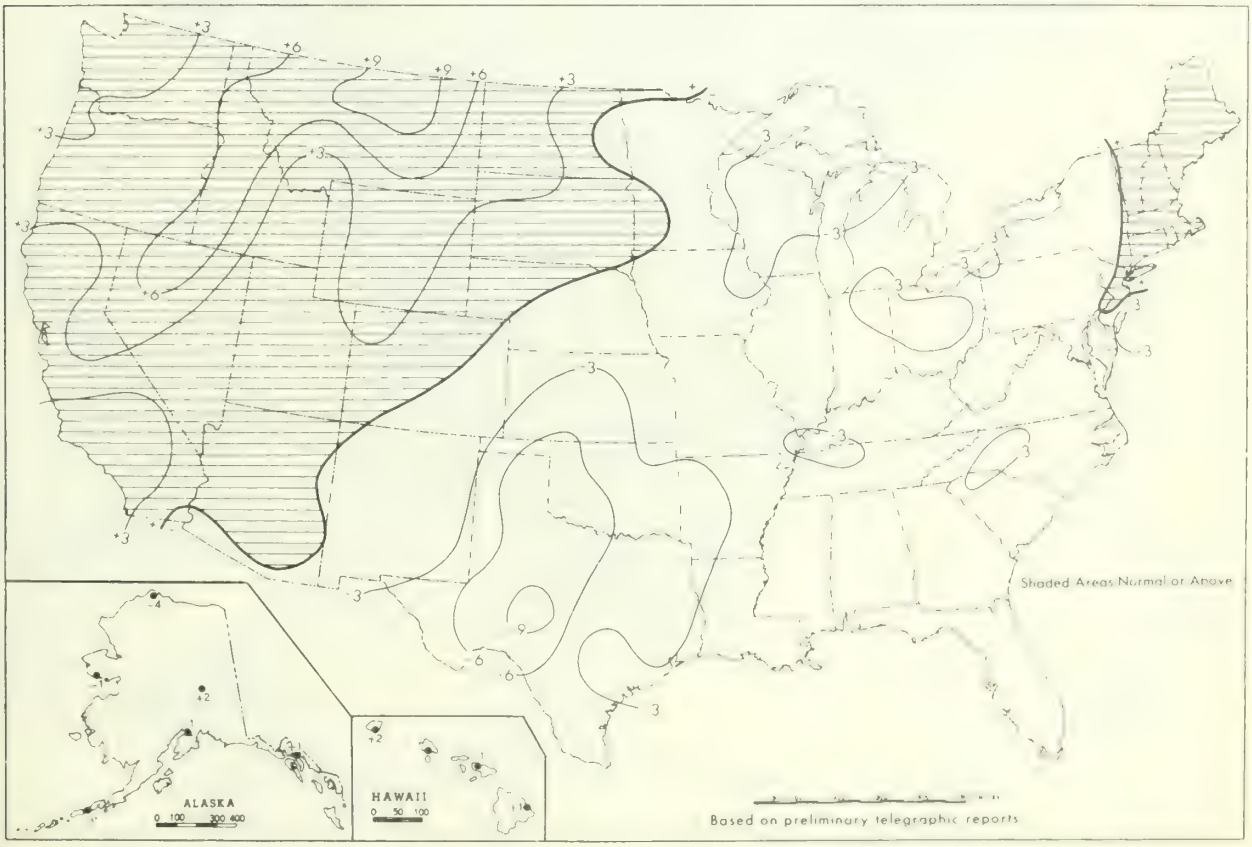


Chart II. Total Precipitation (Inches), **August 1971.**

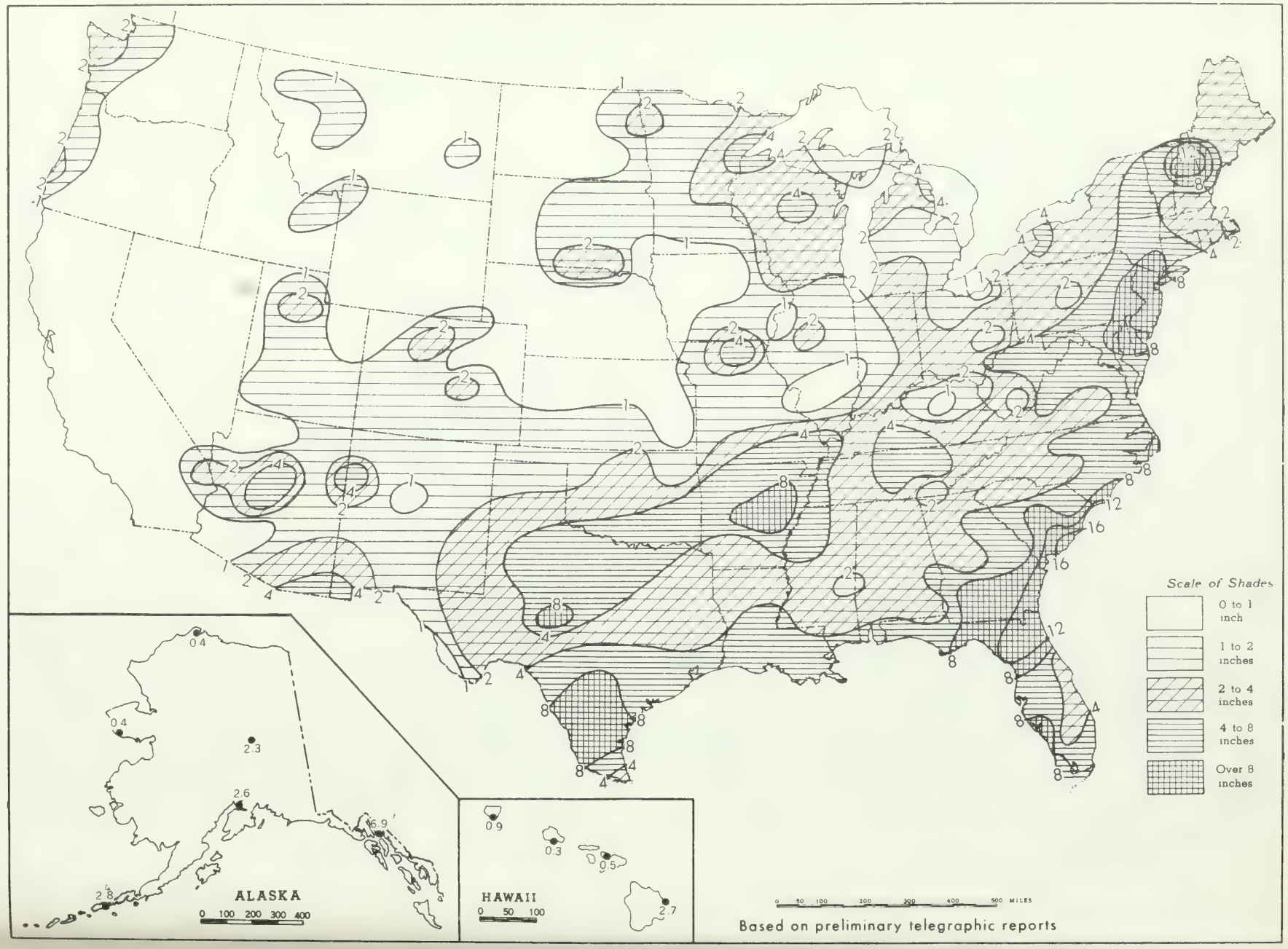


Chart III. Percentage of Normal Precipitation, **August 1971**.

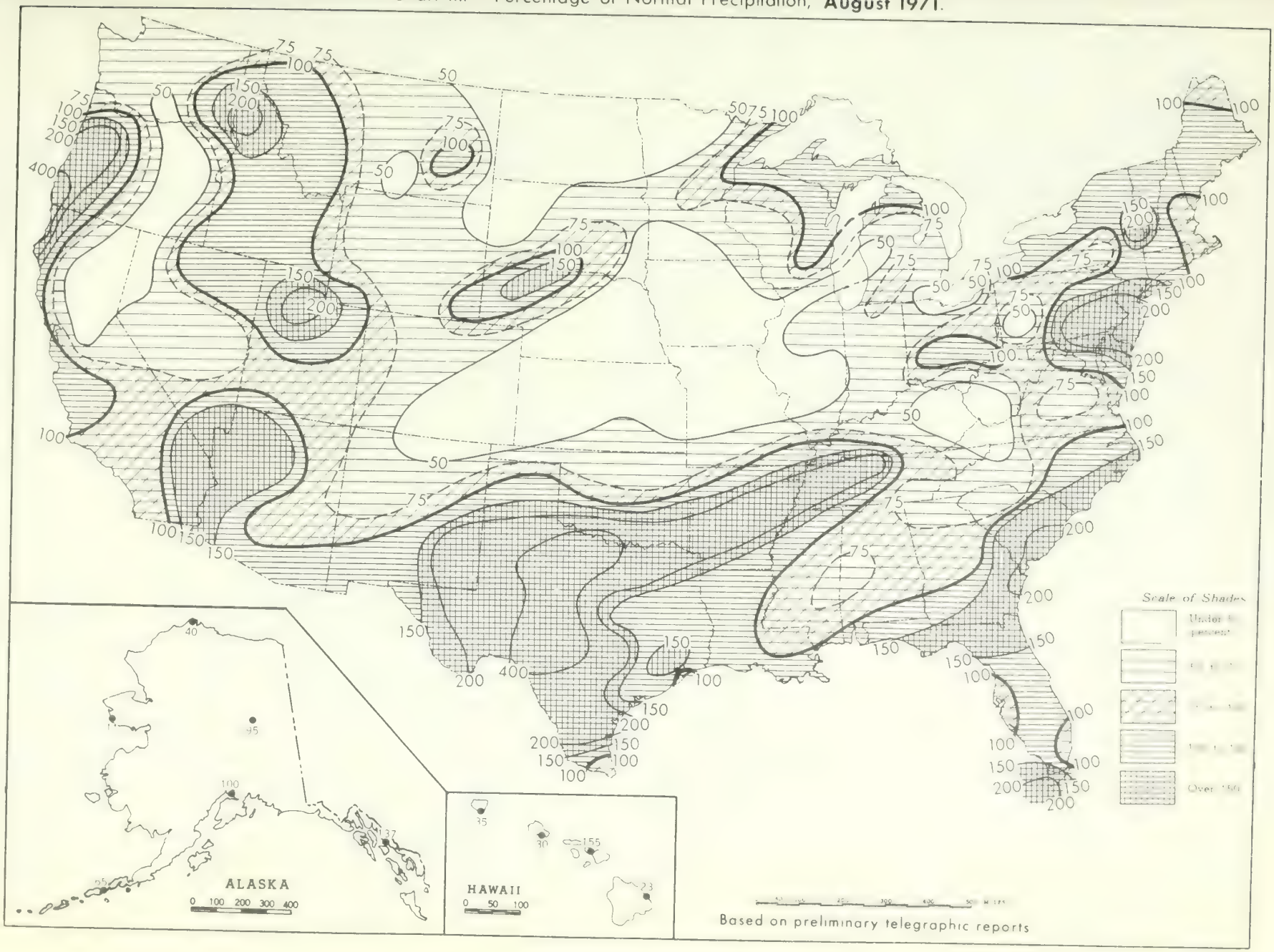
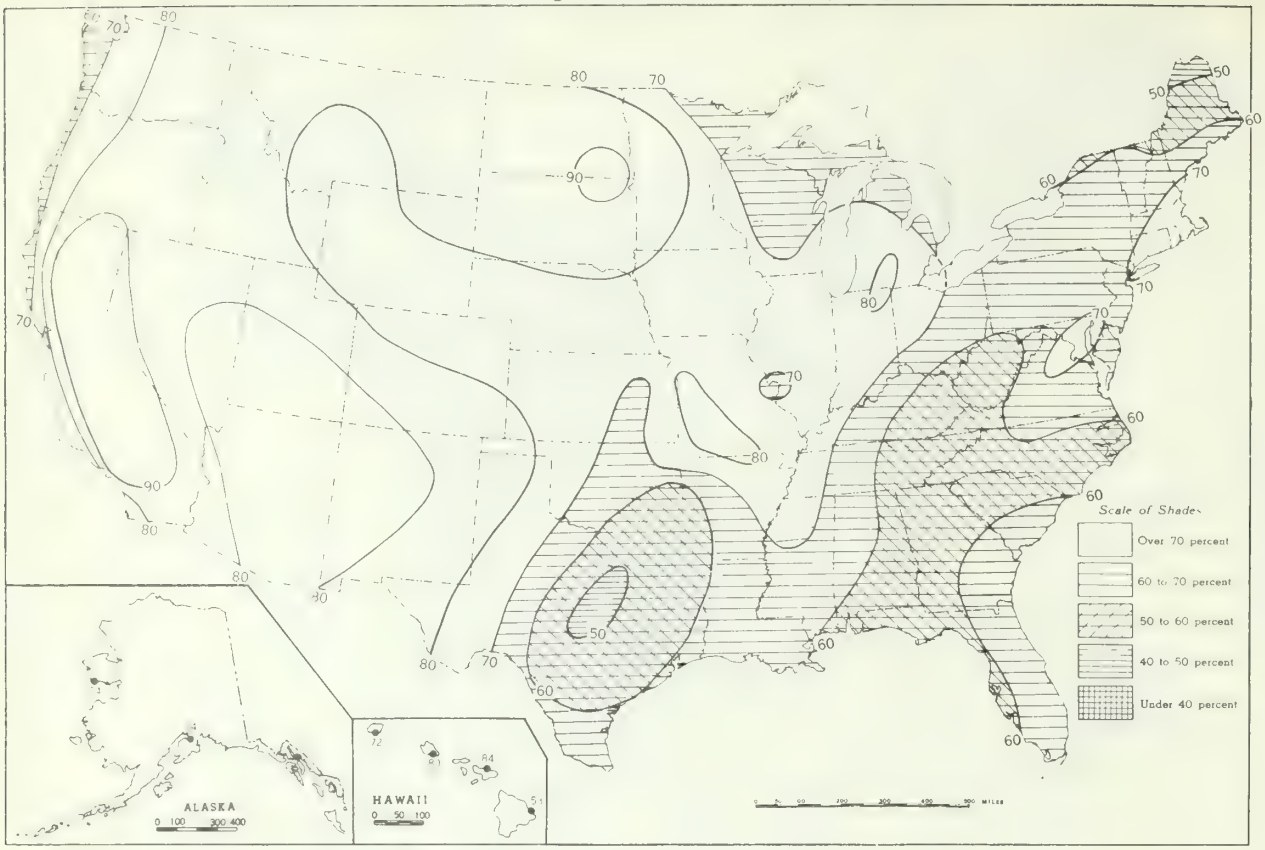
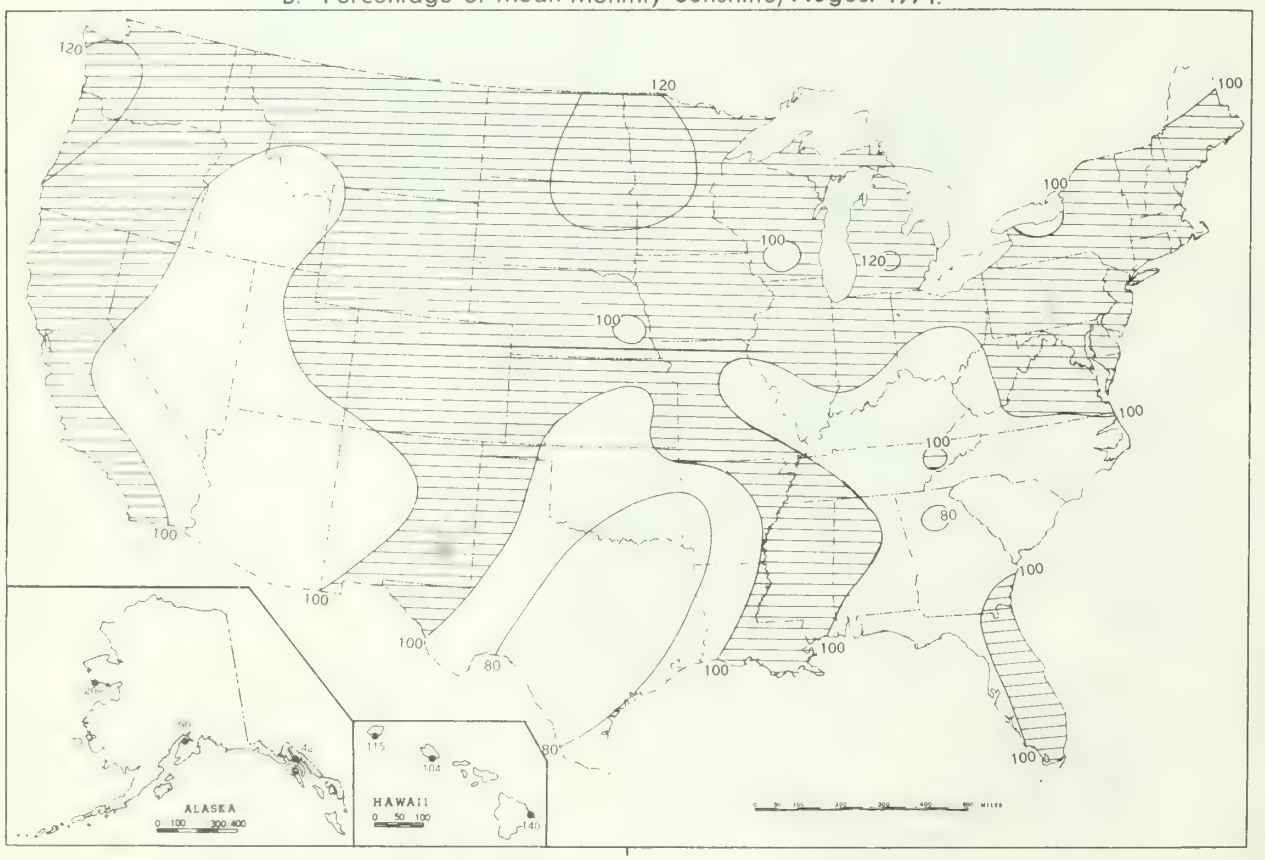


Chart VI. A. Percentage of Possible Sunshine, August 1971.

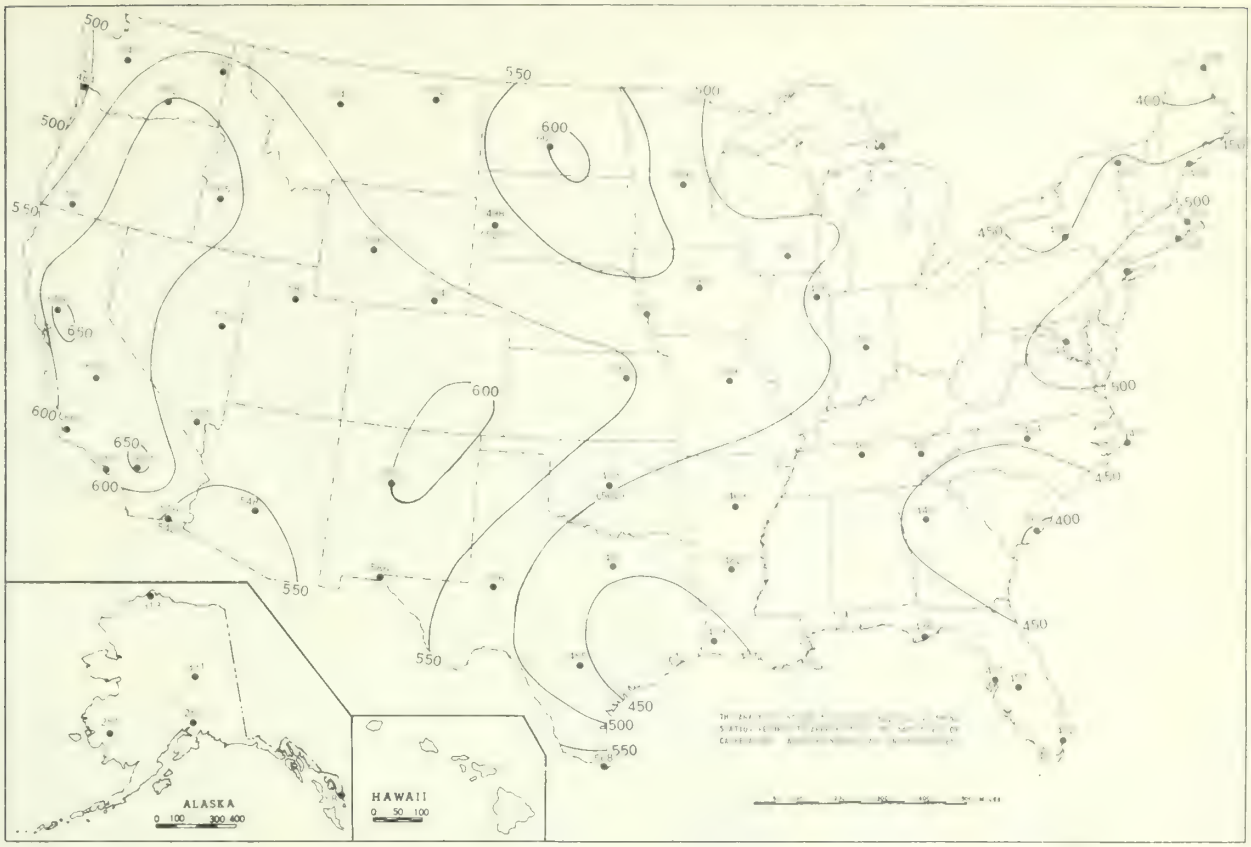


B. Percentage of Mean Monthly Sunshine, August 1971.

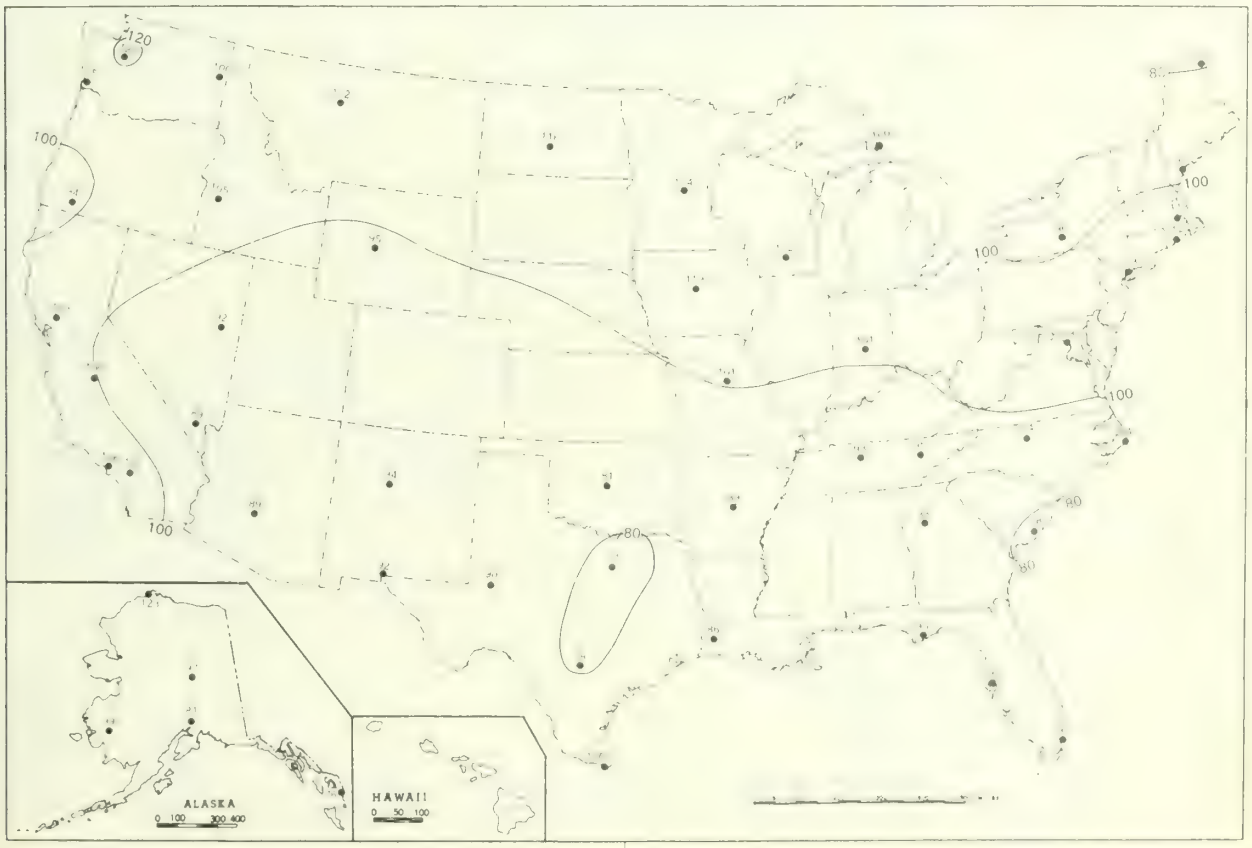


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, August 1971.



B. Percentage of Mean Daily Solar Radiation, August 1971.



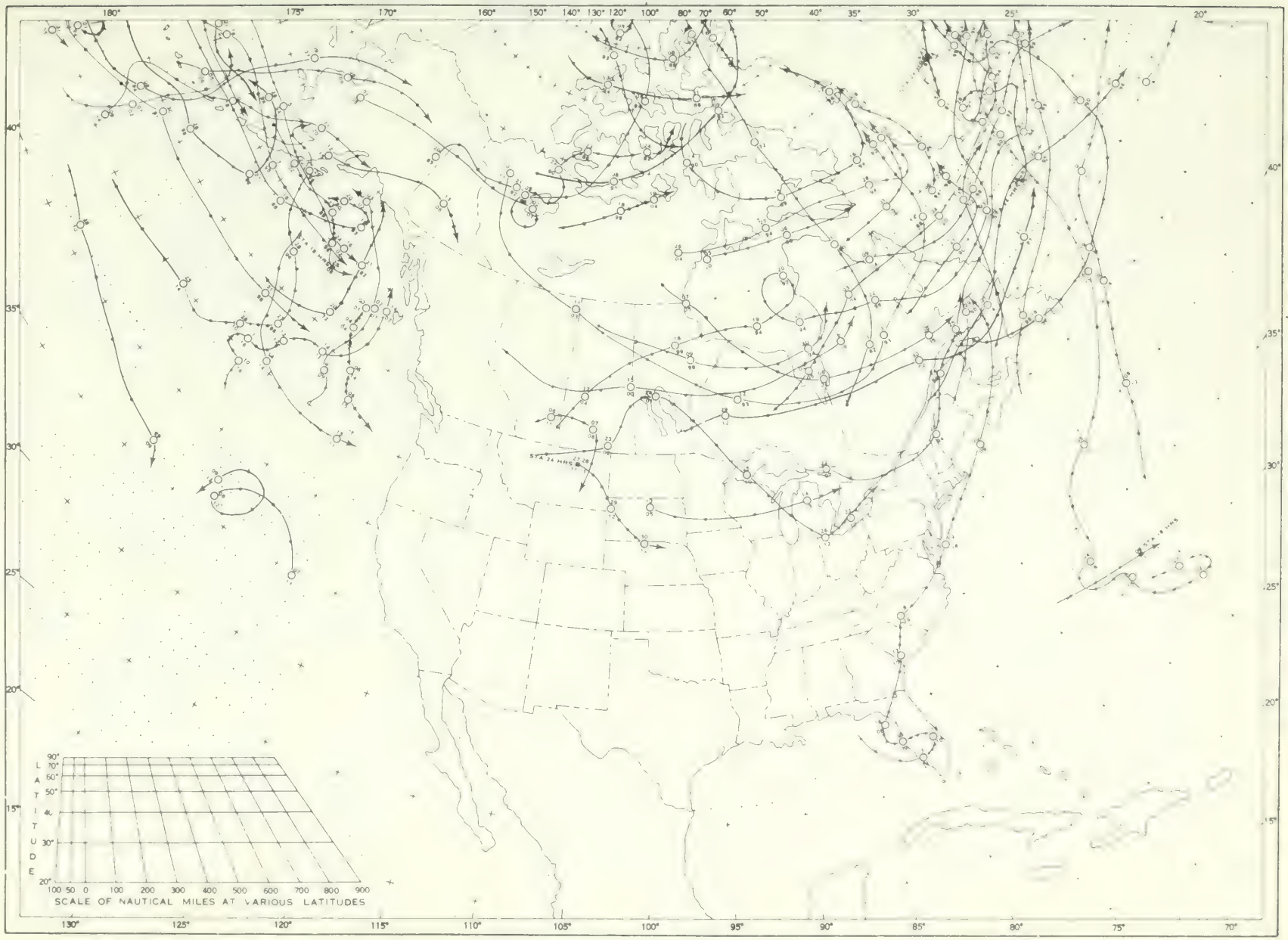
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, August 1971.



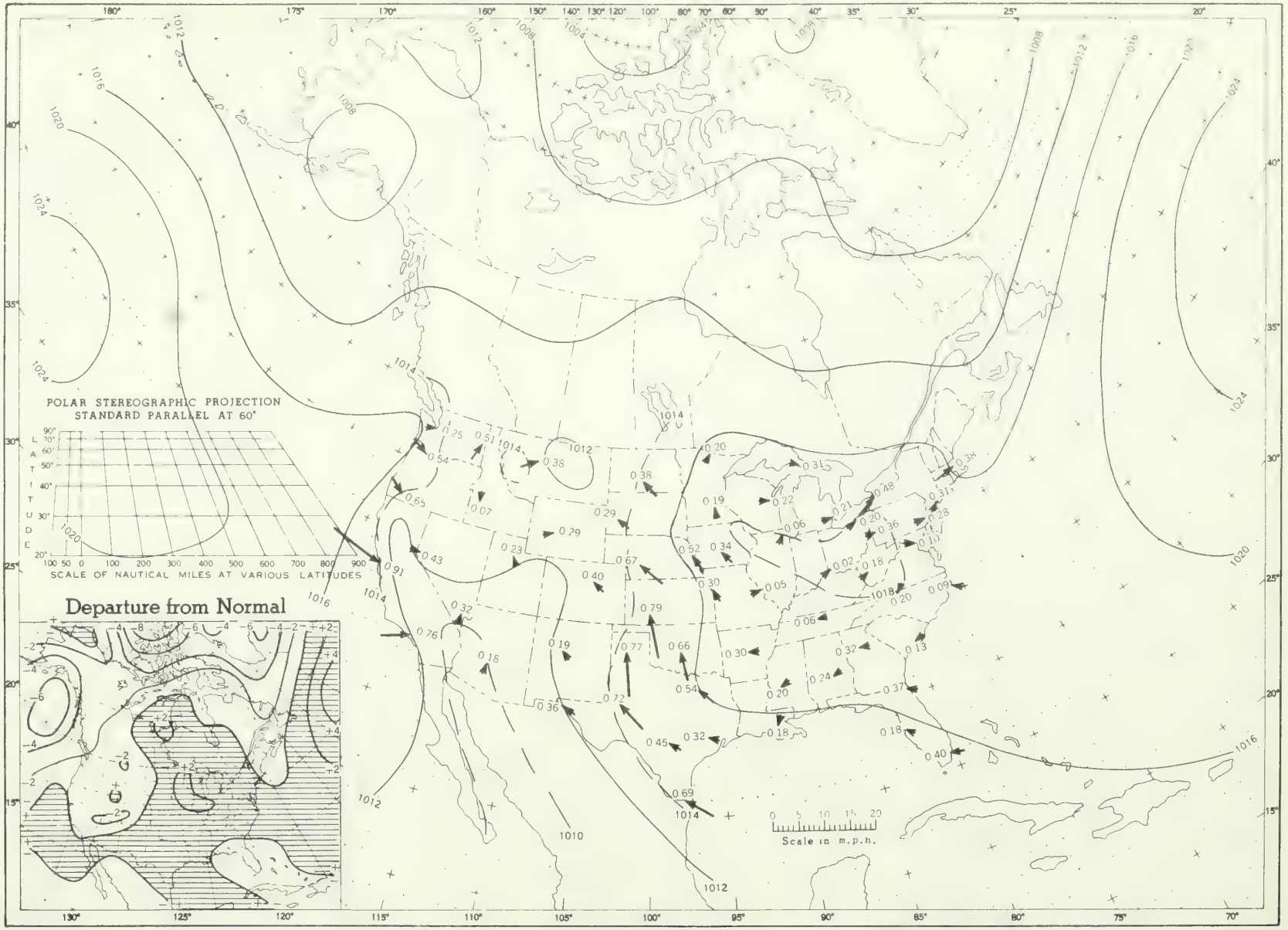
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, August 1971.



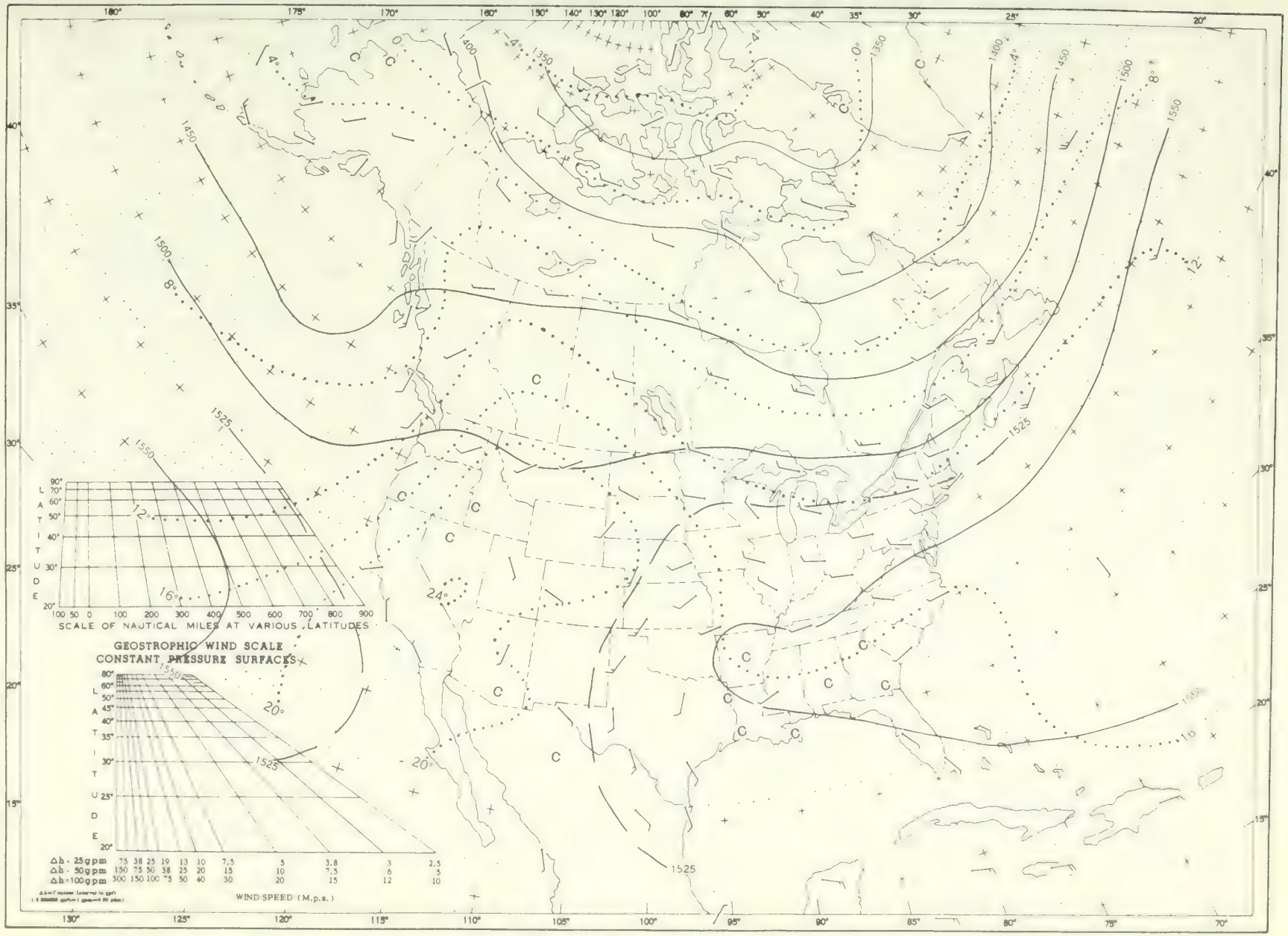
Circle indicates position of center at 7:00 a.m E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, August 1971. Inset Departure of Average Pressure (mb) from Normal, August 1971.



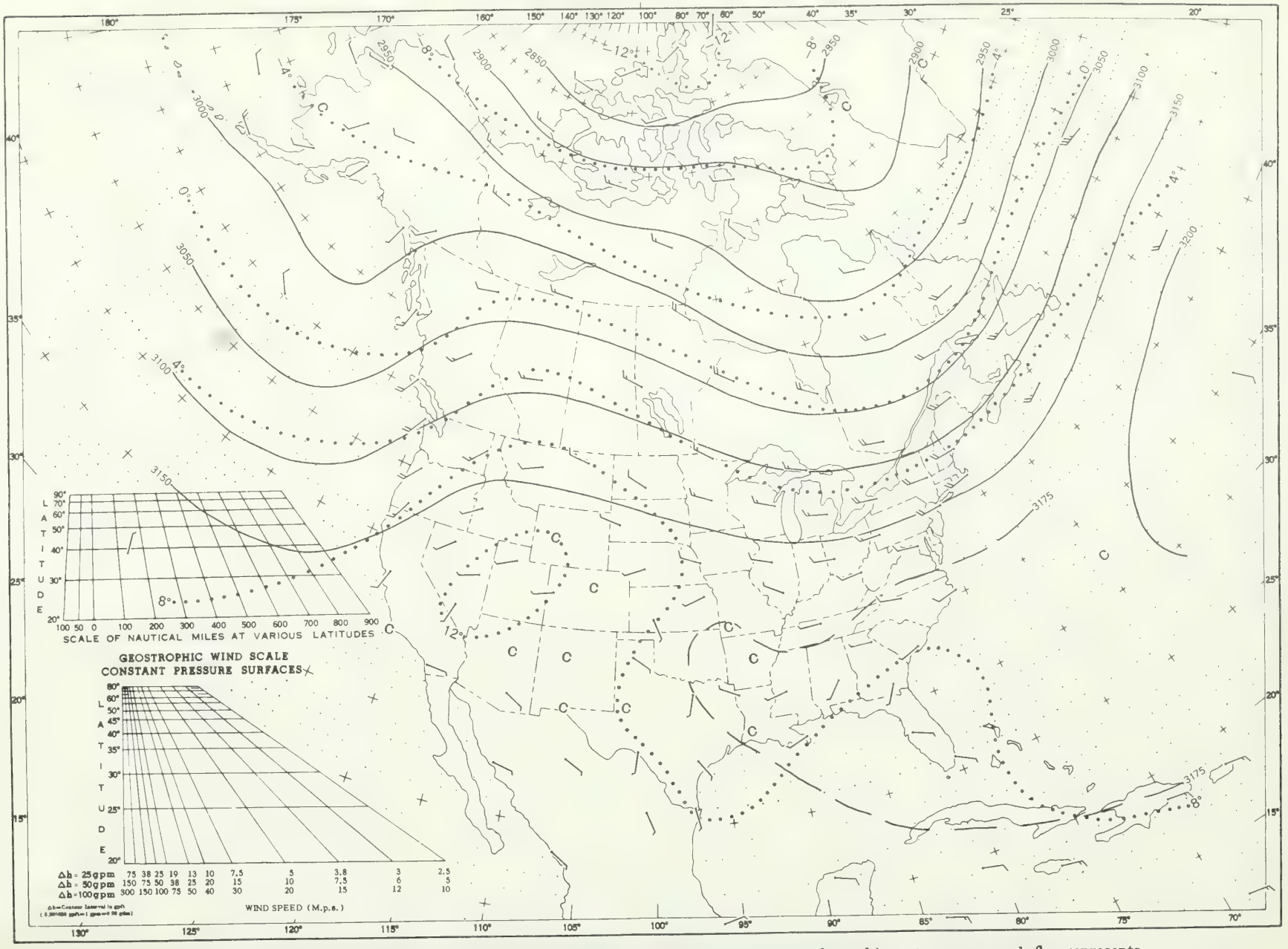
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI 850-mb Surface, 1200 G.m.t., **August 1971.** Average Height and Temperature, and Resultant Winds.



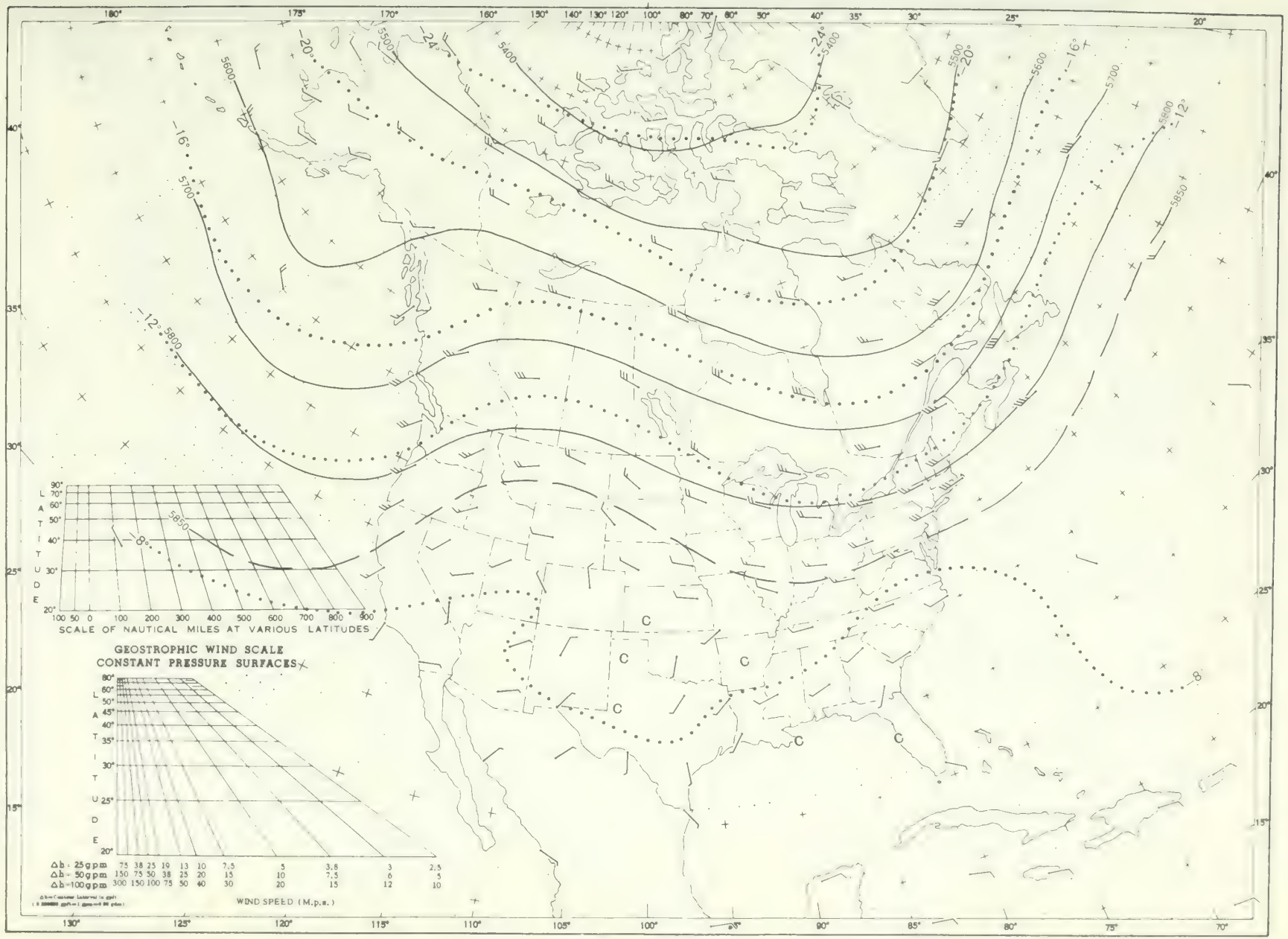
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 G.m.t., August 1971.—Average Height and Temperature, and Resultant Winds



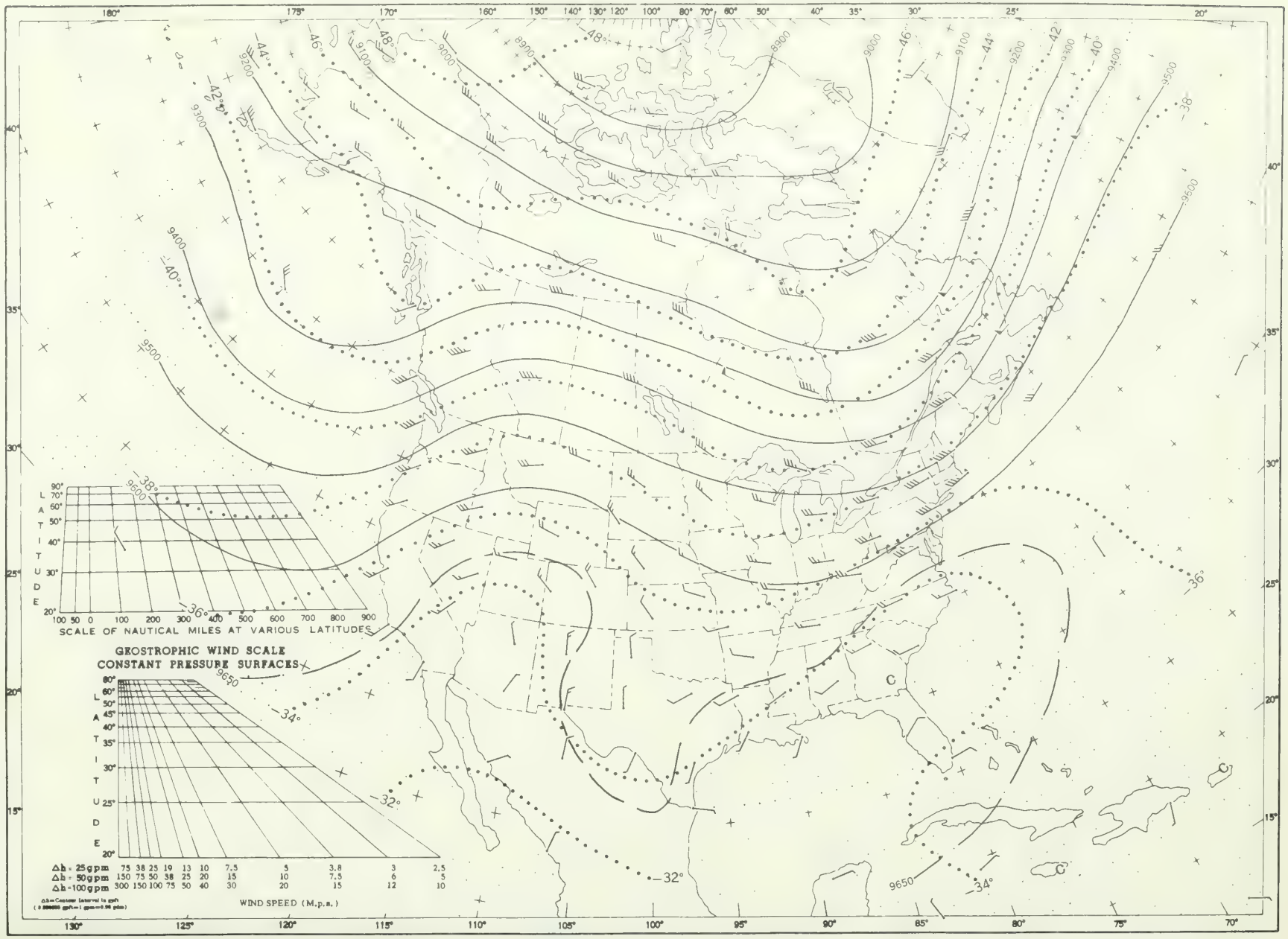
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 G.m.t., August 1971., Average Height and Temperature, and Resultant Winds



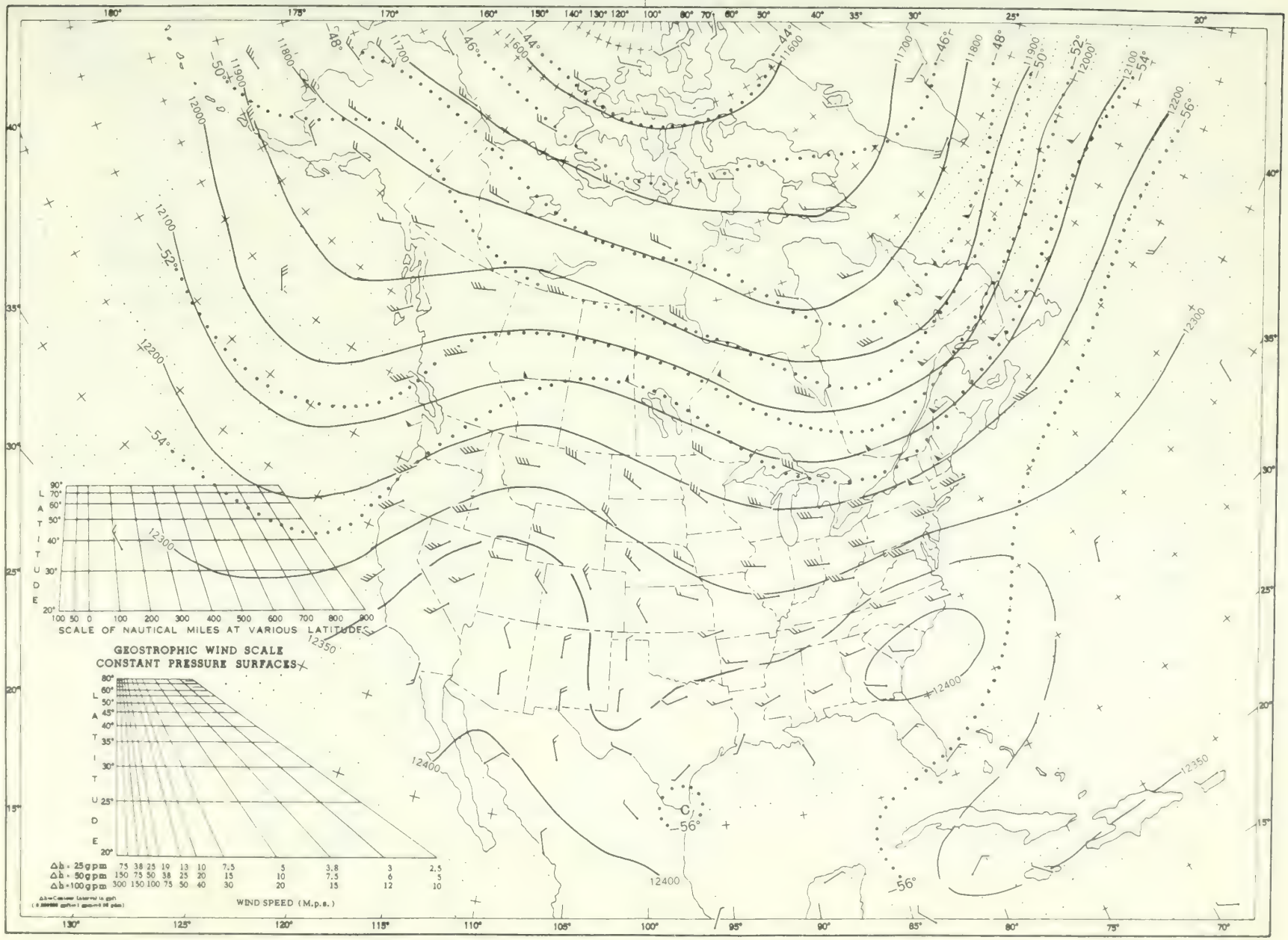
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300-mb. Surface, 1200 G.m.t., August 1971. Average Height and Temperature, and Resultant Winds



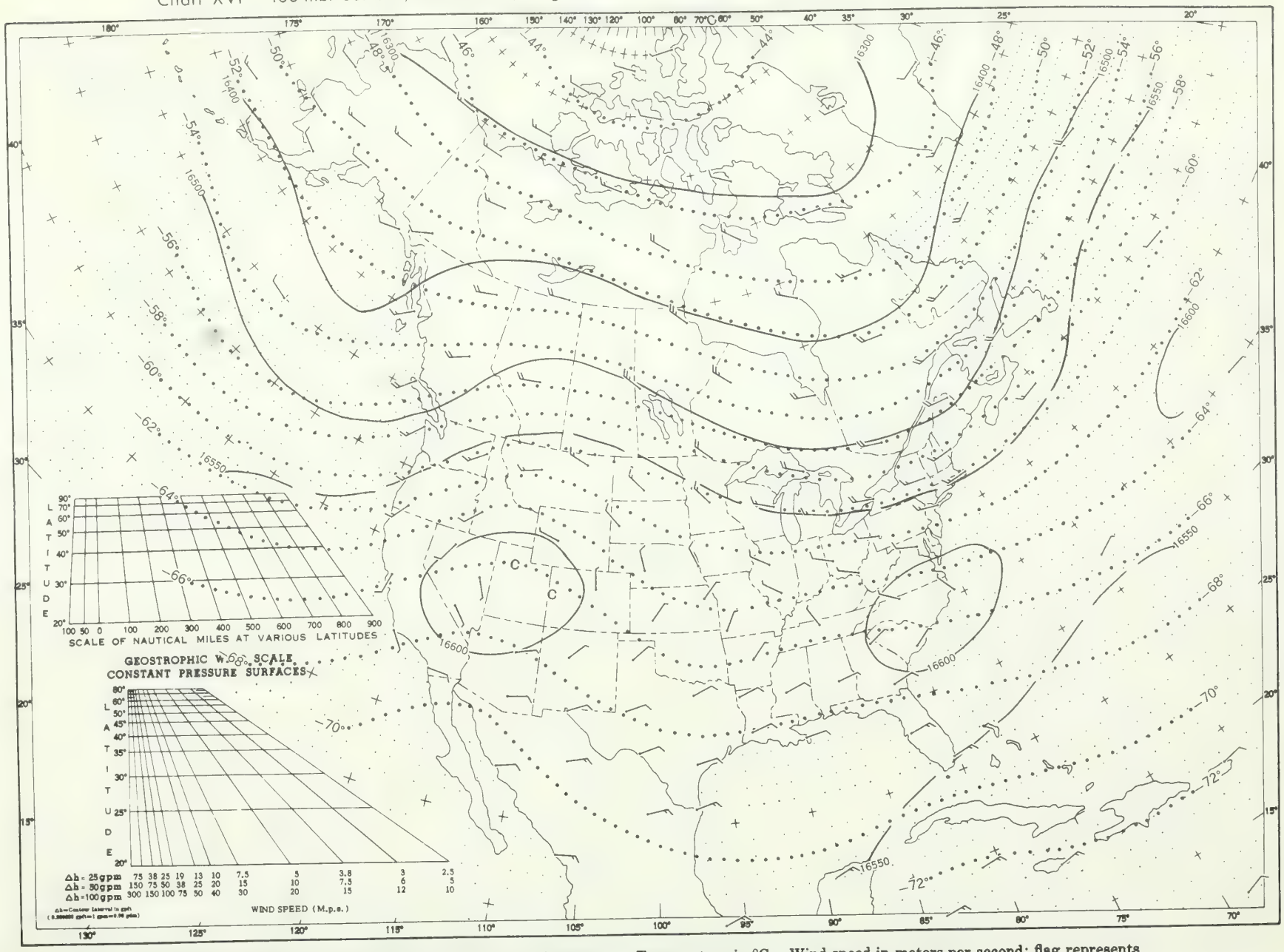
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb Surface, 1200 G.m.t., August 1971. Average Height and Temperature, and Resultant Winds

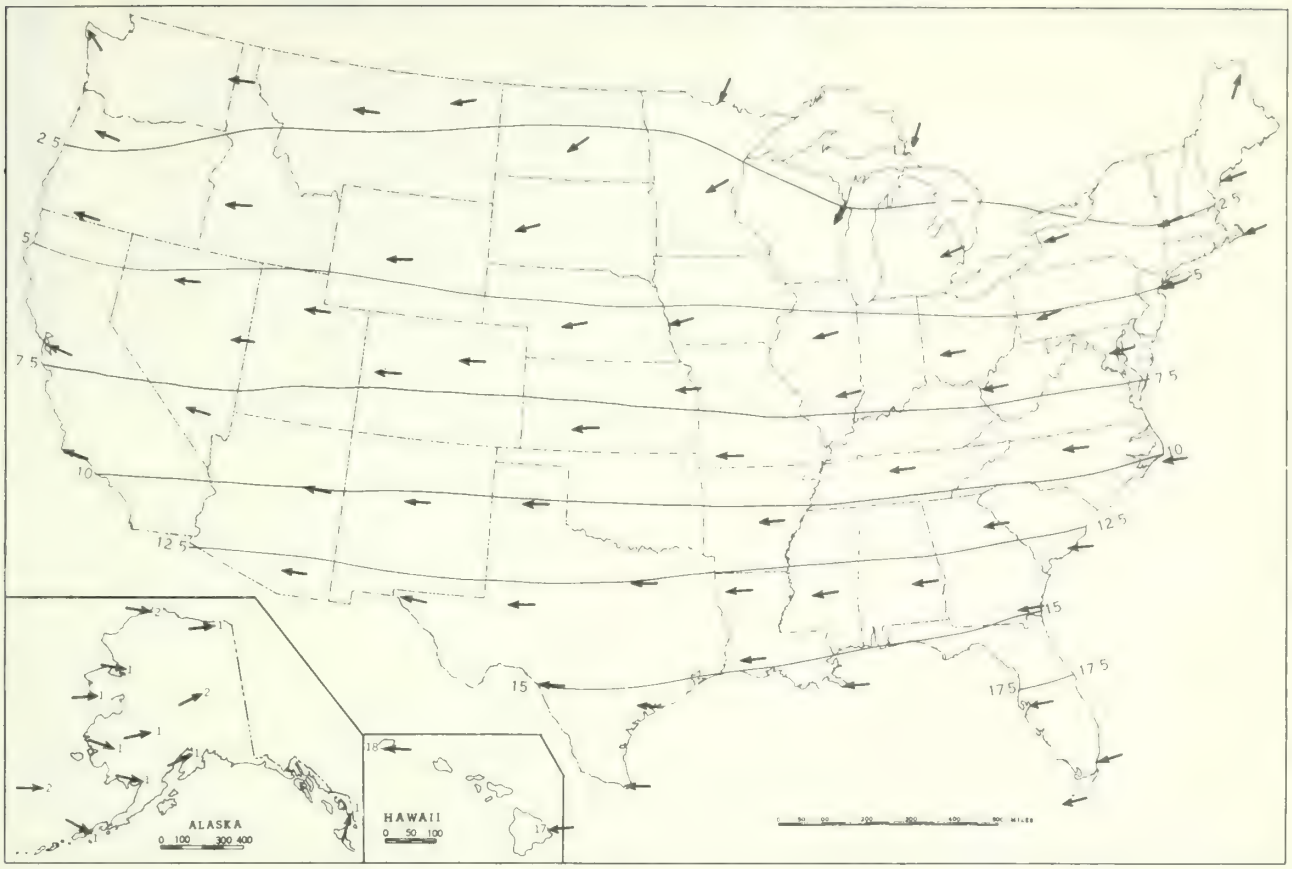


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

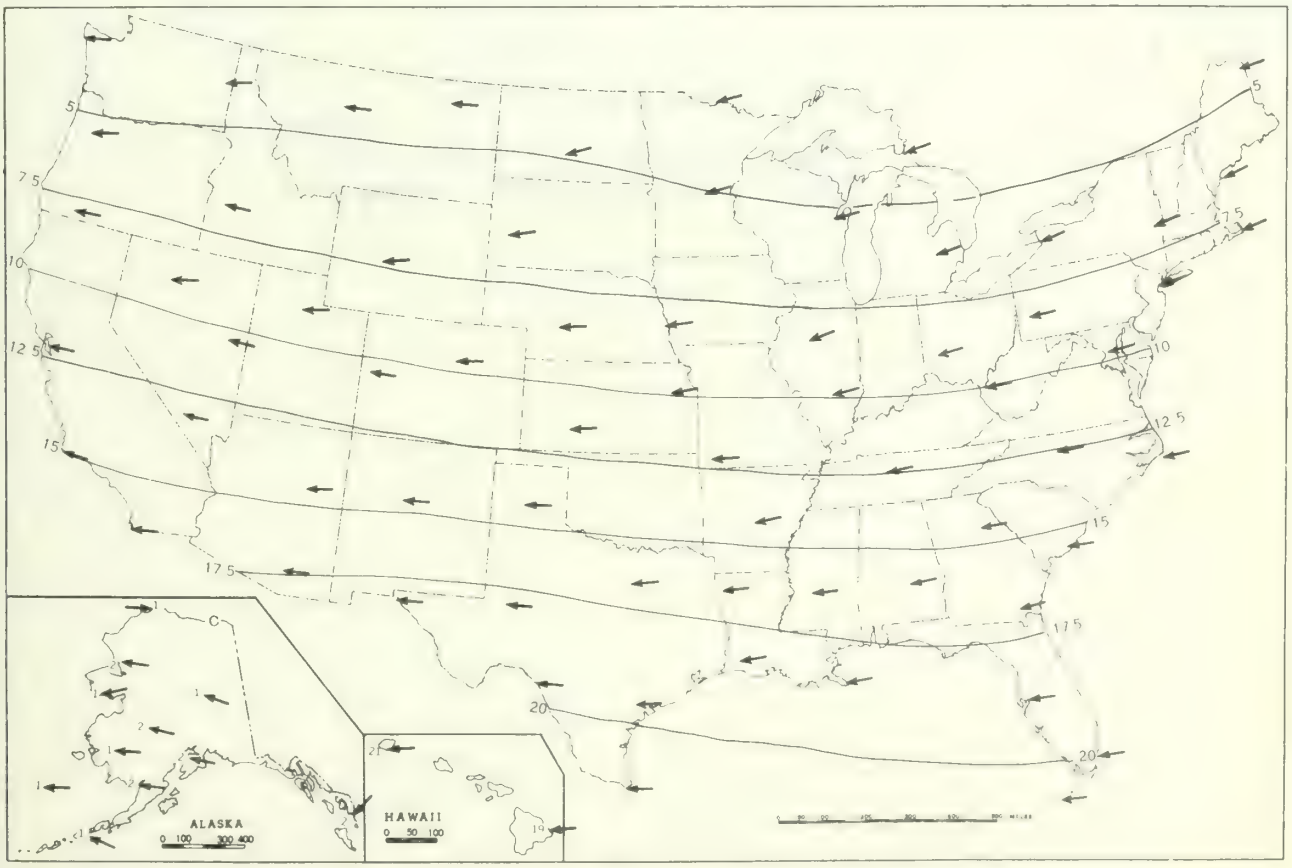
Chart XVI 100-mb. Surface, 1200 G.m.t., August 1971. Average Height and Temperature, and Resultant Winds.



Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.



B. 30-mb. Surface, 1200 G.m.t., August 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 9

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

SEPTEMBER 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. September was, in general, cooler than normal over the West and warmer than normal over the East.
2. Early heavy snowstorms occurred in the central Rocky Mountains shortly after midmonth.

TEMPERATURE--In general, September temperatures averaged below normal over the western half of the Nation and above normal over the eastern half. Monthly temperature departures were usually small. Few stations averaged more than 4° cooler or 4° warmer than normal.

The Far Northwest was cool and comfortable in the first few days of September. Southerly winds on the back side of a HIGH which lay over the East warmed the Great Plains. On the afternoon of September 2, much of the Dakotas and parts of Nebraska had warmed to 100° or higher, 105° at Pierre, S. Dak. The high eighties and nineties were common elsewhere over the Great Plains on the 2d. With the warming trend came increased humidity which added to the discomfort of the citizens over the eastern half of the Nation. The Southwest was hotter but less humid. Temperatures in the desert regions of the Southwest approached or exceeded 100° on most afternoons in the first half of September. Palm Springs, Calif., registered 120° on the afternoon of September 12.

Cool air poured southward over the Rocky Mountains and Great Plains early in the second week of September. Denver, Colo., was 20° cooler on the 8th than on September 7. Pickstown, S. Dak., registered 99° on the 7th but no higher than 66° on the 8th. A warming trend occurred over mid-America about midmonth followed by sharp cooling. Maximum temperatures at Valentine, Nebr., on the 13th and 14th were 95° and 65°, respectively. Subfreezing weather covered the high Rocky Mountains on the morning of September 16 when Alamosa, Colo., registered 27°. The Deep South continued hot and humid until a cold blast lowered maximum temperatures sharply on the 16th. Jackson, Miss., warmed to only 72° on the 16th in contrast to 89° the previous afternoon. A large HIGH centered over the northern Great Plains brought the coldest weather of the season to much of the Great Plains and the central Rocky Mountains. The warmest temperature at Fraser, Colo., on the 17th was 29° and on the morning of the 19th the temperature at Leadville tumbled to 9°.

A High centered over the southern Great Plains brought the coolest weather of record for so early in the season to spots in Arizona, New Mexico, Oklahoma, and western Texas near the end of the third week of September. The Pacific Coast States were cool and comfortable in the fourth week of September. The Far Southwest continued hot. Cool weather prevailed from the northern Great Plains to New England. Clouds held maximums in the eighties across the Deep South except in Florida where there was lots of warm sunshine. In general, the last few days of September were seasonally cool over the West and warm over the East. Autumn chill penetrated far southward into Arizona and New Mexico on the 26th.

In contrast, a large LOW brought sultry summer weather to the Great Plains in the closing days of September. Madison and Milwaukee, Wis., registered 88° on the last day of the month.

PRECIPITATION -- Thinly scattered light thundershowers occurred over much of the eastern half of the United States on September 1. An afternoon shower dropped 2.28 inches of rain at Vandalia, Ill. About the middle of the first week of September, light rain showers fell along a slow-moving cold front that stretched from the northern Great Plains southwestward across the central Rocky Mountains. A few snow flurries occurred in the mountains. As the front moved further south, it set off thunderstorms some of which were accompanied by hail and strong winds. Hobart, Okla., received 4.75 inches of rain on the afternoon of September 4. A depression off the Louisiana coast spread showers from Texas to Florida, with some totals exceeding 5 inches. A few storm totals in the Dakotas also exceeded 5 inches. California and western Texas continued dry. Five tropical cyclones entered the weather picture in the second week of September. Hurricane Edith swept across the Caribbean Sea and lashed Nicaragua and Honduras before slamming into the Louisiana coast accompanied by heavy rains and a few tornadoes. Hurricane Fern drifted inland near Port O'Connor, Tex., producing heavy rains and widespread flooding. She dumped up to 26 inches of rain in the Coastal Bend area of Texas, causing some of the worst flooding since Hurricane Beulah struck the Lower Coast in September 1967. Two deaths and property damage exceeding $30 million were attributed to Hurricane Fern. Hurricane Ginger dallied over the Atlantic Ocean for almost 3 weeks before moving inland across the North Carolina coast on the 30th, producing generous rains in parts of Virginia and North Carolina. Tropical Storm Heidi threatened the Atlantic seaboard on September 12. Hurricane Irene crossed Central America to the Pacific Ocean and was renamed Olivia. Tropical Storm Olivia off the coast of Baja California moved northeastward bringing generous showers to the arid Southwest, especially Arizona and New Mexico.

Snow fell in the Great Basin and the northern and central Rocky Mountains and cold rain accompanied by blustery winds fell over the northern and central Great Plains in the latter half of the month.

Snow whitened most of Colorado from September 16 to 20. The heavy, wet snow, ranging from 6 inches to 2 or 3 feet in depth caused extensive damage to trees and utility lines along the eastern slopes of the Rocky Mountains and the adjacent plains. On the afternoon and evening of September 30, a heavy snowstorm, the earliest of record, swept across northern Utah Wasatch Front Counties. Two to 8 inches fell in the valleys; more in the mountains. The heavy, wet snow broke limbs of shade and fruit trees and broke power and communication lines.

Monthly totals ranged from 2 to more than 5 inches

in western Washington and northwestern Oregon. Most other areas west of the Rocky Mountains received less than 1 inch of rain in September. September totals ranged widely east of the Rocky Mountains, from less than 1 inch to more than 16 inches. Most monthly amounts were between 2 and 8 inches.

For the Nation as a whole, most areas received between 50 and 150 percent of normal.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

SEPTEMBER 1971

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In
Alabama	3 Stations	94	11+	Florence	48	21	Fort Morgan	12.50	Newton	1.66
Alaska	Crooked Creek	78	1	2 Stations	2	28	Little Port Walter	25.37	Barrow WSO	.17
Arizona	Willow Beach	117	11	Fort Valley	13	19	Palisade R S	5.15	3 Stations	.00
Arkansas	2 Stations	102	14	2 Stations	38	21	West Memphis	6.58	Bald Knob 5 N	.17
California	3 Stations	120	13+	Bodie	1	29	Elk Valley	6.88	78 Stations	.00
Colorado	4 Stations	103	8+	Fraser	2	19	Elbert	7.76	Gateway 1 SW	.30
Connecticut	2 Stations	91	9+	Coventry	28	25	Putnam Lake	9.12	Groton	.65
Delaware	Milford 2 WSW	91	5	2 Stations	42	25	Wilmgton Porter Resvr	11.16	Lewes 1 SW	2.49
Florida	8 Stations	95	25+	Fountain 3 SSE	51	14	Naples 2 NE	16.62	High Springs	.31
Georgia	2 Stations	95	20+	Clayton 1 W	48	14+	Gainesville	7.23	Newington 2 NE	.36
Hawaii	Kilauea Point 1133, Kauai	94	19	Mauna Loa Slope Obs,Hawaii	33	24	Mount Waialeale 1047,Kauai	28.70	5 Stations	0
Idaho	2 Stations	99	10	2 Stations	10	28	Clarkia Ranger Station	3.53	Payette	.17
Illinois	Waterloo 1 WSW	102	14	4 Stations	32	24	Watseka 2 NW	6.68	Cairo WSO	.91
Indiana	Logansport Radio WSAL	96	8	Culver Experiment Farm	32	24	Shoals Hiway 50 Bridge	9.55	Albion 5 E	1.77
Iowa	2 Stations	101	7	LeMars 2 N	24	23	Ottumwa FAA Airport	5.26	Glenwood 8 SSE	.43
Kansas	8 Stations	106	8+	Syracuse 2 W	28	19	Elgin	9.11	Hays 1 S	.47
Kentucky	9 Stations	93	30+	Falmouth 5 WNW	40	21	Henderson 7 SSW	8.72	Brownsville	1.64
Louisiana	Bastrop	97	7	Cotton Valley	49	21	Mermentau	18.72	Logansport 4 ENE	1.08
Maine	2 Stations	91	5+	Squa Pan Dam	21	27	Machias	4.61	Harris Station	1.35
Maryland	2 Stations	95	9	Oakland 1 SE	34	25	Loch Raven Dam	9.55	Blackwater Refuge	.49
Massachusetts	7 Stations	92	10+	Barre Falls Dam	24	25	Chester 2	6.21	Nantucket FAA Airport	.07
Michigan	7 Stations	94	9+	Stambaugh 1 S	25	24	Ionia 5 NW	7.30	Alpena WSO	1.00
Minnesota	2 Stations	98	8+	Wannaska 8 SE	17	22	Zumbrota	6.98	Dawson	.98
Mississippi	6 Stations	95	16+	Batesville 2 SW	46	21	Centreville 4 ESE	12.61	Rosedale	.82
Missouri	Festus 2 NW	105	14	4 Stations	33	24+	Lamar	9.30	Marble Hill	.70
Montana	3 Stations	100	11+	Wisdom	7	18	Ekalaka	5.12	Birney	.12
Nebraska	Benkelman	106	8	Agate 3 E	20	19	Chadron FAA Airport	4.71	Plattsmouth	.01
Nevada	Sunrise Manr Las Vegas	112	13	Currie Highway Sta	5	26	Sheldon	2.30	15 Stations	.00
New Hampshire	Windham 3 NW	95	5	Mount Washington	22	25	Mount Washington	6.24	Berlin	1.23
New Jersey	7 Stations	92	10+	Charlotteburg	31	25	Paterson	9.74	Canton	3.11
New Mexico	2 Stations	100	8+	2 Stations	15	20+	Hobbs	4.89	2 Stations	.30
New York	New York Laurel Hill	94	5	Roxbury	29	25	Forestport	10.70	Cutchogue	.36
North Carolina	4 Stations	93	29+	Tuckaseigee 2 S	40	14	Cedar Island	17.95	Siler City 2 NW	.94
North Dakota	Breien	104	2	Wishek	19	23+	Minot FAA	6.11	Edgeley	.48
Ohio	Toledo Blade	96	6	2 Stations	30	25	Kings Mills	9.23	Enterprise	1.58
Oklahoma	2 Stations	108	7	Kenton	30	19	Tulsa WSO	18.81	2 Stations	1.09
Oregon	Brookings	100	15	Seneca	8	18	Otis 2 NE	10.38	Pine Mtn Observatory	.09
Pennsylvania	Donora 1 SW	96	10	Philipsburg FAA AP	25	25	Devault 1 W	13.14	Scranton	1.23
Puerto Rico	San Sebastian	97	13	Adjuntas Substation	55	13	Jayuya 1 SE	13.19	Santa Isabel 1 N	.17
Rhode Island	Providence WSO	91	9+	Kingston	31	25	North Scituate 4 W	2.94	Block Island WSO	.33
South Carolina	Tilghman For Nursery	97	17	Walhalla	47	14	Caesars Head 1 NE	9.73	2 Stations	.53
South Dakota	2 Stations	107	2	Custer	19	17	Deadwood	5.52	Leola	.43
Tennessee	4 Stations	95	15+	Newbern	41	21	Milan	7.48	Monsanto	.65
Texas	Zapata	106	7	2 Stations	34	20+	Kaffie Ranch	27.89	La Tuna 1 S	.07
Utah	Saint George	105	13+	Soldier Creek	10	20	City Creek Water Plant	2.48	4 Stations	.00
Vermont	Vernon	90	6	Woodstock 2 WSW	27	25	Mount Mansfield	5.20	Saint Johnsbury	.95
Virginia	Chase City	96	5	Berryville	38	25	Halifax 2 SSE	9.46	Burgess 1 ESE	.93
Washington	2 Stations	91	6	Mazama	20	18+	Cathlamet 6 NE	8.55	Eltopia 7 WNW	.23
West Virginia	Ravenswood Lock Park	98	6	Brandonville	32	25	Philippi	12.06	Bluefield FAA Airport	1.71
Wisconsin	3 Stations	95	8+	Drummond 6 W	24	24+	Rib Falls	7.33	Racine	.35
Wyoming	4 Stations	99	2	2 Stations	5	17	Parkman 5 WNW	3.98	Arvada 3 N	.30

\+ And also on an earlier date or dates.

NOTE Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days						No. of days		Snow, Ice pellets				Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.					M.p.h.		M.p.h.							%
ALABAMA																																
BIRMINGHAM	620	994.9	1017.0	85	65	75.0	- 1.3	92	14	54	13	3	0	67	80	3.35	0.02	1.84	8	5	0.0	0	2.5	9	18	NE	16+	8	8	14	6.3	59
HUNTSVILLE	624	994.2	1017.0	82	65	73.5	- 1.0	89	14	55	13	0	0	66	81	5.99	2.90	2.31	9	5	0.0	0	2.5	10	29	13	7	7	8	15	6.5	
MOBILE	211	1007.8	1015.6	87	72	79.5	1.6	91	24+	65	14	8	0	73	85	7.30	1.05	2.90	14	11	0.0	0	4.2	8	29	16	16	3	11	16	7.1	
MONTGOMERY	183	1009.1	1016.4	88	68	77.8	0.7	92	11	59	14	8	0	69	80	5.86	1.89	2.42	7	4	0.0	0	1.6	8	21	S	4	9	10	11	5.9	56
ALASKA												8														B					
ANCHORAGE	114	1005.4	1010.4	52	40	46.1	- 1.9	58	16+	28	27	0	3	41	83	1.79	- 0.71	0.59	12	0	0.0	0	0.8	18	25	12	16	3	6	21	8.0	30
ANNETTE	110	1010.5	1014.5	59	47	53.1	- 1.0	69	21+	36	28	0	0	46	82	7.30	- 2.58	1.80	16	0	0.0	0	2.6	16	39	14	7	5	5	20	7.7	
BARROW	31	1012.5	1013.3	34	29	31.7	1.2	47	23	23	30+	0	28	30	94	0.17	- 0.47	0.03	7	0	2.0	1	0.3	2	30	24	28	0	1	29	9.6	
BARTER ISLAND	39			34	27	30.5	- 1.6	43	25+	12	10	0	28			0.91	- 0.03	0.34	11	0	13.9	11			35	9	2	2	3	25	8.9	
BETHEL	125	1004.7	1010.4	51	37	44.1	- 0.5	59	14+	29	6	0	4	40	86	3.39	0.80	2.02	13	0	T	0	1.2	24	29	21	19	2	5	23	8.4	
BETTLES	644	986.8	1012.1	47	31	38.8		59	15	19	14	0	18	32	78	1.44		0.28	15	0	2.9	3	1.6	36	25	3	16	1	7	22	8.4	
BIG DELTA	1268			51	34	42.5		61	16	23	28	0	8			1.58		0.46	13	0	T	T			40	21	16	1	11	18	7.8	
COLD BAY	96	1007.1	1010.9	50	39	44.5	- 3.0	59	29	31	10	0	1	41	86	3.86	- 0.46	1.29	19	0	0.0	0	3.4	20	44	16	22	0	5	25	9.2	
FAIRBANKS	436	993.9	1011.1	52	37	44.7	1.1	66	16	29	23+	0	7	33	66	2.45	1.35	0.64	12	1	3.5	2	1.2	31	29	21	17	5	7	18	7.3	
GULKANA	1572			52	31	41.9		59	4	20	28+	0	19			1.82		0.83	14	0	T		3.0	17	25	17	16	4	10	16	7.0	
HOMER	67	1007.8	1010.4	54	38	45.9		60	1	29	25	0	4	41	84	1.59	- 1.17	0.52	14	0	0.0	0	0.5	35	29	7	15	3	8	19	7.9	
JUNEAU	12	1012.2	1013.1	55	42	48.1	- 0.8	61	25+	25	29	0	4	43	86	5.36	- 1.31	0.77	19	1	0.0	0	5.6	10	30	12	8+	3	2	25	8.7	21
KING SALMON	49	1007.5	1009.6	55	39	46.8	- 1.1	64	11	31	22	0	1	39	76	3.40	0.32	1.36	13	0	0.0	0	0.9	19	30	17	28	0	4	26	9.1	
KOTZEBUE	10	1009.8	1010.2	46	36	41.4	0.5	53	1	25	30	0	5	35	79	0.74	- 0.48	0.36	9	0	T	T	2.3	8	38	26	24	4	7	19	7.7	
MC GRATH	344	998.0	1010.7	53	37	44.8	0.9	61	13	27	13	0	8	39	85	1.61	- 1.00	0.93	14	0	0.0	0	0.8	23	21	18	16	2	7	21	8.1	
NOME	13	1008.5	1009.2	48	36	41.6	- 0.3	54	3+	23	13	0	7	34	75	1.97	- 0.70	0.51	10	0	T	0	1.1	12	37	23	24	2	6	22	8.2	38
ST. PAUL ISLAND	22	1008.8	1009.6	47	38	42.3	- 2.3	49	27+	29	16	0	5	40	92	2.64	- 0.43	0.63	19	0	0.0	0	0.9	23	40	17	22	1	6	23	8.5	
SHEMYA	122	1004.7	1008.5	49	44	46.1	- 2.2	51	11+	36	30+	0	0	42	88	4.15	1.90	1.56	19	0	0.0	0	4.3	29	40	4	26	2	6	22	8.3	
SUMMIT	2401	924.5	1011.3	47	31	38.8		53	11+	20	28	0	20	33	80	2.87		0.52	17	1	8.2	2	1.5	4	23	23	16	2	4	24	8.4	
TALKEETNA	345			55	35	44.9	- 1.1	63	12	21	28	0	12			3.99	- 0.47	0.82	14	0	0.0	0			14	19	17+					
UNALAKLEET	15			49	38	43.1		60	15	27	13	0	6			2.02		0.66	16	0	0.0	0			37	22	24	5	2	23	8.1	
YAKUTAT	28	1010.5	1011.6	53	36	44.5	- 4.7	60	25	21	28	0	10	42	92	15.78	- 0.77	6.00	23	0	0.0	0	3.2	10	29	16	8+	4	2	24	8.2	
ARIZONA																																
FLAGSTAFF	7006	789.0	1015.4	69	37	53.0	- 5.5	81	13+	23	20	0	10	33	51	2.02	0.44	1.70	3	5	T	0	2.5	21	26	22	26	22	6	2	2.5	
PHOENIX	1117	970.2	1008.0	99	72	85.6	2.8	110	12+	59	20	27	0	50	33	0.92	0.19	0.69	3	2	0.0	0	1.8	12	52Y	SE	1	24	5	1	1.7	90
TUCSON	2584	923.1	1008.8	92	66	79.1	- 1.3	101	15+	55	23	18	0	54	47	1.75	0.75	0.65	5	5	0.0	0	3.7	17	42	W	18+	23	4	3	2.3	88
WINSLOW	4895	851.7	1012.6	85	51	68.0	- 2.7	96	6	32	19	11	1	37	36	1.74	0.83	1.17	6	4	0.0	0	3.2	21	39	22	29	19	9	2	2.6	
YUMA	194	1000.3	1007.3	99	73	85.7	- 0.6	114	12	57	28	26	0	54	39	1.27	0.89	1.27	1	1	0.0	0	1.2	17	26	NW	18	25	4	1	1.5	93
ARKANSAS																																
FORT SMITH	447	999.0	1015.5	86	64	74.8	- 0.1	96	14	43	20	16	0	64	74	1.35	- 2.29	0.45	8	5	0.0	0	1.4	9	18	N	5	10	11	9	5.5	64
LITTLE ROCK	257	1006.1	1015.6	88	65	76.4	2.1	96	14+	48	21	18	0	66	77	0.78	- 2.45	0.48	3	0	0.0	0	1.5	12	19	NE	16	10	11	9	5.5	80
CALIFORNIA																																
BAKERSFIELD	475	993.9	1011.2	89	64	76.6	0.3	104	16+	49	30+	17	0	50	44	0.02	- 0.06	0.02	1	0	0.0	0	2.9	33	23	13	18	26	3	1	1.0	
BISHOP	4108	872.0		87	46	66.5	- 1.7	102	13	29	26	12	3			0.01	- 0.18	0.01	1		0.0	0						25	5	0	1.4	
BLUE CANYON	5280			71	51	61.1	- 1.8	91	13	27	30	1	2			1.35	0.72	1.20	3		7.4	2			24	17	29	23	4	3	1.9	
EUREKA U	43			62	51	56.7	0.3	74	16	44	30	0	0			2.08	1.44	1.20	6		0.0	0			25	NW	30	11	8	11	5.2	64
FRESNO	328	999.7	1011.2	91	56	73.4	- 0.8	105	14	43	28	19	0	52	53	0.04	- 0.06	0.04	1	2	0.0	0	4.6	29	20	NW	30	27	2	1	0.9	95
LONG BEACH	25	1010.2	1011.5	86	66	76.1	4.8	108	12	52	29	9	0	61	67	T	- 0.06	T	0	0	0.0	0	2.5	24	18	28	6	17	10	3	3.5	
LOS ANGELES	97	1007.1	1010.8	77	65	70.9	2.4	91	12	55	29	2	0	61	75	T	- 0.17	T	0	0	0.0	0	5.1	25	26Y	N	30	18	9	3	3.4	
LOS ANGELES U	270			84	66	74.6	2.7	106	13	56	29	7	0			T	- 0.23	T	0		0.0	0			20	N	30	19	8	3	3.0	78
MT SHASTA R	3544	892.0	1015.3	73	42	57.7	- 3.8	87	13+	34	19	0	0	35	49	0.30	- 0.57	0.26	3		0.0	0	1.5	35								
OAKLAND	6	1012.9	1013.2	75	58	66.4	1.3	96	14	51	30	4	0	54	70	0.12	- 0.08	0.07	2	0	0.0	0	6.8	29	21	25	29	26	3	1	1.8	
RED BLUFF	342	999.0	1011.3	90	59	74.2	- 1.8	111	13	42	30	20	0	37	33	0.54	0.17	0.54	1	0	0.0	0	2.7	34	35	SE	29+	26	3	1	1.1	94
SACRAMENTO	17	1010.5	1011.4	89	56	72.2	0.6	105	13	43	30	17	0	48	50	T	- 0.19	T	0	0	0.0	0	2.9	23	26	SW	29	27	2	1	1.1	95
SANDBERG R	4517	861.8		79	58	68.2	- 1.1	95	15+	37	30	7	0			0.12	- 0.09	0.12	1		0.0	0			31	35	3	24	4	2	1.7	
SAN DIEGO	13	1010.2	1011.2	78	66	72.2	2.3	94	12	58	28	3	0	61	70	T	- 0.15	T	0	0	0.0	0	4.3	28	21	W	19	13	10	7	4.2	71
SAN FRANCISCO	8	1012.9	1013.4	77	56	66.2	2.3	103	14	51	30+	4	0	52	68	0.11	- 0.08	0.11	1	0	0.0	0	9.3	29	28	28	6	25	4	1	1.5	
SAN FRANCISCO U	52			72	57	64.7	2.7	101	14	53	30	3	0			0.22	0.00	0.19	2		0.0	0			25	W	6					86
SANTA MARIA	236			75	51	63.3	0.5	98	13	40	28	1	0			0.04	- 0.12	0.04	1		0.0	0						23	7	0	2.1	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature											Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days								Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CALIFORNIA																																
STOCKTON	22	1011.2	1012.4	89	58	73.8	1.1	105	13	47	27	17	0	49	48	0.19	0.00	0.19	1	0	0.0	0	6.0	30	22	27	24+	25	4	1	1.2	
COLORADO																																
ALAMOSA	7536	773.8		71	35	52.7	- 3.0	83	7+	20	20	0	11			1.45	0.68	0.90	7		1.2	1						16	9	5	3.4	
COLORADO SPRINGS	6145	812.7	1015.1	69	44	56.7	- 4.9	90	7	25	19	1	4	34	49	1.36	0.29	0.84	10	0	9.7	8	1.8	8	39	1	7	19	5	6	3.3	
DENVER	5283	837.5	1014.0	73	42	57.5	- 5.5	94	7	20	19	3	3	38	56	2.85	1.72	1.36	10	2	17.2	13	2.2	13	35	NW	3	17	8	5	3.5	75
GRAND JUNCTION	4843	852.0	1012.7	79	48	63.2	- 4.6	94	13	30	19	8	2	34	38	0.58	- 0.33	0.36	5	1	0.0	0	2.7	17	39	NW	7	21	5	4	2.6	83
PUEBLO	4684	856.1	1013.5	78	46	62.2	- 4.4	99	7	29	19	9	2	36	45	1.20	0.36	1.00	7	2	7.5	T	1.7	4	58	NE	7	19	5	6	3.5	85
CONNECTICUT																																
BRIDGEPORT	7	1019.6	1020.2	75	63	69.0	3.5	86	9	45	25	0	0	61	78	5.72	1.77	3.30	7	2	0.0	0	1.5	14	28	33	24	5	10	15	6.8	
HARTFORD	169	1018.2	1019.6	77	58	67.7	4.4	91	9	37	25	3	0	58	74	4.24	0.59	2.23	11	4	0.0	0	0.7	29	24	NW	16	3	8	19	7.5	45
DELAWARE																																
WILMINGTON	74	1016.3	1019.2	78	64	71.1	3.5	88	9	44	25	0	0	64	79	6.99	3.04	3.24	10	4	0.0	0	1.6	12	21	1	24	6	8	16	6.8	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	290	1007.1	1018.9	79	61	69.7		89	9+	43	25	0	0	63	83	3.63		1.19	8	3	0.0	0	1.2	16	16	1	30+	6	8	16	6.9	
WASHINGTON NATIONAL	10	1016.6	1018.9	81	66	73.0	3.3	90	10+	52	25	3	0	63	74	2.48	- 1.35	1.13	7	3	0.0	0	1.7	17	23	NW	21	7	10	13	6.5	51
FLORIDA																																
APALACHICOLA U	13			86	74	79.8	0.9	89	21+	67	29	0	0			4.95	- 3.58	1.64	14	7	0.0	0			26	E	8	9	12	9	5.4	69
DAYTONA BEACH	31	1014.6	1016.0	87	72	79.6	0.4	90	11	65	15	1	0	70	76	7.20	0.20	3.21	15	4	0.0	0	3.8	6	23	4	28+	2	19	9	6.5	
FORT MYERS	15	1014.6	1015.0	87	73	80.0	- 1.3	91	30+	72	22+	7	0	72	80	9.21	0.71	2.37	13	12	0.0	0	3.2	8	23	1	10	8	11	11	6.3	
JACKSONVILLE	26	1015.2	1016.4	88	70	78.9	- 0.5	92	18	61	30	6	0	71	82	4.17	- 3.39	1.82	11	6	0.0	0	2.4	6	32	NW	11	9	12	9	5.4	70
KEY WEST	4	1013.5	1014.2	87	78	82.7	0.4	89	19+	73	22	0	0	73	74	5.47	- 1.26	1.69	16	9	0.0	0	5.1	12	33	SW	6	3	13	14	6.9	75
LAKELAND U	214			87	72	79.4	- 0.8	92	18	69	30+	6	0			2.86	- 3.69	0.94	12		0.0	0						10	15	5	5.0	69
MIAMI	7	1014.6	1014.7	86	75	80.7	- 0.6	89	11	73	29+	0	0	73	81	9.63	0.16	3.03	19	10	0.0	0	4.0	5	37	19	12	2	13	15	7.2	
ORLANDO	108	1011.2	1015.7	90	74	81.8	1.8	94	17	69	15	20	0	71	74	2.98	- 4.25	1.50	13	6	0.0	0	2.5	7	31	26	11	6	14	10	6.1	
PENSACOLA	112	1011.5	1015.4	86	72	79.0	0.8	89	21+	63	14	0	0	70	78	4.91	- 2.78	2.34	10	7	0.0	0	3.2	10	23	21	5	4	13	13	6.7	
TALLAHASSEE	55	1013.5	1015.8	90	68	78.5	0.4	93	21	54	30+	17	0	68	75	1.57	- 3.94	0.69	10	10	0.0	0	3.3	7	18	15	8	7	14	9	5.4	
TAMPA	19	1014.9	1015.2	88	72	80.3	- 0.2	93	25+	66	30	16	0	70	76	10.16	3.27	4.38	11	12	0.0	0	3.0	9	25	34	12	7	11	12	6.4	52
WEST PALM BEACH	15	1014.2	1015.0	88	74	81.1	- 1.0	92	25+	70	21+	10	0	72	77	6.24	- 3.42	1.39	17	6	0.0	0	3.4	8	23	21	12+	0	15	15	7.6	
GEORGIA																																
ATHENS	802	988.8	1017.4	83	65	74.3	0.8	90	30+	58	14	2	0	66	81	2.75	- 0.27	1.39	6	2	0.0	0	2.5	4	17	31	13	5	16	9	6.0	
ATLANTA	1010	980.7	1016.9	82	65	73.7	0.6	87	30+	57	14	0	0	65	79	3.32	0.06	2.79	5	1	0.0	0	2.9	8	22	NW	11	6	15	9	5.9	56
AUGUSTA	136	1011.5	1016.8	87	65	76.0	0.7	90	21+	55	14	4	0	67	81	2.50	- 0.50	1.70	8	4	0.0	0	1.9	3	21	24	17	7	13	10	5.9	
COLUMBUS	385	1002.7		87	69	78.0	2.0	91	10	59	14	6	0	68	75	4.96	2.19	4.25	8	2	0.0	0	3.4	6	17	10	22+	9	11	10	5.6	
MACON	354	1004.7	1017.5	90	69	79.3	2.9	94	15+	58	14	19	0	68	74	1.36	- 1.41	0.84	6	4	0.0	0	2.9	5	17	NE	29+	6	12	12	6.1	58
ROME	637			85	65	74.8	2.4	94	10	53	14	5	0			2.22	- 1.08	1.51	7		0.0	0										
SAVANNAH	46	1014.9	1016.6	89	70	78.6	1.9	91	15	61	30+	5	0	69	76	1.67	- 3.58	0.67	10	1	0.0	0	3.2	5	26	SW	11	8	12	10	5.5	70
HAWAII																																
HILO	27	1015.2	1016.3	85	68	76.6	1.1	90	14	65	27+	1	0	68	79	8.63	0.13	2.24	25	0	0.0	0	1.0	17	18	SE	20	6	8	16	6.8	51
HONOLULU	7	1015.6	1016.0	87	72	79.1	- 0.1	89	7+	68	14	0	0	66	68	1.03	0.04	0.49	16	0	0.0	0	10.5	5	26	NE	3	4	16	10	6.1	74
KAHULUI	48	1015.2	1015.4	89	68	78.5	0.1	92	18	64	16+	8	0	67	71	0.25	0.00	0.15	5	0	0.0	0	11.2	5	32	E	20	11	7	12	5.6	71
LIHUE	103	1012.2	1017.2	85	75	80.0	1.9	87	23+	70	15	0	0	70	73	2.69	0.61	0.92	18	0	0.0	0	9.6	6	24	NE	30	4	20	6	5.8	58
IDAHO																																
BOISE	2838	915.3	1015.0	73	46	59.2	- 3.5	93	5	34	16	2	0	32	41	0.64	0.25	0.25	5	1	0.0	0	0.2	19	28	W	28	18	6	6	3.5	82
LEWISTON	1413			72	45	58.6	- 4.9	91	10	35	30	1	0			1.57	0.67	0.70	8		0.0	0			31Y		13	16	4	10	4.1	
POCATELLO	4454	863.2	1015.4	68	37	52.7	- 7.6	88	10	23	18	0	7	31	48	2.06	1.45	0.86	6	0	T	0	3.7	23	32	S	6	15	9	6	4.0	79
ILLINOIS																																
CAIRO U	314			83	66	74.3	1.8	91	14	52	21	2	0			0.91	- 2.10	0.31	6		0.0	0			21	SW	28+	11	12	7	4.8	60
CHICAGO O HARE	658	992.2	1016.3	79	60	69.7	6.1	94	8	41	24	6	0	58	69	2.39	- 0.35	0.94	7	4	0.0	0	3.0	18	34	19	29	5	14	11	6.6	
CHICAGO MIDWAY	607	994.6	1016.8	79	61	70.4	4.3	95	8	44	24	8	0	59	69	3.47	0.74	1.91	9	4	0.0	0	3.5	17	29	SW	5	6	15	9	6.1	59

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max. 90 F. or above	Temperature: No. of days Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days .01 inch or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile Speed	Wind: Fastest mile Direction	Wind: Fastest mile Date	No. of days (sunrise to sunset) Clear, 0-3	No. of days (sunrise to sunset) Partly cloudy, 4-7	No. of days (sunrise to sunset) Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ILLINOIS																																
MOLINE	582	995.3	1016.6	80	57	68.7	3.4	95	8	37	24	8	0	56	69	4.54	1.29	4.54	7	2	0.0	0	2.4	19	29	SW	28	12	10	8	4.7	74
PEORIA	652	992.9	1016.6	80	58	68.9	2.5	93	14+	37	24	6	0	58	72	3.07	0.02	1.23	9	9	0.0	0	2.8	17	22	NW	14+	12	9	9	5.4	65
ROCKFORD	724	989.8	1016.4	79	57	68.1	4.3	92	30+	36	24	8	0	56	70	2.36	- 1.15	1.41	6	4	0.0	0	2.1	18	40	20	4	7	14	9	5.6	
SPRINGFIELD	588	994.2	1016.2	82	60	71.2	3.6	95	14+	40	24	12	0	59	70	3.76	0.83	1.11	12	7	0.0	0	3.3	16	24	SE	5	12	10	8	5.2	70
INDIANA																																
EVANSVILLE	381	1003.4	1017.3	82	63	72.7	2.6	91	9+	44	21	7	0	63	75	4.47	1.60	2.10	8	4	0.0	0	1.0	14	19	N	11	7	13	10	6.0	64
FORT WAYNE	791	988.8	1018.5	77	58	67.4	2.6	89	8	39	24	0	0	60	80	4.14	1.47	1.48	11	6	0.0	0	1.1	20	22	W	23+	4	13	13	7.0	51
INDIANAPOLIS	792	988.5	1017.5	79	60	69.4	2.9	89	30+	41	21	0	0	61	77	3.10	- 0.14	1.40	10	3	0.0	0	0.9	15	27	N	11	6	11	13	6.5	58
SOUTH BEND	773	989.5	1017.4	75	59	67.1	3.3	88	8	40	24	0	0	60	80	5.16	2.09	1.75	11	6	0.0	0	2.9	18	23	19	28	4	10	16	7.1	
IOWA																																
BURLINGTON	692			80	58	68.9	2.9	93	8+	41	20	7	0	58	70	3.80	0.61	1.67	7	4	0.0	0	3.0	19	23	21	28+	11	11	8	5.0	
DES MOINES	938	981.0	1015.5	79	57	68.1	2.7	95	2	39	20	5	0	54	64	2.19	- 0.69	1.47	5	2	0.0	0	2.8	19	32	S	30	13	5	12	5.2	68
DUBUQUE	1056	977.7		75	55	64.9	3.2	89	8+	36	24	0	0			3.96	0.22	1.48	7		0.0	0						10	7	13	5.7	
SIOUX CITY	1095	975.3	1014.9	79	51	65.0	- 0.5	101	7	32	23+	5	2	50	61	0.60	- 2.14	0.35	6	0	0.0	0	1.8	17	35	S	30	11	5	14	5.4	65
WATERLOO	868	984.4	1015.9	76	51	63.4	0.5	93	2	31	20	2	1	53	73	2.56	- 1.24	1.12	7	4	0.0	0	2.6	18	28	20	4	12	3	15	5.4	
KANSAS																																
CONCORDIA	1470	961.7	1014.0	81	55	68.2	- 1.4	101	7	37	23+	11	0	52	60	0.74	- 1.99	0.42	6	2	0.0	0	4.9	18	36	S	30	15	7	8	4.3	75
DODGE CITY	2582	924.1	1013.6	81	56	68.2	- 2.1	102	7	38	19	11	0	47	54	1.46	- 0.07	0.86	5	0	0.0	0	3.8	17	42	SW	30	15	6	9	4.1	74
GOODLAND	3654	888.3	1013.7	77	47	61.8	- 3.7	102	7	32	19	8	1	41	55	1.38	0.14	0.87	6	1	T	T	2.6	21	40	36	7	16	7	7	3.8	
TOPEKA	877	983.7	1015.0	84	59	71.6	2.2	99	10+	40	20	14	0	55	61	1.35	- 1.63	0.56	5	2	0.0	0	3.4	18	32	SW	27	14	5	11	5.0	66
WICHITA	1321	967.5	1014.4	82	60	70.8	- 0.5	100	7	41	20	10	0	56	64	1.73	- 1.49	0.81	6	2	0.0	0	4.1	17	35	S	30+	12	7	11	4.9	61
KENTUCKY																																
COVINGTON	869	986.8	1017.9	79	62	70.3	3.1	89	1	45	21	0	0	62	79	6.56	3.73	1.59	12	6	0.0	0	1.3	14	29	30	20	3	11	16	7.0	
LEXINGTON	966	983.1	1018.0	82	63	72.5	3.2	91	10+	50	22	7	0	62	75	3.51	0.71	1.95	10	6	0.0	0	1.3	16	22	18	20	5	9	16	7.2	
LOUISVILLE	477	1000.0	1017.4	81	64	72.2	2.7	89	30+	49	21	0	0	63	76	4.72	2.09	1.73	8	4	0.0	0	1.0	13	27	S	28	6	11	13	6.5	52
LOUISIANA																																
ALEXANDRIA	92	1011.2	1015.4	86	68	76.7	- 0.3	92	7	60	17	7	0	70	87	7.47	4.34	2.25	16	10	0.0	0	2.7	7	22	36	16	5	11	14	6.4	
BATON ROUGE	64	1011.9	1014.4	87	71	78.7	0.8	92	3	64	17	9	0	71	82	10.94	7.42	4.28	16	9	0.0	0	4.4	9	40	17	16	5	6	19	7.4	
LAKE CHARLES	9	1012.9	1013.9	89	72	80.1	1.4	95	5	63	20	16	0	72	82	5.38	1.36	2.99	14	8	0.0	0	5.7	7	40	36	16	3	11	16	7.2	
NEW ORLEANS	4	1013.5	1014.5	86	72	78.9	0.6	91	24	61	14	2	0	72	82	16.74	11.71	6.50	15	9	0.0	0	3.9	7	32	22	16	5	8	17	7.1	
SHREVEPORT	254	1005.4	1014.7	88	68	78.1	- 0.7	95	14+	58	21+	19	0	67	73	1.30	- 0.98	0.41	7	3	0.0	0	3.6	10	28	9	15	7	10	13	6.2	61
MAINE																																
CARIBOU	624	995.3		67	46	56.2	2.4	81	8	24	27	0	3			2.62	- 0.91	0.86	13		0.0	0						5	8	17	7.1	
PORTLAND	43	1017.3	1019.6	71	51	61.3	2.6	90	5	35	25	1	0	54	78	3.55	0.03	1.43	9	1	0.0	0	1.3	25	36	E	17	9	7	14	6.2	61
MARYLAND																																
BALTIMORE	148	1013.9	1019.5	79	63	70.9	2.5	88	9	48	25	0	0	63	78	5.55	2.22	3.42	7	3	0.0	0	0.8	15	18	W	17	8	8	14	6.5	47
MASSACHUSETTS																																
BLUE HILL OBS R	629			74	58	65.7	3.3	90	5	42	25	1	0			1.64	- 2.31	0.83	9		0.0	0			31	NW	24					51
BOSTON	15	1018.6	1019.6	75	61	68.0	2.7	92	5	49	25	3	0	58	74	1.55	- 1.91	0.94	7	1	0.0	0	0.8	29	25	NW	9	6	11	13	6.2	59
WORCESTER	986	984.1	1021.0	71	56	63.4	2.6	86	5	40	25	0	0	55	76	4.23	0.31	3.11	4	0	0.0	0	1.8	28	24	30	21	5	9	16	6.9	
MICHIGAN																																
ALPENA	689			71	50	60.2	4.2	87	5	31	25	0	1	52	77	1.00	- 2.61	0.54	11	4	0.0	0	1.8	22	18	SW	8+	2	12	16	7.3	53
DETROIT	619			75	59	67.3	2.2	93	8	42	24	1	0	58	72	1.48	- 0.96	0.44	5	3	0.0		0.9	19	36	14	9					
DETROIT METRO	633	993.6	1017.6	77	57	66.6	3.3	94	8	36	24	1	0	56	74	2.72	0.40	1.09	9	3	0.0	0	0.4	15	30	SW	4	5	9	16	7.0	55
FLINT	771	989.8	1017.5	74	56	64.8	2.8	90	8+	37	24	2	0	55	74	2.10	- 0.84	0.86	9	3	0.0	0	2.2	21	23	32	23+	3	8	19	7.6	
GRAND RAPIDS	784	988.5	1017.5	75	56	65.6	3.4	90	8+	35	24	2	0	56	74	6.30	3.32	1.68	12	6	0.0	0	2.4	17	25	NW	23	3	11	16	7.4	48
HOUGHTON LAKE	1149	976.0	1017.8	71	50	60.8	3.5	85	5	31	25+	0	2	54	80	1.20	- 1.74	0.34	12	8	0.0	0	1.7	18	20	24	4	3	9	18	7.5	
LANSING	841	986.5	1017.8	74	55	64.3	2.3	91	8	35	24	2	0	58	82	5.25	2.65	1.93	14	3	0.0	0	2.4	19	28	W	5	4	8	18	7.4	53
MARQUETTE U	677			69	54	61.1	3.4	91	3	42	22	1	0			3.80	0.52	1.31	13		0.0	0			26	SW	30+	6	10	14	6.6	50

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

SEPTEMBER 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days						No. of days		Snow, Ice pellets				Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	994.6	1017.3	74	55	64.5	1.5	85	9+	37	25	0	0	56	77	1.77	- 1.29	0.65	10	6	0.0	0	2.9	18	25	18	28	5	12	13	6.6	
SAULT STE MARIE	721	990.2	1016.8	67	47	57.2	1.4	82	5+	33	24	0	0	52	85	4.03	0.22	0.95	13	6	0.0	0	0.7	17	31	W	23	2	9	19	7.9	46
MINNESOTA																																
DULUTH	1428	964.1	1015.3	67	47	57.3	3.1	87	2	30	24+	0	4	49	76	2.67	- 0.19	1.06	12	7	0.0	0	2.0	20	29	W	28+	7	8	15	6.6	61
INTERNATIONAL FALLS	1179	970.5	1013.7	68	44	55.6	2.7	92	2	24	22	1	5	48	80	5.22	2.32	2.37	15	7	0.0	0	3.6	20	29	32	30	4	10	16	7.0	
MINNEAPOLIS	834	984.8	1015.2	73	52	62.8	2.4	94	2	34	23	3	0	50	67	2.73	0.30	0.92	10	6	0.0	0	2.6	19	34	SW	30	11	8	11	5.7	64
ROCHESTER	1297	968.5	1015.9	73	51	62.0	1.3	93	7	36	23+	2	0	53	75	3.93	0.83	2.20	9	4	0.0	0	4.6	19	31	19	30	11	5	14	5.7	
ST CLOUD	1034	977.3	1015.3	70	49	59.6	0.8	90	2	32	19	1	1			3.12	0.71	1.25	7		0.0	0						9	10	11	5.5	
MISSISSIPPI																																
JACKSON	310	1004.1	1015.7	88	68	78.3	1.8	93	3	59	13	18	0	71	85	6.00	3.47	4.67	11	7	0.0	0	2.9	11	33	NE	16	5	12	13	6.5	59
MERIDIAN	290	1005.1	1016.1	87	67	77.0	1.1	92	2	59	14	10	0	68	78	7.17	3.84	3.42	13	8	0.0	0	2.1	7	18	8	16	6	7	17	6.8	
MISSOURI																																
COLUMBIA REGIONAL	887	984.4	1016.4	82	61	71.3	2.0	101	14	44	21	13	0	57	66	2.65	- 1.23	0.95	8	6	0.0	0	3.1	17	27	W	5	9	10	11	5.6	65
KANSAS CITY	742	988.2	1014.8	83	62	72.6	1.3	97	8	45	20	12	0	57	62	2.70	- 0.55	1.14	5	1	0.0	0	2.9	18	35	SW	4	13	8	9	4.8	73
ST JOSEPH	811			82	54	67.6	- 1.0	95	8+	33	20	11	0	54	67	1.60	- 1.84		5		0.0		1.9	18	28	25	8	16	4	10	4.6	
ST LOUIS	535	996.3	1016.4	83	62	72.5	3.0	100	14	44	21	13	0	62	75	3.98	1.22	1.15	11	4	0.0	0	2.4	17	28	S	6	9	11	10	5.6	75
SPRINGFIELD	1268	971.2	1016.1	83	60	71.6	1.2	98	14	39	20	11	0	59	70	5.07	1.22	2.00	9	5	0.0	0	4.1	16	40	NW	5	14	8	8	4.8	67
MONTANA																																
BILLINGS	3567	891.3	1015.0	68	43	55.6	- 4.8	94	11	28	18	1	2	36	55	1.80	0.61	0.71	11	0	T	0	4.0	27	42	NW	11	10	10	10	5.2	67
GLASGOW	2284	933.0	1014.3	70	43	56.5	- 0.2	94	6	30	18	2	2	36	51	0.48	- 0.48	0.21	8	2	0.0	0	3.4	32	46	30	11	9	12	9	5.8	
GREAT FALLS	3662	888.6	1015.4	67	43	54.7	- 2.7	88	6	30	22+	0	3	34	51	0.61	- 0.59	0.33	7	1	T	T	7.7	24	38	SW	11	9	7	14	5.9	66
HAVRE	2584	922.8	1014.5	69	40	54.6	- 1.0	91	6	26	21	1	4	33	50	0.15	- 0.86	0.13	3	0	T	0	5.4	27	52	W	11	6	13	11	6.0	78
HELENA	3828	881.8	1017.4	63	36	49.7	- 6.3	82	10	22	21	0	7	32	57	0.89	- 0.06	0.27	11	1	T	0	3.8	29	35	NW	19	11	5	14	5.6	74
KALISPELL	2965	912.3	1017.5	65	34	49.1	- 5.6	82	10	22	30+	0	13	34	63	0.46	- 0.58	0.32	7	0	0.0	0	1.1	20	25	3	15	11	4	15	5.9	
MILES CITY	2629	921.4	1013.9	70	45	57.9	- 3.1	98	11	30	18	2	1	39	55	1.01	0.05		8	0	0.0		3.6	31								
MISSOULA	3190	905.5	1017.8	68	36	51.9	- 3.5	89	10	23	21	0	10	35	58	0.30	- 0.72	0.23	4	0	T	0	2.4	31	28	SW	13	12	5	13	5.1	69
NEBRASKA																																
GRAND ISLAND	1841	948.9	1014.3	78	50	64.4	- 0.8	101	7	33	23	8	0	47	57	1.35	- 0.80	0.55	8	2	0.0	0	2.6	20	32	18	30	13	6	11	5.1	
LINCOLN U	1150			80	56	68.1	- 0.1	100	7	39	24	8	0			0.96	- 1.91	0.40	10		0.0				41	SE	30	14	3	13	5.2	63
NORFOLK	1544			77	49	63.2	- 1.8	101	7	30	19	5	2			0.85	- 1.40	0.38	7		0.0	0						12	5	13	5.3	
NORTH PLATTE	2775	917.7	1014.9	76	44	59.7	- 4.0	100	7	26	23+	6	4	44	63	2.01	0.34	1.24	7	0	0.0	0	0.7	5	32	N	15+	14	7	9	4.6	67
OMAHA	977	979.3	1014.4	82	54	67.8	0.9	100	7	35	23	11	0	51	59	0.57	- 2.06	0.44	7	2	0.0	0	2.2	20	35	SE	30	12	6	12	5.1	61
SCOTTSBLUFF	3957	879.8	1014.6	73	44	58.4	- 3.9	95	13	29	19	4	1	41	61	2.09	0.88	0.59	11	2	T	T	1.2	1	29	2	13	15	6	9	4.4	
VALENTINE	2587			74	47	60.2	- 1.6	98	2	29	19	5	1			0.97	- 0.28	0.44	6		0.0	0			56	N	13	14	4	12	4.9	65
NEVADA																																
ELKO	5050	844.9	1015.1	72	34	53.2	- 4.7	88	13+	21	28	0	12	24	38	0.74	0.40	0.40	3	1	T	0	1.8	29	23	30	25+	20	7	3	2.5	
ELY	6253	809.3	1013.4	72	33	52.5	- 5.0	87	13+	16	28	0	16	23	36	0.39	- 0.17	0.18	3	2	2.2	1	4.3	20	33	SE	29	23	6	1	1.7	91
LAS VEGAS	2162	935.3	1010.2	92	63	77.6	- 2.4	107	12	47	30	18	0	29	18	0.00	- 0.34	0.00	0	0	0.0	0	2.1	20	34	NW	30	25	4	1	1.2	97
RENO	4404	865.6	1014.1	78	35	56.5	- 2.3	96	13	23	19	5	11	27	36	0.10	- 0.13	0.10	1	0	T	T	1.5	28	37	W	29	25	4	1	1.3	95
WINNEMUCCA	4301	868.9	1015.1	76	34	55.0	- 3.6	97	13	18	19	6	14	23	33	0.37	0.03	0.24	5	0	0.2	0	1.4	31	28	W	26+	22	2	6	2.5	86
NEW HAMPSHIRE																																
CONCORD	342	1007.5	1020.0	73	50	61.1	1.8	88	4	27	25	0	1	55	82	1.91	- 1.84	1.10	7	2	0.0	0	0.2	27	29	W	17	5	9	16	6.7	50
MT WASHINGTON OBS	6262			50	40	45.2	4.2	60	16	22	25	0	7			6.24	- 0.76	1.88	8	0	0.0	0			87Y	W	24	2	5	23	8.4	29
NEW JERSEY																																
ATLANTIC CITY	64	1017.3	1019.6	75	60	67.5	0.3	85	6+	41	25	0	0	64	89	4.39	1.08	2.58	8	1	0.0	0	2.5	14	20	15	13+	7	6	17	7.0	50
ATLANTIC CITY U	11			72	63	67.9	- 0.5	81	10	47	25	0	0			5.47	2.07	2.54	6						23	NW	21+					
NEWARK	7	1018.6	1019.6	78	66	71.8	4.5	92	9	48	25	2	0	61	71	7.88	4.12	5.27	10	5	0.0	0	0.5	11	23	33	24	5	7	18	7.3	
TRENTON U	56			76	63	69.9	2.8	90	9	46	25	1	0			5.59	2.09	2.86	8		0.0	0			32	NE	11	4	10	16	7.2	43

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							°%
NEW MEXICO																																
ALBUQUERQUE	5311	838.5	1012.5	81	52	66.4	- 3.6	94	14+	37	19+	11	0	37	42	1.44	0.49	0.57	8	3	T	0	2.3	12	50	E	16	18	8	4	2.9	79
CLAYTON	4969			75	49	61.6	- 4.4	92	7	32	18+	4	2			0.87	- 0.78	0.45	5		1.1	T						17	5	8	3.7	
ROSWELL	3612			84	55	69.3	- 0.4	95	14+	33	20	15	0			1.57	- 0.25	1.21	7		0.0	0			26	SE	14					70
NEW YORK																																
ALBANY	275	1009.1	1019.7	75	55	64.8	3.2	86	9+	40	25+	0	0	58	81	2.40	- 1.18	1.03	8	3	0.0	0	2.3	18	22	W	24+	3	9	18	7.5	42
BINGHAMTON	1590	961.7	1020.4	70	55	62.8	3.3	85	6	37	25	0	0	58	87	1.66	- 1.29	0.48	11	4	0.0	0	2.8	17	23	S	20	2	12	16	7.5	38
BUFFALO	705	992.9	1018.4	74	57	65.4	4.0	86	6	42	25	0	0	58	79	1.88	- 1.25	0.77	8	0	0.0	0	2.0	20	30	W	20	3	10	17	7.2	50
NEW YORK U	132	1017.3	1019.3	77	66	71.6	3.1	91	9	49	25	2	0	62	75	7.36	3.49	4.03	11	2	0.0	0	1.0	9	22	SE	29					40
NEW YORK KENNEDY	13	1019.0	1019.8	78	66	71.8	4.0	90	6+	51	25	2	0	62	73	3.72	- 0.44	1.78	7	2	0.0	0	2.7	15	21	17	12	5	10	15	7.0	
NEW YORK LA GUARDIA	11	1019.0	1020.0	76	66	70.9	2.1	91	9	50	25	1	0	62	74	4.93	1.01	2.42	6	4	0.0	0	2.0	13	25	NW	24	6	8	16	7.1	
ROCHESTER	547	998.3	1018.3	77	57	67.4	5.0	93	6	41	25	3	0	61	82	1.79	- 0.74	0.50	8	1	0.0	0	1.8	20	28	W	23	5	10	15	6.9	43
SYRACUSE	410	1004.1	1018.7	75	56	65.6	3.2	89	6	43	24+	0	0	59	81	2.56	- 0.28	1.63	10	3	0.0	0	1.2	17	30	W	23	5	12	13	6.8	44
NORTH CAROLINA																																
ASHEVILLE	2140	943.4	1018.8	79	60	69.5	3.6	88	15	51	15	0	0	63	88	3.80	0.18	1.22	14	3	0.0	0	0.4	2	21	33	30	1	11	18	7.7	57
CAPE HATTERAS R	7	1016.6	1017.1	82	69	75.6	1.5	86	20+	63	16	0	0	69	80	8.59	2.70	5.28	11	3	0.0	0	6.9	8	44	12	30	8	12	10	5.6	55
CHARLOTTE	736	990.9	1017.8	82	64	73.1	0.2	89	6	57	26+	0	0	65	79	2.68	- 0.81	1.15	13	4	0.0	0	2.6	5	25	SE	18	4	10	16	7.2	66
GREENSBORO	897	987.1	1018.4	80	62	71.0	0.9	88	9+	54	15	0	0	64	84	2.51	- 1.15	1.04	7	3	0.0	0	2.1	4	25	N	30	2	9	19	7.5	58
RALEIGH	434	1002.4	1018.2	81	63	72.0	0.8	87	10+	53	25	0	0	65	85	2.91	- 0.94	1.89	6	4	0.0	0	3.1	5	32	34	30	3	14	13	6.7	53
WILMINGTON	28	1015.6	1017.0	84	67	75.4	0.2	89	15	56	26	0	0	69	85	5.04	- 1.25	1.32	11	6	0.0	0	3.6	3	32	NW	30	8	11	11	5.7	61
NORTH DAKOTA																																
BISMARCK	1647	953.6	1013.2	69	44	56.8	- 1.9	100	2	25	22	1	1	45	69	1.63	0.44	0.87	8	2	0.0	0	2.0	30	43	NW	7	8	6	16	6.3	65
FARGO	896	980.7	1013.5	70	47	58.5	- 0.3	95	2	27	18	2	2	49	74	4.30	2.82	2.29	8	3	0.0	0	2.7	20	29	NW	7	7	10	13	6.2	77
WILLISTON	1899	944.8	1013.2	68	44	56.0	- 1.2	89	11+	30	18	0	1	41	63	2.48	1.36	2.24	10	5	T	T	4.1	30	42	NW	11	10	4	16	6.3	58
OHIO																																
AKRON	1208	973.9	1018.2	76	57	66.7	2.8	87	10+	42	25	0	0	59	81	3.06	0.44	1.80	10	2	0.0	0	0.6	20	23	32	13	5	7	18	7.1	
CINCINNATI ABBE OB	761			79	62	70.5	1.5	90	10	46	24+	1	0			8.68	5.97	3.51	11		0.0	0			17	NW	20					56
CLEVELAND	777	989.8	1018.6	77	59	67.7	3.5	91	8	40	25	3	0	59	77	4.27	1.37	2.02	9	4	0.0	0	0.7	18	24	S	20	7	7	16	6.8	48
COLUMBUS	812	988.5	1018.2	77	59	67.8	1.9	87	29+	42	24+	0	0	59	78	3.08	0.43	0.97	8	4	0.0	0	1.2	13	26	NW	20	4	9	17	7.1	52
DAYTON	1002	982.1	1017.9	76	60	68.2	1.4	86	30+	43	24+	0	0	61	80	3.78	1.19	1.24	8	4	0.0	0	1.5	15	22	S	20	8	9	13	6.3	56
MANSFIELD	1295			77	59	67.8	4.5	89	8+	43	25+	0	0	60	82	2.41	- 0.57	1.25	9	4	0.0	0	1.9	21	23	30	20	5	11	14	6.8	
TOLEDO	659	992.6	1017.6	78	56	66.8	3.4	91	8	33	24	2	0	58	77	1.84	- 0.29	0.84	7	4	0.0	0	0.9	21	24	NW	23+	6	8	16	6.8	48
YOUNGSTOWN	1178	976.0	1018.6	75	57	66.0	3.5	88	8	36	25	0	0	59	82	2.74	- 0.15	1.30	14	4	0.0	0	0.9	14	20	25	20	5	8	17	7.2	
OKLAHOMA																																
OKLAHOMA CITY	1285	968.8	1014.6	85	62	73.3	- 0.5	101	7+	41	20	14	0	59	67	4.25	1.23	2.30	7	4	0.0	0	3.8	16	32	N	17	15	10	5	4.2	70
TULSA	650	990.9	1015.0	83	63	73.0	- 0.8	95	14	42	20	12	0	63	75	18.81	14.80	6.03	14	8	0.0	0	4.5	18	46	NE	6	11	11	8	4.9	64
OREGON																																
ASTORIA	8	1015.6	1016.4	68	48	57.9	- 0.1	80	22	37	30	0	0	50	79	4.65	1.52	1.15	13	2	0.0	0	1.3	17	26	29	1	12	3	15	5.7	
BURNS U	4151	873.7	1016.4	68	36	52.0	- 6.8	86	10	23	27	0	9	33	52	0.57	0.07	0.34	6		0.2	T	3.0	31				18	3	9	3.5	
EUGENE	359	1002.7	1016.3	74	45	59.2	- 2.3	86	19	36	19	0	0	46	69	3.04	1.77	0.98	11	0	T	0	1.3	29	27	1	16+	16	5	9	4.4	
MEACHAM	4050	877.8	1017.0	60	40	49.5	- 6.2	80	10	30	29	0	4			3.23	1.77	1.11	8		2.7	T			16	2	16+	16	1	13	4.6	
MEDFORD	1298	967.8	1015.1	79	46	62.6	- 1.6	94	16	38	19	6	0	40	52	1.24	0.64	0.78	6	0	0.0	0	1.4	31	22	16	18	21	1	8	2.9	
PENDLETON	1482	963.1	1016.7	72	46	59.1	- 5.1	85	10	36	30	0	0	39	52	1.03	0.40	0.77	5	1	0.0	0	2.3	27	29	2	20	14	5	11	4.6	
PORTLAND	21	1014.9	1016.2	72	50	60.8	- 1.4	82	22	40	30	0	0	46	64	3.53	1.90	1.49	12	1	0.0	0	0.7	16	35	E	17+	13	6	11	4.9	65
SALEM	196	1008.8	1016.3	72	46	59.1	- 3.4	85	22+	36	30	0	0	47	69	3.98	2.60	1.41	10	0	0.0	0	0.5	19	24	21	1	16	5	9	4.5	
SEXTON SUMMIT R	3836	884.5	1015.3	65	47	56.2	- 3.5	82	16	31	29	0	1			2.19	0.94	0.67	9		3.1	2			45	12	17	20	2	8	3.2	
PACIFIC AREA																																
GUAM TAGUAC R	361	996.3	1008.9	86	72	79.0	- 0.3	88	29+	65	6	0	0	75	88	12.21	- 1.15	1.95	24	5	0.0	0	1.8	9	20	E	30					40
JOHNSTON	7	1013.2	1013.7	84	78	81.1	- 0.5	85	19+	71	2	0	0	72	75	2.46	0.11	2.19	6	0	0.0	0	14.9	9	30	E	26+	4	15	11	6.4	77
KOROR R	94	1005.4	1009.2	88	76	82.1	1.1	91	21	73	28+	4	0	76	84	13.98	- 0.35	3.82	19	1	0.0	0	1.5	16	22	SE	27	0	7	23	8.4	54
KWAJALEIN	8	1009.1	1009.8	86	76	81.0	- 0.9	89	10	73	16+	0	0	75	82	12.52	2.33	2.79	22	0	0.0	0	7.3	10	28	9	27+	1	5	24	8.7	
MAJURO	10	1010.5	1010.7	85	77	80.8	0.4	88	11	73	22	0	0	74	79	7.93	- 4.13	1.74	21	1	0.0	0	7.3	8	19	NE	18+	0	5	25	9.1	65

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No of days								Snow, Ice pellets				Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90° F. or above	Min. 32° F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.						%
PACIFIC AREA																															
PAGO PAGO	12	1012.9	1013.2	84	73	78.4		87	24	64	28	0	0	71	80	2.61		0.68	17	2	0.0	0	9.6	10	27	E	2	6	15	9	5.9	67
PONAPE R	123	1003.4	1008.9	88	73	80.3	0.8	91	14	69	8	3	0	74	84	9.89	- 5.92	2.08	23	0	0.0	0	3.6	13	15	E	19+	1	5	24	8.5	33
TRUK MOEN ISLAND	5	1008.8	1009.0	86	76	81.1	0.7	88	25+	73	21+	0	0	75	83	14.54	1.96	4.96	23	2	0.0	0	2.3	13	23	NW	12	0	4	26	9.4	68
WAKE	11	1010.5	1010.6	85	76	80.7	- 1.8	90	1	72	9	1	0	73	78	17.08	11.84	6.30	21	2	0.0	0	8.0	12	48	SW	5	6	9	15	6.8	55
YAP R	44			87	75	80.8	- 0.6	89	23+	72	23+	0	0			13.87	- 0.14	2.88	25	4	0.0	0			27	SE	26	0	9	21	8.5	67
PENNSYLVANIA																															
ALLENTOWN	387	1005.8	1019.6	75	60	67.7	3.0	89	9	39	25	0	0	62	84	3.71	- 0.04	1.78	12	7	0.0	0	1.6	8	27	32	16	5	7	18	7.3	
ERIE	731	991.9	1018.4	71	57	64.1	0.8	83	8	40	25	0	0	58	82	3.51	- 0.05	1.05	10	5	0.0	0	1.4	17	21	34	23	7	5	18	7.1	
HARRISBURG	338	1006.4	1019.3	77	63	69.9	3.0	92	9	43	25	2	0	63		1.94	- 0.88	0.56	13	3	0.0	0	1.3	15	25	NW	16	6	9	15	6.8	41
PHILADELPHIA	5	1018.3	1019.2	79	64	71.6	4.9	92	9	48	25	2	0	64	79	5.83	2.37	2.26	7	5	0.0	0	2.1	13	23	SE	10	6	8	16	7.1	45
PITTSBURGH	1137	974.9	1018.4	77	60	68.5	4.3	91	9	41	25	2	0	59	76	3.86	1.32	0.80	13	4	0.0	0	0.3	22	23	29	20	5	6	19	7.4	38
SCRANTON	930	985.4	1019.3	73	58	65.5	3.0	85	6+	35	25	0	0	60	86	1.93	- 1.04	0.64	10	4	0.0	0	1.6	15	27	W	16	3	8	19	7.6	43
WILLIAMSPORT	524	1000.3	1019.2	75	61	68.2	4.1	89	9	40	25	0	0	60	79	3.33	0.06	1.01	11	4	0.0	0	1.5	8	21	19	20+	3	10	17	7.8	
RHODE ISLAND																															
BLOCK ISLAND	110			73	62	67.4	3.4	79	16+	49	23	0	0			0.33	- 2.87	0.19	6		0.0	0										
PROVIDENCE	51	1017.6	1020.0	77	60	68.7	5.5	91	9+	39	25	2	0	60	76	2.54	- 0.98	1.12	7	2	0.0	0	0.8	20	21	35	24	6	7	17	6.7	49
SOUTH CAROLINA																															
CHARLESTON	40	1014.9	1016.6	86	68	77.1	1.5	91	15	60	26	3	0	68	78	0.53	- 5.30	0.18	8	2	0.0	0	3.2	3	31Y	NW	30+	10	11	9	5.3	69
CHARLESTON U	9			85	72	78.4	1.3	90	15	65	26+	1	0			0.83	- 5.49	0.47	6		0.0	0			27	N	29					
COLUMBIA	213	1009.5	1017.4	87	67	77.1	1.8	91	21+	59	14+	7	0	68	80	5.03	3.72	2.99	9	4	0.0	0	3.1	3	21	4	10	8	11	11	6.1	55
GRNVLLE-SPRTNBRG	957	983.7	1017.8	83	63	72.9	0.2	89	30+	53	14	0	0	65	81	3.28	- 0.60	0.78	11	2	0.0	0	3.1	3	20	N	12	3	13	14	6.9	49
SOUTH DAKOTA																															
ABERDEEN	1296	966.8	1013.4	73	46	59.7	- 0.9	99	2	30	23+	4	4	48	69	2.30	0.90	1.82	7	4	T	T	2.7	20	28	35	13	9	9	12	5.5	
HURON	1281	967.5	1013.6	73	47	60.0	- 1.9	99	2	32	23+	5	3	47	65	1.78	0.25	1.07	7	3	0.0	0	3.3	18	37	W	5	11	7	12	5.1	70
RAPID CITY	3162	904.2	1014.4	71	44	57.4	- 4.2	101	2	30	19	4	3	38	56	2.32	1.37	1.18	9	3	0.0	0	3.6	32	54	NW	5	14	8	8	4.5	61
SIOUX FALLS	1418	964.1	1015.2	75	48	61.5	- 0.3	100	7	32	19	3	1	48	65	3.23	0.62	1.60	8	4	0.0	0	2.0	21	32	19	30+	10	7	13	5.4	
TENNESSEE																															
BRISTOL	1507	965.1	1018.5	83	62	72.3	3.2	92	9	55	15+	5	0	62	78	2.91	0.29	0.78	12	3	0.0	0	0.9	5	22	22	16	6	9	15	6.8	
CHATTANOOGA	665	992.9	1017.1	85	66	75.5	1.7	92	15+	56	14	6	0	65	76	3.68	0.58	3.05	8	4	0.0	0	0.6	12	18	NW	12	5	9	16	6.8	46
KNOXVILLE	980	983.1	1017.7	82	65	73.3	1.1	90	10+	55	14	2	0	64	79	3.41	0.87	1.21	9	4	0.0	0	1.4	2	22	N	12	6	9	16	6.8	43
MEMPHIS	258	1006.1	1016.2	85	67	76.1	2.2	94	14	51	21	10	0	64	69	3.42	0.60	0.99	9	3	0.0	0	2.4	14	20	SE	26+	10	10	10	5.7	72
NASHVILLE	590	995.3	1016.7	84	65	74.4	1.6	91	15	54	21	3	0	63	73	2.11	- 0.76	0.86	9	6	0.0	0	0.8	19	26	NW	25+	8	8	14	6.1	61
OAK RIDGE R	905			82	63	72.6	1.6	92	15	54	14	3	0			3.32	0.02	1.16	11		0.0	0			25Y		12	2	13	15	7.2	
TEXAS																															
ABILENE	1762	953.6	1014.1	83	63	73.3	- 2.6	97	7	41	20	9	0	62	71	5.33	3.26	2.50	7	2	0.0	0	4.4	17	42	NW	17	11	12	7	5.2	68
AMARILLO	3604	891.6	1014.0	79	56	67.1	- 4.7	95	6	39	20	7	0	48	56	4.70	2.81	2.52	6	4	0.0	0	5.1	18	32	NE	17	18	4	8	7.8	74
AUSTIN	597	991.5	1013.2	88	71	79.3	0.2	98	6	52	20	14	0	68	75	2.13	- 1.31	0.89	10	3	0.0	0	3.5	10	27	SE	24+	6	11	13	5.8	48
BROWNSVILLE	19	1010.8	1011.4	89	74	81.4	0.2	99	7	63	20	14	0	72	77	10.78	5.79	3.54	15	4	0.0	0	2.4	11	32	W	11	4	10	16	7.1	50
CORPUS CHRISTI	41	1010.2	1011.5	88	74	81.1	0.3	98	7+	60	20	10	0	74	83	12.17	7.77	4.67	15	3	0.0	0	6.1	9	66	NW	10	2	14	14	7.1	46
DALLAS	481	997.0	1014.2	88	70	79.1	1.2	100	6	50	20	18	0	65	67	1.83	- 0.99	0.99	6	2	0.0	0	4.7	13	23	SE	24+	9	12	9	5.4	64
DEL RIO	1026	977.0	1012.4	88	69	78.5	- 1.4	99	7	51	20	16	0	66	70	0.50	- 2.11	0.26	7	2	0.0	0	6.3	11	26	33	18	6	12	12	6.3	
EL PASO	3918	881.1	1010.6	87	60	73.5	- 1.0	96	16	44	20	18	0	48	44	0.96	- 0.18	0.78	6	5	0.0	0	1.2	14	35	E	5	19	9	2	3.1	87
FORT WORTH	537	994.2	1014.4	87	68	77.1	- 1.3	96	6	46	20	16	0	66	74	3.24	0.70	1.23	6	2	0.0	0	3.0	13	20	34	18	6	15	9	5.7	
GALVESTON J	7			84	76	79.8	- 0.3	93	6	62	20	1	0			10.21	5.12	5.21	14		0.0	0			43	E	9					65
HOUSTON INTERCON	96	1009.8	1013.7	87	70	78.3	0.0	97	6	57	20	9	0	71	83	5.17	1.12	2.21	10	7	0.0	0	4.4	7	25	19	3	2	13	15	7.2	50
LUBBOCK	3254	903.8	1013.2	82	59	70.4	- 1.0	96	6	41	20	11	0	56	66	5.22	2.86	2.29	7	5	0.0	0	3.8	16	25	36	17	19	4	7	3.8	
MIDLAND	2851	916.0	1012.7	83	60	71.6	- 3.8	95	8+	42	20	13	0	57	65	2.55	0.76	1.77	6	2	0.0	0	6.1	13	30	S	17	17	4	9	4.0	
PORT ARTHUR	16	1013.2		85	70	77.8	- 0.4	92	6+	58	20	4	0	71	84	5.07	0.19	2.94	15	7	0.0	0	6.0	8	40	E	16	3	15	12	6.7	61
SAN ANGELO	1903	947.5	1012.8	85	63	74.3	- 4.0	96	6	46	20	12	0	61	68	3.59	0.93	1.62	6	2	0.0	0	3.5	14	26	18	29	7	14	9	5.5	
SAN ANTONIO	788	985.4	1012.9	88	72	80.1	1.5	96	7+	54	20	15	0	68	71	4.57	1.08	1.97	12	4	0.0	0	3.7	8	32	NE	10	4	13	13	6.7	63
VICTORIA	104	1008.5	1012.5	87	72	79.7	0.6	96	7+	57	20	10	0	71	80	12.03	7.80	5.66	16	6	0.0	0	6.0	7	49Y	N	10	4	10	16	7.1	
WACO	501	996.3	1013.9	88	70	79.1	0.1	98	6	49	20	19	0	67	71	0.74	- 2.03	0.48	5	1	0.0	0	3.1	12	21	33	19+	6	13	11	5.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

SEPTEMBER 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0.3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
TEXAS																																
WICHITA FALLS	994	977.3	1013.3	86	65	75.5	- 1.9	99	6	45	20	17	0	64	71	5.13	2.80	1.97	8	6	0.0	0	4.6	12	49	31	4	16	7	7	4.3	
UTAH																																
MILFORD	5028	846.3		77	40	58.7	- 4.4	94	13	25	19	4	6			0.49	0.06	0.34	3		1.1	T						25	2	3	1.5	
SALT LAKE CITY	4220	871.3	1013.9	74	45	59.8	- 4.6	90	11+	32	28	3	1	35	44	1.75	1.22	1.20	6	0	4.0	4	2.7	17	38	SW	25	19	9	2	2.5	85
WENDOVER	4237	870.6	1014.6	73	49	60.8	- 5.9	90	11	34	28	1	0	26	30	0.36	0.04	0.30	3		0.0	0						22	4	4	2.5	
VERMONT																																
BURLINGTON	332	1006.4	1018.9	73	54	63.5	5.1	86	5	38	24	0	0	57	81	1.63	- 1.68	0.77	13	0	0.0	0	2.7	19	33	SW	29	2	12	16	7.2	55
VIRGINIA																																
LYNCHBURG	916			79	61	70.0	1.3	88	6	52	15	0	0			1.85	- 1.51	0.87	10		0.0	0			22	NE	30	4	10	16	7.1	40
NORFOLK	24	1017.3	1018.2	80	66	73.2	0.6	88	11	54	26	0	0	65	78	5.46	1.24	3.49	4	1	0.0	0	4.8	6	49	NE	30	8	12	10	5.9	66
RICHMOND	164	1012.5	1018.8	81	62	71.4	1.2	89	8+	48	25	0	0	65	83	2.35	- 1.30	1.56	5	3	0.0	0	1.6	8	21	NE	30	4	14	12	6.6	52
ROANOKE	1149	977.0	1018.7	79	61	69.8	0.7	88	9+	55	15	0	0	62	79	3.87	0.61	1.80	13	3	0.0	0	1.1	18	29	31	14	3	8	19	7.4	
WALLOPS ISLAND	9			80	69	74.0		85	11	54	26+	0	0			5.41		4.36	5		0.0	0			38Y	NE	30					
WASHINGTON																																
OLYMPIA	195	1009.1	1016.5	69	41	55.3	- 3.2	80	22	32	21	0	1	47	78	3.06	0.97	1.20	12	0	0.0	0	2.2	20	18	18	27+	10	8	12	5.5	
QUILLAYUTE	179	1008.8	1016.5	65	44	54.5	- 2.7	76	18	34	30	0	0	46	77	5.93	1.25	1.91	12	0	0.0	0	0.7	7	28	SW	10	10	6	14	5.9	45
SEATTLE-TACOMA	400	1000.0	1016.5	66	50	57.6	- 2.3	76	22+	43	29	0	0	47	74	3.51	1.46	1.11	12	0	0.0	0	1.0	17	24	N	20	9	8	13	5.9	62
SPOKANE	2356	932.3	1016.0	67	43	55.2	- 5.7	86	10	31	30	0	1	37	57	1.37	0.62	0.44	11	0	0.0	0	2.7	20	32	NE	19	15	4	11	4.5	70
STAMPEDE PASS R	3958	880.5		53	41	46.9	- 5.0	65	10	32	29	0	1			3.95	- 0.44	1.27	13		T	0						9	7	14	6.2	
WALLA WALLA U	949			72	49	60.2	- 5.8	87	5	36	30	0	0			1.80	1.02	1.20	6		0.0	0			22	W	2	17	5	8	3.6	72
YAKIMA	1052	978.0	1016.3	73	38	55.5	- 5.8	87	10	28	29	0	6	37	56	0.73	0.38	0.65	3	1	0.0	0	2.8	30	25	32	13	18	7	5	3.4	
WEST INDIES																																
SAN JUAN P.R.	13	1012.2	1014.8	90	7B	83.9	3.4	94	26	75	3	22	0	70	65	2.19	- 4.57	1.41	9	4	0.0	0	5.6	10	31	E	1	7	20	3	4.9	74
WEST VIRGINIA																																
BECKLEY	2504	931.6	1018.3	74	58	66.0	2.2	84	15	46	25	0	0	60	86	4.51	1.39	0.84	16	6	0.0	0	3.4	17	21	14	25+	5	7	18	7.5	
CHARLESTON	939	984.4	1018.0	79	62	70.7	2.5	90	6	48	25	1	0	64	83	7.61	4.69	2.27	14	3	0.0	0	0.2	23	18	7	6	5	5	20	7.6	
ELKINS	1948	949.2		76	56	66.2	3.6	86	10	39	24	0	0			6.29	3.22	2.18	14		0.0	0						0	7	23	8.3	
HUNTINGTON	827	988.2	1017.8	79	63	71.0	2.8	90	10	50	25	1	0	63	81	2.61	0.07	0.77	11	6	0.0	0	0.9	16	17	24	20+	2	9	19	7.6	
PARKERSBURG U	615			79	62	70.2	2.1	91	9+	45	25	4	0			4.59	1.88	2.91	8		0.0	0			26	NE	16					35
WISCONSIN																																
GREEN BAY	682	990.9	1016.3	73	52	62.3	1.8	87	4+	35	24	0	0	53	74	3.36	0.44	1.35	11	5	0.0	0	2.1	21	30	SW	28	8	10	12	6.4	46
LA CROSSE	651	991.9	1016.4	75	53	64.3	2.1	95	2	38	20	3	0	56	80	2.43	- 1.05		12	6	0.0		2.9	16								
MADISON	858	985.1	1016.3	78	53	65.1	4.1	90	8+	33	24	2	0	54	72	1.87	- 1.45	0.64	9	4	0.0	0	1.9	19	28	SW	28	7	11	12	6.1	61
MILWAUKEE	672	991.5	1016.7	74	56	64.9	4.6	92	8	36	24	1	0	56	75	1.30	- 1.42	0.61	7	3	0.0	0	2.7	19	30	S	28	8	12	10	5.8	68
WYOMING																																
CASPER	5338	837.8	1014.6	69	39	53.9	- 5.8	90	11+	24	18	2	9	31	51	0.74	- 0.16	0.33	9	1	2.8	1	4.4	25	31	21	29	14	10	6	4.1	
CHEYENNE	6126	812.7	1014.9	66	40	53.1	- 5.5	86	2+	24	18	0	7	31	49	1.76	0.66	0.82	8	1	7.4	4	5.4	28	34	NW	20+	17	7	6	3.8	68
LANDER	5563	829.7	1014.8	67	40	53.4	- 5.6	87	11+	27	18	0	10	30	49	2.27	1.24	0.51	8	2	10.1	2	2.8	26	32	SW	29	16	6	8	4.3	74
SHERIDAN	3964	879.1	1015.6	71	38	54.5	- 4.3	96	11	22	18	3	10	33	48	0.90	- 0.27	0.37	6	0	T	T	4.2	31	38	NW	11	14	5	11	4.7	66

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	994.9	1017.0	29.4	18.3	23.9	- 0.7	33.3	14	12.2	13	3	0	19.4	80	85	- 1	47	8	5	0	0	1.1	9	8.0	NE	16+	8	8	14	6.3	59
HUNTSVILLE	190	994.2	1017.0	27.8	18.3	23.1	- 0.6	31.7	14	12.8	13	0	0	18.9	81	152	74	59	9	5	0	0	1.1	10	13.0	13	7	7	8	15	6.5	
MOBILE	64	1007.8	1015.6	30.6	22.2	26.4	0.9	32.8	24+	18.3	14	8	0	22.8	85	185	27	74	14	11	0	0	1.9	8	13.0	16	16	3	11	16	7.1	
MONTGOMERY	56	1009.1	1016.4	31.1	20.0	25.4	0.4	33.3	11	15.0	14	8	0	20.6	80	149	48	61	7	4	0	0	0.7	8	9.4	S	4	9	10	11	5.9	56
ALASKA												8																				
ANCHORAGE	35	1005.4	1010.4	11.1	4.4	7.8	- 1.1	14.4	16+	- 2.2	27	0	3	5.0	83	45	- 18	15	12	0	0	0	0.4	18	11.2	12	16	3	6	21	8.0	30
ANNETTE	34	1010.5	1014.5	15.0	8.3	11.7	- 0.6	20.6	21+	- 2.2	28	0	0	7.8	82	185	- 66	46	16	0	0	0	1.2	16	17.4	14	7	5	5	20	7.7	
BARROW	9	1012.5	1013.3	1.1	- 1.7	- 0.2	0.7	8.3	23	- 5.0	30+	0	28	- 1.1	94	4	- 12	1	7	0	51	25	0.1	2	13.4	24	28	0	1	29	9.6	
BARTER ISLAND	12			1.1	- 2.8	- 0.8	0.9	6.1	25+	-11.1	10	0	28			23	- 1	9	11	0	353	279			15.6	9	2	2	3	25	8.9	
BETHEL	38	1004.7	1010.4	10.6	2.8	6.7	- 0.3	15.0	14+	- 1.7	6	0	4	4.4	86	86	20	51	13	0	T	0	0.5	24	13.0	21	19	2	5	23	8.4	
BETTLES	196	986.8	1012.1	8.3	- 0.6	3.8		15.0	15	- 7.2	14	0	18	0.0	78	37		7	15	0	74	76	0.7	36	11.2	3	16	1	7	22	8.4	
BIG DELTA	386			10.6	1.1	5.8		16.1	16	- 5.0	28	0	8			40		12	13	0	T	T			17.9	21	16	1	11	18	7.8	
COLD BAY	29	1007.1	1010.9	10.0	3.9	6.9	- 1.7	15.0	29	- 0.6	10	0	1	5.0	86	98	- 12	33	19	0	0	0	1.5	20	19.7	16	22	0	5	25	9.2	
FAIRBANKS	133	993.9	1011.1	11.1	2.8	7.1	0.6	18.9	16	- 1.7	23+	0	7	0.6	66	62	34	16	12	1	89	51	0.5	31	13.0	21	17	5	7	18	7.3	
GULKANA	479			11.1	- 0.6	5.5		15.0	4	- 6.7	28+	0	19			46		21	14	0	T		1.3	17	11.2	17	16	4	10	16	7.0	
HOMER	20	1007.8	1010.4	12.2	3.3	7.7		15.6	1	- 1.7	25	0	4	5.0	84	40	- 30	13	14	0	0	0	0.2	35	13.0	7	15	3	8	19	7.9	
JUNEAU	4	1012.2	1013.1	12.8	5.6	8.9	- 0.4	16.1	25+	- 3.9	29	0	4	6.1	86	136	- 33	20	19	1	0	0	2.5	10	13.4	12	8+	3	2	25	8.7	21
KING SALMON	15	1007.5	1009.6	12.8	3.9	8.2	- 0.6	17.8	11	- 0.6	22	0	1	3.9	76	86	8	35	13	0	0	0	0.4	19	13.4	17	28	0	4	26	9.1	
KOTZEBUE	3	1009.8	1010.2	7.8	2.2	5.2	0.3	11.7	1	- 3.9	30	0	5	1.7	79	19	- 12	9	9	0	T	T	1.0	8	17.0	26	24	4	7	19	7.7	
MC GRATH	105	998.0	1010.7	11.7	2.8	7.1	0.5	16.1	13	- 2.8	13	0	8	3.9	85	41	- 25	24	14	0	0	0	0.4	23	9.4	18	16	2	7	21	8.1	
NOME	4	1008.5	1009.2	8.9	2.2	5.3	- 0.2	12.2	3+	- 5.0	13	0	7	1.1	75	50	- 18	13	10	0	T	0	0.5	12	16.5	23	24	2	6	22	8.2	38
ST. PAUL ISLAND	7	1008.8	1009.6	8.3	3.3	5.7	- 1.3	9.4	27+	- 1.7	16	0	5	4.4	92	67	- 11	16	19	0	0	0	0.4	23	17.9	17	22	1	6	23	8.5	
SHEMYA	37	1004.7	1008.5	9.4	6.7	7.8	- 1.2	10.6	11+	- 2.2	30+	0	0	5.6	88	105	48	40	19	0	0	0	1.9	29	17.9	4	26	2	6	22	8.3	
SUMMIT	732	924.5	1011.3	8.3	- 0.6	3.8		11.7	11+	- 6.7	28	0	20	0.6	80	73		13	17	1	208	51	0.7	4	10.3	23	16	2	4	24	8.4	
TALKEETNA	105			12.8	1.7	7.2	- 0.6	17.2	12	- 6.1	28	0	12			101	- 12	21	14	0	0	0			6.3	19	17+					
UNALAKLEET	5			9.4	3.3	6.2		15.6	15	- 2.8	13	0	6			51		17	16	0	0	0			16.5	22	24	5	2	23	8.1	
YAKUTAT	9	1010.5	1011.6	11.7	2.2	6.9	- 2.6	15.6	25	- 6.1	28	0	10	5.6	92	401	- 20	152	23	0	0	0	1.4	10	13.0	16	8+	4	2	24	8.2	
ARIZONA																																
FLAGSTAFF	2135	789.0	1015.4	20.6	2.8	11.7	- 3.1	27.2	13+	- 5.0	20	0	10	0.6	51	51	11	43	3	5	T	0	1.1	21	11.6	22	26	22	6	2	2.5	
PHOENIX	340	970.2	1008.0	37.2	22.2	29.8	1.6	43.3	12+	15.0	20	27	0	10.0	33	23	5	18	3	?	0	0	0.8	12	23.2Y	SE	1	24	5	1	1.7	90
TUCSON	788	923.1	1008.8	33.3	18.9	26.2	0.7	38.3	15+	12.8	23	18	0	12.2	47	44	19	17	5	5	0	0	1.7	17	18.8	W	18+	23	4	3	2.3	88
WINSLOW	1492	851.7	1012.6	29.4	10.6	20.0	1.5	35.6	6	0.0	19	11	1	2.8	36	44	21	30	6	4	0	0	1.4	21	17.4	22	29	19	9	2	2.6	
YUMA	59	1000.3	1007.3	37.2	22.8	29.8	0.3	45.6	12	13.9	28	26	0	12.2	39	32	23	32	1	1	0	0	0.5	17	11.6	NW	18	25	4	1	1.5	93
ARKANSAS																																
FORT SMITH	136	999.0	1015.5	30.0	17.8	23.8	- 0.1	35.6	14	6.1	20	16	0	17.8	74	34	- 58	11	8	5	0	0	0.6	9	8.0	N	5	10	11	9	5.5	64
LITTLE ROCK	78	1006.1	1015.6	31.1	18.3	24.7	1.2	35.6	14+	8.9	21	18	0	18.9	77	20	- 62	12	3	0	0	0	0.7	12	8.5	NE	16	10	11	9	5.5	80
CALIFORNIA																																
BAKERSFIELD	145	993.9	1011.2	31.7	17.8	24.8	0.1	40.0	16+	9.4	30+	17	0	10.0	44	1	- 2	1	1	0	0	0	1.3	33	10.3	13	18	26	3	1	1.0	
BISHOP	1252	872.0		30.6	7.8	19.2	- 0.9	38.9	13	- 1.7	26	12	3			T	- 5	T	1		0	0						25	5	0	1.4	
BLUE CANYON	1609			21.7	10.6	16.2	- 1.0	32.8	13	- 2.8	30	1	2			34	18	30	3		188	51			10.7	17	29	23	4	3	1.9	
EUREKA U	13			16.7	10.6	13.7	0.2	23.3	16	6.7	30	0	0			53	37	30	6		0	0			11.2	NW	30	11	8	11	5.2	64
FRESNO	100	999.7	1011.2	32.8	13.3	23.0	0.4	40.6	14	6.1	28	19	0	11.1	53	1	- 2	1	1	2	0	0	2.1	29	8.9	NW	30	27	2	1	0.9	95
LONG BEACH	8	1010.2	1011.5	30.0	18.9	24.5	2.7	42.2	12	11.1	29	9	0	16.1	67	T	- 2	T	0	0	0	0	1.1	24	8.0	28	6	17	10	3	3.5	
LOS ANGELES	30	1007.1	1010.8	25.0	18.3	21.6	1.3	32.8	12	12.8	29	2	0	16.1	75	T	- 4	T	0	0	0	0	2.3	25	11.6Y	N	30	18	9	3	3.4	
LOS ANGELES U	82			28.9	18.9	23.7	1.5	41.1	13	13.3	29	7	0			T	- 6	T	0		0	0			8.9	N	30	19	8	3	3.0	78
MT SHASTA R	1080	892.0	1015.3	22.8	5.6	14.3	- 2.1	30.6	13+	1.1	19	0	0	1.7	49	8	- 14	7	3		0	0	0.7	35								
OAKLAND	2	1012.9	1013.2	23.9	14.4	19.1	0.7	35.6	14	10.6	30	4	0	12.2	70	3	- 2	2	2	0	0	0	3.0	29	9.4	25	29	26	3	1	1.8	
RED BLUFF	104	999.0	1011.3	32.2	15.0	23.4	1.0	43.9	13	5.6	30	20	0	2.8	33	14	4	14	1	0	0	0	1.2	34	15.6	SE	29+	26	3	1	1.1	94
SACRAMENTO	5	1010.5	1011.4	31.7	13.3	22.3	0.3	40.6	13	6.1	30	17	0	8.9	50	T	- 5	T	0	0	0	0	1.3	23	11.6	SW	29	27	2	1	1.1	95
SANDBERG R	1377	861.8		26.1	14.4	20.1	- 0.6	35.0	15+	2.8	30	7	0			3	- 2	3	1		0	0			13.9	35	3	24	4	2	1.7	
SAN DIEGO	4	1010.2	1011.2	25.6	18.9	22.3	1.3	34.4	12	14.4	28	3	0	16.1	70	T	- 4	T	0	0	0	0	1.9	28	9.4	W	19	13	10	7	4.2	71
SAN FRANCISCO	2	1012.9	1013.4	25.0	13.3	19.0	1.3	39.4	14	10.6	30+	4	0	11.1	68	3	- 2	3	1	0	0	0	4.2	29	12.5	28	6	25	4	1	1.5	
SAN FRANCISCO U	16			22.2	13.9	18.2	1.5	38.3	14	11.7	30	3	0			6	0	5	2		0	0			11.2	W	6					86
SANTA MARIA	72			23.9	10.6	17.4	0.3	36.7	13	4.4	28	1	0			1	- 3	1	1		0	0						23	7	0	2.1	
STOCKTON	7	1011.2	1012.4	31.7	14.4	23.2	0.6	40.6	13	8.3	27	17	0	9.4	48	5	0	5	1	0	0	0	2.7	30	9.8	27	24+	25	4	1	1.2	
COLORADO																																
ALAMOSA	2297	773.8		21.7	1.7	11.5	- 1.7	28.3	7+	- 6.7	20	0	11			37	17	23	7		30	25						16	9	5	3.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm.	Mm.	M.p.s		M.p.s.							°.
COLORADO																																
COLORADO SPRINGS	1873	812.7	1015.1	20.6	6.7	13.7	- 2.7	32.2	7	- 3.9	19	1	4	1.1	49	35	7	21	10	0	246	203	0.8	8	17.4	1	7	19	5	6	3.3	
DENVER	1610	837.5	1014.0	22.8	5.6	14.2	- 3.1	34.4	7	- 6.7	19	3	3	3.3	56	72	44	35	10	2	437	330	1.0	13	15.6	NW	3	17	8	5	3.5	75
GRAND JUNCTION	1476	852.0	1012.7	26.1	8.9	17.3	- 2.6	34.4	13	- 1.1	19	8	2	1.1	38	15	- 8	9	5	1	0	0	1.2	17	17.4	NW	7	21	5	4	2.6	83
PUEBLO	1428	856.1	1013.5	25.6	7.8	16.8	- 2.4	37.2	7	- 1.7	19	9	2	2.2	45	30	9	25	7	2	191	T	0.8	4	25.9	NE	7	19	5	6	3.5	85
CONNECTICUT																																
BRIDGEPORT	2	1019.6	1020.2	23.9	17.2	20.6	1.9	30.0	9	7.2	25	0	0	16.1	78	145	45	84	7	2	0	0	0.7	14	12.5	33	24	5	10	15	6.8	
HARTFORD	52	1013.2	1019.6	25.0	14.4	19.8	2.4	32.8	9	2.8	25	3	0	14.4	74	108	15	57	11	4	0	0	0.3	29	10.7	NW	16	3	8	19	7.5	46
DELAWARE																																
WILMINGTON	23	1016.3	1019.2	25.6	17.8	21.7	1.9	31.1	9	6.7	25	0	0	17.8	79	178	77	82	10	4	0	0	0.7	12	9.4	1	24	6	8	16	6.8	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	88	1007.1	1018.9	26.1	16.1	20.9		31.7	9+	6.1	25	0	0	17.2	83	92		30	8	3	0	0	0.5	16	7.2	1	30+	6	8	16	6.9	
WASHINGTON NATIONAL	3	1016.6	1018.9	27.2	18.9	22.8	1.8	32.2	10+	11.1	25	3	0	17.2	74	63	- 34	29	7	3	0	0	0.8	17	10.3	NW	21	7	10	13	6.5	61
FLORIDA																																
APALACHICOLA U	4			30.0	23.3	26.6	0.5	31.7	21+	19.4	29	0	0			126	- 91	42	14	7	0	0			11.6	E	8	9	12	9	5.4	69
DAYTONA BEACH	9	1014.6	1016.0	30.6	22.2	26.4	0.2	32.2	11	18.3	15	1	0	21.1	76	183	5	82	15	4	0	0	1.7	6	10.3	4	28+	2	19	9	6.5	
FORT MYERS	5	1014.6	1015.0	30.6	22.8	26.7	- 0.7	32.8	30+	22.2	22+	7	0	22.2	80	234	18	60	13	12	0	0	1.4	8	10.3	1	10	8	11	11	6.3	
JACKSONVILLE	8	1015.2	1016.4	31.1	21.1	26.1	- 0.3	33.3	18	16.1	30	6	0	21.7	82	106	- 86	46	11	6	0	0	1.1	6	14.3	NW	11	9	12	9	5.4	70
KEY WEST	1	1013.5	1014.2	30.6	25.6	28.2	0.2	31.7	19+	22.8	22	0	0	22.8	74	139	- 32	43	16	9	0	0	2.3	12	14.8	SW	6	3	13	14	6.9	75
LAKELAND U	65			30.6	22.2	26.3	- 0.4	33.3	18	20.6	30+	6	0			73	- 94	24	12		0	0						10	15	5	5.0	69
MIAMI	2	1014.6	1014.7	30.0	23.9	27.1	- 0.3	31.7	11	22.8	29+	0	0	22.8	81	245	4	77	19	10	0	0	1.8	5	16.5	19	12	2	13	15	7.2	
ORLANDO	33	1011.2	1015.7	32.2	23.3	27.7	1.0	34.4	17	20.6	15	20	0	21.7	74	76	-108	38	13	6	0	0	1.1	7	13.9	26	11	6	14	10	6.1	
PENSACOLA	34	1011.5	1015.4	30.0	22.2	26.1	0.4	31.7	21+	17.2	14	0	0	21.1	78	125	- 71	59	10	7	0	0	1.4	10	10.3	21	5	4	13	13	6.7	
TALLAHASSEE	17	1013.5	1015.8	32.2	20.0	25.8	0.2	33.9	21	12.2	30+	17	0	20.0	75	40	-100	18	10	10	0	0	1.5	7	8.0	15	8	7	14	9	5.4	
TAMPA	6	1014.9	1015.2	31.1	22.2	26.8	- 0.1	33.9	25+	18.9	30	16	0	21.1	76	258	83	111	11	12	0	0	1.3	9	11.2	34	12	7	11	12	6.4	52
WEST PALM BEACH	5	1014.2	1015.0	31.1	23.3	27.3	- 0.6	33.3	25+	21.1	21+	10	0	22.2	77	158	- 87	35	17	6	0	0	1.5	8	10.3	21	12+	0	15	15	7.6	
GEORGIA																																
ATHENS	244	988.8	1017.4	28.3	18.3	23.5	0.4	32.2	30+	14.4	14	2	0	18.9	81	70	- 7	35	6	2	0	0	1.1	4	7.6	31	13	5	16	9	6.2	
ATLANTA	308	980.7	1016.9	27.8	18.3	23.2	0.3	30.6	30+	13.9	14	0	0	18.3	79	84	2	71	5	1	0	0	1.3	8	9.8	NW	11	6	15	9	5.9	56
AUGUSTA	41	1011.5	1016.8	30.6	18.3	24.4	0.4	32.2	21+	12.8	14	4	0	19.4	81	64	- 13	43	8	4	0	0	0.8	3	9.4	24	17	7	13	10	5.9	
COLUMBUS	117	1002.7		30.6	20.6	25.6	1.1	32.8	10	15.0	14	6	0	20.0	75	126	56	108	8	2	0	0	1.5	6	7.6	10	22+	9	11	10	5.6	
MACON	108	1004.7	1017.5	32.2	20.6	26.3	1.6	34.4	15+	14.4	14	19	0	20.0	74	35	- 36	21	6	4	0	0	1.3	5	7.6	NE	29+	6	12	12	6.1	58
ROME	194			29.4	18.3	23.8	1.3	34.4	10	11.7	14	5	0			56	- 27	38	7		0	0										
SAVANNAH	14	1014.9	1016.6	31.1	21.1	25.9	1.1	32.8	15	16.1	30+	5	0	20.6	76	42	- 91	17	10	1	0	0	1.4	5	11.6	SW	11	8	12	10	5.5	70
HAWAII																																
HILO	8	1015.2	1016.3	29.4	20.0	24.8	0.6	32.2	14	18.3	27+	1	0	20.0	79	219	3	57	25	0	0	0	0.4	17	8.0	SE	20	6	8	16	6.8	51
HONOLULU	2	1015.6	1016.0	30.6	22.2	26.2	- 0.1	31.7	7+	20.0	14	0	0	18.9	68	26	1	12	16	0	0	0	4.7	5	11.6	NE	3	4	16	10	6.1	74
KAHULUI	15	1013.2	1015.4	31.7	20.0	25.8	0.1	33.3	18	17.8	16+	8	0	19.4	71	6	0	4	5	0	0	0	5.0	5	14.3	E	20	11	7	12	5.6	71
LIHUE	31	1012.2	1017.2	29.4	23.9	26.7	1.1	30.6	23+	21.1	15	0	0	21.1	73	68	15	23	18	0	0	0	4.3	6	10.7	NE	30	4	20	6	5.8	58
IDAHO																																
BOISE	865	915.3	1015.0	22.8	7.8	15.1	- 1.9	33.9	5	1.1	16	2	0	0.0	41	16	6	6	5	1	0	0	0.1	19	12.5	W	28	18	6	6	3.5	82
LEWISTON	431			22.2	7.2	14.8	- 2.7	32.8	10	1.7	30	1	0			40	17	18	8		0	0			13.9Y		13	16	4	10	4.1	
POCATELLO	1358	863.2	1015.4	20.0	2.8	11.5	- 4.2	31.1	10	- 5.0	18	0	7	- 0.6	48	52	37	22	6	0	T	0	1.7	23	14.3	S	6	15	9	6	4.0	79
ILLINOIS																																
CAIRO U	96			28.3	18.9	23.5	1.0	32.8	14	11.1	21	2	0			23	- 53	8	6		0	0			9.4	SW	28+	11	12	7	4.8	60
CHICAGO O HARE	201	992.2	1016.3	26.1	15.6	20.9	3.4	34.4	8	5.0	24	6	0	14.4	69	61	- 9	24	7	4	0	0	1.3	18	15.2	19	28	5	14	11	6.6	
CHICAGO MIDWAY	185	994.6	1016.8	26.1	16.1	21.3	2.4	35.0	8	6.7	24	8	0	15.0	69	88	19	49	9	4	0	0	1.6	17	13.0	SW	5	6	15	9	6.1	59
MOLINE	177	995.3	1016.6	26.7	13.9	20.4	1.9	35.0	8	2.8	24	8	0	13.3	69	115	33	115	7	2	0	0	1.1	19	13.0	SW	28	12	10	8	4.7	74
PEORIA	199	992.9	1016.6	26.7	14.4	20.5	1.4	33.9	14+	2.8	24	6	0	14.4	72	78	1	31	9	9	0	0	1.3	17	9.8	NW	14+	12	9	9	5.4	65
ROCKFORD	221	989.8	1016.4	26.1	13.9	20.1	2.4	33.3	30+	2.2	24	8	0	13.3	70	60	- 29	36	6	4	0	0	0.9	18	17.9	20	4	7	14	9	5.6	
SPRINGFIELD	179	994.2	1016.2	27.8	15.6	21.8	2.0	35.0	14+	4.4	24	12	0	15.0	70	96	21	28	12	7	0	0	1.5	16	10.7	SE	5	12	10	8	5.2	70
INDIANA																																
EVANSVILLE	116	1003.4	1017.3	27.8	17.2	22.6	1.4	32.8	9+	6.7	21	7	0	17.2	75	114	41	53	11	4	0	0	0.4	14	8.5	N	11	7	13	10	6.0	64

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 32.2 °C or above	Temperature: No of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb	C	C.	C.	C	C		C				C.	%	Mm	Mm.	Mm			Mm	Mm	M.p.s.		M.p.s							%
INDIANA																																
FORT WAYNE	241	988.8	1018.5	25.0	14.4	19.7	1.4	31.7	8	3.9	24	0	0	15.6	80	105	37	38	11	6	0	0	0.5	20	9.8	W	23+	4	13	13	7.0	51
INDIANAPOLIS	241	988.5	1017.5	26.1	15.6	20.8	1.6	31.7	30+	5.0	21	0	0	16.1	77	79	- 4	36	10	3	0	0	0.4	15	12.1	N	11	6	11	13	6.5	58
SOUTH BEND	236	989.5	1017.4	23.9	15.0	19.5	1.8	31.1	8	4.4	24	0	0	15.6	80	131	53	44	11	6	0	0	1.3	18	10.3	19	28	4	10	16	7.1	
IOWA																																
BURLINGTON	211			26.7	14.4	20.5	1.6	33.9	8+	5.0	20	7	0	14.4	70	97	15	42	7	4	0	0	1.3	19	10.3	21	28+	11	11	8	5.0	
DES MOINES	286	981.0	1015.5	26.1	13.9	20.1	1.5	35.0	2	3.9	20	5	0	12.2	64	56	- 18	37	5	2	0	0	1.3	19	14.3	S	30	13	5	12	5.2	68
DUBUQUE	322	977.7		23.9	12.8	18.3	1.8	31.7	8+	2.2	24	0	0			101	6	38	7		0	0						10	7	13	5.7	
SIOUX CITY	334	975.3	1014.9	26.1	10.6	18.3	- 0.3	38.3	7	0.0	23+	5	2	10.0	61	15	- 54	9	6	0	0	0	0.8	17	15.6	S	30	11	5	14	5.4	65
WATERLOO	265	984.4	1015.9	24.4	10.6	17.4	0.3	33.9	2	- 0.6	20	2	1	11.7	73	65	- 31	28	7	4	0	0	1.2	18	12.5	20	4	12	3	15	5.4	
KANSAS																																
CONCORDIA	448	961.7	1014.0	27.2	12.8	20.1	- 0.8	38.3	7	2.8	23+	11	0	11.1	60	19	- 51	11	6	2	0	0	2.2	18	16.1	S	30	15	7	8	4.3	75
DODGE CITY	787	924.1	1013.6	27.2	13.3	20.1	- 1.2	38.9	7	3.3	19	11	0	8.3	54	37	- 2	22	5	0	0	0	1.7	17	18.8	SW	30	15	6	9	4.1	74
GOODLAND	1114	888.3	1013.7	25.0	8.3	16.6	- 2.1	38.9	7	0.0	19	8	1	5.0	55	35	4	22	6	1	T	T	1.2	21	17.9	36	7	16	7	7	3.8	
TOPEKA	267	983.7	1015.0	28.9	15.0	22.0	1.2	37.2	10+	4.4	20	14	0	12.8	61	34	- 41	14	5	2	0	0	1.5	18	14.3	SW	27	14	5	11	5.0	66
WICHITA	403	967.5	1014.4	27.8	15.6	21.6	- 0.3	37.8	7	5.0	20	10	0	13.3	64	44	- 38	21	6	2	0	0	1.8	17	15.6	S	30+	12	7	11	4.9	61
KENTUCKY																																
COVINGTON	265	986.8	1017.9	26.1	16.7	21.3	1.7	31.7	1	7.2	21	0	0	16.7	78	167	95	40	12	6	0	0	0.6	14	13.0	30	20	3	11	16	7.0	
LEXINGTON	294	983.1	1018.0	27.8	17.2	22.5	1.8	32.8	10+	10.0	22	7	0	16.7	75	89	18	50	10	6	0	0	0.6	16	9.8	18	20	5	9	16	7.2	
LOUISVILLE	145	1000.0	1017.4	27.2	17.8	22.3	1.5	31.7	30+	9.4	21	0	0	17.2	76	120	53	44	8	4	0	0	0.4	13	12.1	S	28	6	11	13	6.5	52
LOUISIANA																																
ALEXANDRIA	28	1011.2	1015.4	30.0	20.0	24.8	- 0.2	33.3	7	15.6	17	7	0	21.1	87	190	110	57	16	10	0	0	1.2	7	9.8	36	16	5	11	14	6.4	
BATON ROUGE	20	1011.9	1014.4	30.6	21.7	25.9	0.4	33.3	3	17.8	17	9	0	21.7	82	278	188	109	16	9	0	0	2.0	9	17.9	17	16	5	6	19	7.4	
LAKE CHARLES	3	1012.9	1013.9	31.7	22.2	26.7	0.8	35.0	5	17.2	20	16	0	22.2	82	137	35	76	14	8	0	0	2.5	7	17.9	36	16	3	11	16	7.2	
NEW ORLEANS	1	1013.5	1014.5	30.0	22.2	26.1	0.3	32.8	24	16.1	14	2	0	22.2	82	425	297	165	15	9	0	0	1.7	7	14.3	22	16	5	8	17	7.1	
SHREVEPORT	77	1005.4	1014.7	31.1	20.0	25.6	- 0.4	35.0	14+	14.4	21+	19	0	19.4	73	33	- 25	10	7	3	0	0	1.6	10	12.5	9	15	7	10	13	6.2	61
MAINE																																
CARIBOU	190	995.3		19.4	7.8	13.4	1.3	27.2	8	- 4.4	27	0	3			67	- 23	22	13		0	0						5	8	17	7.1	
PORTLAND	13	1017.3	1019.6	21.7	10.6	16.3	1.4	32.2	5	1.7	26	1	0	12.2	78	90	1	36	9	1	0	0	0.6	25	16.1	E	17	9	7	14	6.2	61
MARYLAND																																
BALTIMORE	45	1013.9	1019.5	26.1	17.2	21.6	1.6	31.1	9	8.9	25	0	0	17.2	78	141	56	87	7	3	0	0	0.4	15	8.0	W	17	8	8	14	6.5	47
MASSACHUSETTS																																
BLUE HILL OBS R	192			23.3	14.4	18.7	1.8	32.2	5	5.6	25	1	0			42	- 59	21	9		0	0			13.9	NW	24					51
BOSTON	5	1018.6	1019.6	23.9	16.1	20.0	1.6	33.3	5	9.4	25	3	0	14.4	74	39	- 49	24	7	1	0	0	0.4	29	11.2	NW	9	6	11	13	6.2	59
WORCESTER	301	984.1	1021.0	21.7	13.3	17.4	1.4	30.0	5	4.4	25	0	0	12.8	76	107	8	79	4	0	0	0	0.8	28	10.7	30	21	5	9	16	6.9	
MICHIGAN																																
ALPENA	210			21.7	10.0	15.7	2.3	30.6	5	- 0.6	25	0	1	11.1	77	25	- 66	14	11	4	0	0	0.8	22	8.0	SW	8+	2	12	16	7.3	53
DETROIT	189			23.9	15.0	19.6	1.2	33.9	8	5.6	24	1	0	14.4	72	38	- 24	11	5	3	0		0.4	19	16.1	14	9					
DETROIT METRO	193	993.6	1017.6	25.0	13.9	19.2	1.8	34.4	8	2.2	24	1	0	13.3	74	69	10	28	9	3	0	0	0.2	15	13.4	SW	4	5	9	16	7.0	55
FLINT	235	989.8	1017.5	23.3	13.3	18.2	1.6	32.2	8+	2.8	24	2	0	12.8	74	53	- 21	22	9	3	0	0	1.0	21	10.3	32	23+	3	8	19	7.6	
GRAND RAPIDS	239	988.5	1017.5	23.9	13.3	18.7	1.9	32.2	8+	1.7	24	2	0	13.3	74	160	84	43	12	6	0	0	1.1	17	11.2	NW	23	3	11	16	7.4	48
HOUGHTON LAKE	35	976.0	1017.8	21.7	10.0	16.0	1.9	29.4	5	- 0.6	25+	0	2	12.2	80	30	- 44	9	12	8	0	0	0.8	18	8.9	24	4	3	9	18	7.5	
LANSING	256	986.5	1017.8	23.3	12.8	17.9	1.3	32.8	8	1.7	24	2	0	14.4	82	133	67	49	14	3	0	0	1.1	19	12.5	W	5	4	8	18	7.4	53
MARQUETTE C	206			20.6	12.2	16.2	1.9	32.8	3	5.6	22	1	0			97	13	33	13		0	0			11.6	SW	30+	6	10	14	6.6	50
MUSKEGON	191	994.6	1017.3	23.3	12.8	18.1	0.9	29.4	9+	2.8	25	0	0	13.3	77	45	- 33	17	10	6	0	0	1.3	18	11.2	18	28	5	12	13	6.6	
SAULT STE MARIE	220	990.2	1016.8	19.4	8.3	14.0	0.9	27.8	5+	0.6	24	0	0	11.1	85	102	6	24	13	6	0	0	0.3	17	13.9	W	23	2	9	19	7.9	46
MINNESOTA																																
DULUTH	435	964.1	1015.3	19.4	8.3	14.1	1.7	30.6	2	- 1.1	24+	0	4	9.4	76	68	- 5	27	12	7	0	0	0.9	20	13.0	W	28+	7	8	15	6.6	61
INTERNATIONAL FALLS	359	970.5	1013.7	20.0	6.7	13.1	1.5	33.3	2	- 4.4	22	1	5	8.9	80	133	59	60	15	7	0	0	1.6	20	13.0	32	30	4	10	16	7.0	
MINNEAPOLIS	254	984.8	1015.2	22.8	11.1	17.1	1.3	34.4	2	1.1	23	3	0	10.0	67	69	8	23	10	6	0	0	1.2	19	15.2	SW	30	11	8	11	5.7	64
ROCHESTER	395	968.5	1015.9	22.8	10.6	16.7	0.7	33.9	7	2.2	23+	2	0	11.7	75	100	21	56	9	4	0	0	2.1	19	13.9	19	30	11	5	14	5.7	
ST CLOUD	315	977.3	1015.3	21.1	9.4	15.3	0.4	32.2	2	0.0	19	1	1			79	18	32	7		0	0						9	10	11	5.5	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C	C.	C.	C.	C		C.				C	%	Mm.	Mm.	Mm.			Mm.	Mm	M.p.s.		M.p.s							%
MISSISSIPPI																																
JACKSON	94	1004.1	1015.7	31.1	20.0	25.7	1.0	33.9	3	15.0	13	18	0	21.7	85	152	88	119	11	7	0	0	1.3	11	14.8	NE	16	5	12	13	6.5	59
MERIDIAN	88	1005.1	1016.1	30.6	19.4	25.0	0.6	33.3	2	15.0	14	10	0	20.0	78	182	98	87	13	8	0	0	0.9	7	8.0	8	16	6	7	17	6.8	
MISSOURI																																
COLUMBIA REGIONAL	270	984.4	1016.4	27.8	16.1	21.8	1.1	38.3	14	6.7	21	13	0	13.9	66	67	- 31	24	8	6	0	0	1.4	17	12.1	W	5	9	10	11	5.6	65
KANSAS CITY	226	988.2	1014.8	28.3	16.7	22.6	0.7	36.1	8	7.2	20	12	0	13.9	62	69	- 14	29	5	1	0	0	1.3	18	15.6	SW	4	13	8	9	4.8	73
ST JOSEPH	247			27.8	12.2	19.8	- 0.6	35.0	8+	0.6	20	11	0	12.2	67	41	- 47		5		0		0.8	18	12.5	25	8	16	4	10	4.6	
ST LOUIS	163	996.3	1016.4	28.3	16.7	22.5	1.7	37.8	14	6.7	21	13	0	16.7	75	101	31	29	11	4	0	0	1.1	17	12.5	S	6	9	11	10	5.6	75
SPRINGFIELD	386	971.2	1016.1	28.3	15.6	22.0	0.7	36.7	14	3.9	20	11	0	15.0	70	129	31	51	9	5	0	0	1.8	16	17.9	NW	5	14	8	8	4.8	67
MONTANA																																
BILLINGS	1087	891.3	1015.0	20.0	6.1	13.1	- 2.7	34.4	11	- 2.2	18	1	2	2.2	55	46	15	18	11	0	T	0	1.8	27	18.8	NW	11	10	10	10	5.2	67
GLASGOW	696	933.0	1014.3	21.1	6.1	13.6	- 0.1	34.4	6	- 1.1	18	2	2	2.2	51	12	- 12	5	8	2	0	0	1.5	32	20.6	30	11	9	12	9	5.8	
GREAT FALLS	1116	888.6	1015.4	19.4	6.1	12.6	- 1.5	31.1	6	- 1.1	22+	0	3	1.1	51	15	- 15	8	7	1	T	T	3.4	24	17.0	SW	11	9	7	14	5.9	66
HAVRE	788	922.8	1014.5	20.6	4.4	12.6	- 0.6	32.8	6	- 3.3	21	1	4	0.6	50	4	- 22	3	3	0	T	0	2.4	27	23.2	W	11	6	13	11	6.0	78
HELENA	1167	881.8	1017.4	17.2	2.2	9.8	- 3.5	27.8	10	- 5.6	21	0	7	0.0	57	23	- 2	7	11	1	T	0	1.7	29	15.6	NW	19	11	5	14	5.6	74
KALISPELL	904	912.3	1017.5	18.3	1.1	9.5	- 3.1	27.8	10	- 5.6	30+	0	13	1.1	63	12	- 15	8	7	0	0	0	0.5	20	11.2	3	15	11	4	15	5.9	
MILES CITY	801	921.4	1013.9	21.1	7.2	14.4	- 1.7	36.7	11	- 1.1	18	2	1	3.9	55	26	1		8	0	0		1.6	31								
MISSOULA	972	905.5	1017.8	20.0	2.2	11.1	- 1.9	31.7	10	- 5.0	21	0	10	1.7	58	8	- 18	6	4	0	T	0	1.1	31	12.5	SW	13	12	5	13	5.1	69
NEBRASKA																																
GRAND ISLAND	561	948.9	1014.3	25.6	10.0	18.0	- 0.4	38.3	7	0.6	23	8	0	8.3	57	34	- 20	14	8	2	0	0	1.2	20	14.3	18	30	13	6	11	5.1	
LINCOLN U	351			26.7	13.3	20.1	- 0.1	37.8	7	3.9	24	8	0			24	- 49	10	10		0				18.3	SE	30	14	3	13	5.2	63
NORFOLK	471			25.0	9.4	17.3	- 1.0	38.3	7	- 1.1	19	5	2			22	- 36	10	7		0	0						12	5	13	5.3	
NORTH PLATTE	846	917.7	1014.9	24.4	6.7	15.4	- 2.2	37.8	7	- 3.3	23+	6	4	6.7	63	51	9	31	7	0	0	0	0.3	5	14.3	N	15+	14	7	9	4.6	67
OMAHA	298	979.3	1014.4	27.8	12.2	19.9	0.5	37.8	7	1.7	23	11	0	10.6	59	14	- 52	11	7	2	0	0	1.0	20	15.6	SE	30	12	6	12	5.1	61
SCOTTSBLUFF	1206	879.8	1014.6	22.8	6.7	14.7	- 2.2	35.0	13	- 1.7	19	4	1	5.0	61	53	22	15	11	2	T	T	0.5	1	13.0	2	13	15	6	9	4.4	
VALENTINE	789			23.3	8.3	15.7	- 0.9	36.7	2	- 1.7	19	5	1			25	- 7	11	6		0	0			25.0	N	13	14	4	12	4.9	65
NEVADA																																
ELKO	1539	844.9	1015.1	22.2	1.1	11.8	- 2.6	31.1	13+	- 6.1	28	0	12	- 4.4	38	19	10	10	3	1	T	0	0.8	29	10.3	30	25+	20	7	3	2.5	
ELY	1906	809.3	1013.4	22.2	0.6	11.4	- 2.8	30.6	13+	- 8.9	28	0	16	- 5.0	36	10	- 4	5	3	2	56	25	1.9	20	14.8	SE	29	23	6	1	1.7	91
LAS VEGAS	659	935.3	1010.2	33.3	17.2	25.3	+ 1.3	41.7	12	8.3	30	18	0	- 1.7	18	0	- 9	0	0	0	0	0	0.9	20	24.1	Nw	30	25	4	1	1.2	97
RENO	1342	865.6	1014.1	25.6	1.7	13.6	- 1.3	35.6	13	- 5.0	19	5	11	- 2.8	36	3	- 3	3	1	0	T	T	0.7	28	16.5	W	29	25	4	1	1.3	95
WINNEMUCCA	1311	868.9	1015.1	24.4	1.1	12.8	- 2.0	36.1	13	- 7.8	19	6	14	- 5.0	33	9	1	6	5	0	5	0	0.6	31	12.5	W	26+	22	2	6	2.5	86
NEW HAMPSHIRE																																
CONCORD	104	1007.5	1020.0	22.8	10.0	16.2	1.0	31.1	4	- 2.8	25	0	1	12.8	82	49	- 47	28	7	2	0	0	0.1	27	13.0	W	17	5	9	16	6.7	50
MT WASHINGTON OBS	1909			10.0	4.4	7.3	2.3	15.6	16	- 5.6	25	0	7			158	- 19	48	8	0	0	0			38.9Y	W	24	2	5	23	8.4	29
NEW JERSEY																																
ATLANTIC CITY	20	1017.3	1019.6	23.9	15.6	19.7	0.2	29.4	6+	5.0	25	0	0	17.8	89	112	27	66	8	1	0	0	1.1	14	8.9	15	13+	7	6	17	7.0	50
ATLANTIC CITY U	3			22.2	17.2	19.9	- 0.3	27.2	10	8.3	25	0	0			139	53	65	6						10.3	NW	21+					
NEWARK	2	1018.6	1019.6	25.6	18.9	22.1	2.5	33.3	9	8.9	25	2	0	16.1	71	200	105	134	10	6	0	0	0.2	11	10.3	33	24	5	7	18	7.3	
TRENTON U	17			24.4	17.2	21.1	1.6	32.2	9	7.8	25	1	0			142	53	73	8		0	0			14.3	NE	11	4	10	16	7.2	43
NEW MEXICO																																
ALBUQUERQUE	1619	838.5	1012.5	27.2	11.1	19.1	- 2.0	34.4	14+	2.8	19+	11	0	2.8	42	37	12	14	8	3	T	0	1.0	12	22.4	E	16	18	8	4	2.9	79
CLAYTON	1515			23.9	9.4	16.4	- 2.4	33.3	7	0.0	18+	4	2			22	- 20	11	5		28	T						17	5	8	3.7	
ROSWELL	1101			28.9	12.8	20.7	- 0.2	35.0	14+	0.6	20	15	0			40	- 6	31	7		0	0			11.6	SE	14					70
NEW YORK																																
ALBANY	84	1009.1	1019.7	23.9	12.8	18.2	1.8	30.0	9+	4.4	25+	0	0	14.4	81	61	- 30	26	8	3	0	0	1.0	18	9.8	W	24+	3	9	18	7.5	42
BINGHAMTON	485	961.7	1020.4	21.1	12.8	17.1	1.8	29.4	6	2.8	25	0	0	14.4	87	42	- 33	12	11	4	0	0	1.3	17	10.3	S	20	2	12	16	7.5	38
BUFFALO	215	992.9	1018.4	23.3	13.9	18.6	2.2	30.0	6	5.6	25	0	0	14.4	79	48	- 32	20	8	0	0	0	0.9	20	13.4	W	20	3	10	17	7.2	50
NEW YORK U	40	1017.3	1019.3	25.0	18.9	22.0	1.7	32.8	9	9.4	25	2	0	16.7	75	187	89	102	11	2	0	0	0.4	9	9.8	SE	29					40
NEW YORK KENNEDY	4	1019.0	1019.8	25.6	18.9	22.1	2.2	32.2	6+	10.6	25	2	0	16.7	73	94	- 11	45	7	2	0	0	1.2	15	9.4	17	12	5	10	15	7.0	
NEW YORK LA GUARDIA	3	1019.0	1020.0	24.4	18.9	21.6	1.2	32.8	9	10.0	25	1	0	16.7	74	125	26	61	6	4	0	0	0.9	13	11.2	NW	24	6	8	16	7.1	
ROCHESTER	167	998.3	1018.3	25.0	13.9	19.7	2.8	33.9	6	5.0	25	3	0	16.1	82	45	- 19	13	8	1	0	0	0.8	20	12.5	W	23	5	10	15	6.9	43
SYRACUSE	125	1004.1	1018.7	23.9	13.3	18.7	1.8	31.7	6	6.1	24+	0	0	15.0	81	65	- 7	41	10	3	0	0	0.5	17	13.4	W	23	5	12	13	6.8	44

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	No. of days: Max 32.2 °C or above	No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days .25 mm or more	Precipitation: No. of days With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb.	C	C.	C.	C	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm	M.p.s.		M.p.s.							%
NORTH CAROLINA																																
ASHEVILLE	652	943.4	1018.8	26.1	15.6	20.8	2.0	31.1	15	10.6	15	0	0	17.2	88	97	5	31	14	3	0	0	0.2	2	9.4	33	30	1	11	18	7.7	57
CAPE HATTERAS R	2	1016.6	1017.1	27.8	20.6	24.2	0.8	30.0	20+	17.2	16	0	0	20.6	80	218	69	134	11	3	0	0	3.1	8	19.7	12	30	8	12	10	5.6	55
CHARLOTTE	224	990.9	1017.8	27.8	17.8	22.8	0.1	31.7	6	13.9	26+	0	0	18.3	79	68	- 21	29	13	4	0	0	1.2	5	11.2	SE	18	4	10	16	7.2	66
GREENSBORO	273	987.1	1018.4	26.7	16.7	21.7	0.5	31.1	9+	12.2	15	0	0	17.8	94	64	- 29	26	7	3	0	0	0.9	4	11.2	N	30	2	9	19	7.5	58
RALEIGH	132	1002.4	1018.2	27.2	17.2	22.2	0.4	30.6	10+	11.7	25	0	0	18.3	85	74	- 24	48	6	4	0	0	1.4	5	14.3	34	30	3	14	13	6.7	53
WILMINGTON	9	1015.6	1017.0	28.9	19.4	24.1	0.1	31.7	15	13.3	26	0	0	20.6	85	128	- 32	34	11	6	0	0	1.6	3	14.3	NW	30	8	11	11	5.7	61
NORTH DAKOTA																																
BISMARCK	502	953.6	1013.2	20.6	6.7	13.8	- 1.1	37.8	2	- 3.9	22	1	1	7.2	69	41	11	22	8	2	0	0	0.9	30	19.2	NW	7	8	6	16	6.3	65
FARGO	273	980.7	1013.5	21.1	8.3	14.7	- 0.2	35.0	2	- 2.8	18	2	2	9.4	74	109	72	58	8	3	0	0	1.2	20	13.0	NW	7	7	10	13	6.2	77
WILLISTON	579	944.8	1013.2	20.0	6.7	13.3	- 0.7	31.7	11+	- 1.1	18	0	1	5.0	63	63	35	57	10	5	T	T	1.8	30	18.8	NW	11	10	4	16	6.3	58
OHIO																																
AKRON	368	973.9	1018.2	24.4	13.9	19.3	1.6	30.6	10+	5.6	25	0	0	15.0	81	78	11	46	10	2	0	0	0.3	20	10.3	32	13	5	7	18	7.1	
CINCINNATI ABBE OB	232			26.1	16.7	21.4	0.8	32.2	10	7.8	24+	1	0			220	152	89	11		0	0			7.6	NW	20					56
CLEVELAND	237	989.8	1018.6	25.0	15.0	19.8	1.9	32.8	8	4.4	25	3	0	15.0	77	108	35	51	9	4	0	0	0.3	18	10.7	S	20	7	7	16	6.8	48
COLUMBUS	247	988.5	1018.2	25.0	15.0	19.9	1.1	30.6	29+	5.6	24+	0	0	15.0	78	78	11	25	8	4	0	0	0.5	13	11.6	NW	20	4	9	17	7.1	52
DAYTON	305	982.1	1017.9	24.4	15.6	20.1	0.8	30.0	30+	6.1	24+	0	0	16.1	80	96	30	31	8	4	0	0	0.7	15	9.8	S	20	8	9	13	6.3	56
MANSFIELD	395			25.0	15.0	19.9	2.5	31.7	8+	6.1	25+	0	0	15.6	82	61	- 14	32	9	4	0	0	0.8	21	10.3	30	20	5	11	14	6.8	
TOLEDO	204	992.6	1017.6	25.6	13.3	19.3	1.9	32.8	8	0.6	24	2	0	14.4	77	47	- 7	21	7	4	0	0	0.4	21	10.7	NW	23+	6	8	16	6.8	48
YOUNGSTOWN	359	976.0	1018.6	23.9	13.9	18.9	1.9	31.1	8	2.2	25	0	0	15.0	82	70	- 4	33	14	4	0	0	0.4	14	8.9	25	20	5	8	17	7.2	
OKLAHOMA																																
OKLAHOMA CITY	392	968.8	1014.6	29.4	16.7	22.9	- 0.3	38.3	7+	5.0	20	14	0	15.0	67	108	31	58	7	4	0	0	1.7	16	14.3	N	17	15	10	5	4.2	70
TULSA	198	990.9	1015.0	28.3	17.2	22.8	- 0.4	35.0	14	5.6	20	12	0	17.2	75	478	376	153	12	8	0	0	2.0	18	20.6	NE	6	11	11	8	4.9	64
OREGON																																
ASTORIA	2	1015.6	1016.4	20.0	8.9	14.4	- 0.1	26.7	22	2.8	30	0	0	10.0	79	118	39	29	13	2	0	0	0.6	17	11.6	29	1	12	3	15	5.7	
BURNS U	1265	873.7	1016.4	20.0	2.2	11.1	- 3.8	30.0	10	- 5.0	27	0	9	0.6	52	14	2	9	6		5	T	1.3	31				18	3	9	3.5	
EUGENE	109	1002.7	1016.3	23.3	7.2	15.1	- 1.3	30.0	19	2.2	19	0	0	7.8	69	77	45	25	11	0	T	0	0.6	29	12.1	1	16+	16	5	9	4.4	
MEACHAM	1234	877.8	1017.0	15.6	4.4	9.7	- 3.4	26.7	10	- 1.1	29	0	4			82	45	28	8		69	T			7.2	2	16+	16	1	13	4.6	
MEDFORD	396	967.8	1015.1	26.1	7.8	17.0	- 0.9	34.4	16	3.3	19	6	0	4.4	52	31	16	20	6	0	0	0	0.6	31	9.8	16	18	21	1	8	2.9	
PENDLETON	452	963.1	1016.7	22.2	7.8	15.1	- 2.8	29.4	10	2.2	30	0	0	3.9	52	26	10	20	5	1	0	0	1.0	27	13.0	2	20	14	5	11	4.6	
PORTLAND	6	1014.9	1016.2	22.2	10.0	16.0	- 0.8	27.8	22	4.4	30	0	0	7.8	64	90	48	38	12	1	0	0	0.3	16	15.6	E	17+	13	6	11	4.9	65
SALEM	60	1008.8	1016.3	22.2	7.8	15.1	- 1.9	29.4	22+	2.2	30	0	0	8.3	69	101	66	36	10	0	0	0	0.2	19	10.7	21	1	16	5	9	4.5	
SEXTON SUMMIT R	1169	884.5	1015.3	18.3	8.3	13.4	- 1.9	27.8	16	- 0.6	29	0	1			56	24	17	9		79	51			20.1	12	17	20	2	8	3.2	
PACIFIC AREA																																
GUAM TAGUAC R	110	996.3	1008.9	30.0	22.2	26.1	- 0.2	31.1	29+	18.3	6	0	0	23.9	88	310	- 29	50	24	5	0	0	0.8	9	8.9	E	30					40
JOHNSTON	2	1013.2	1013.7	28.9	25.6	27.3	- 0.3	29.4	19+	21.7	2	0	0	22.2	75	62	3	56	6	0	0	0	6.7	9	13.4	E	26+	4	15	11	6.4	77
KOROR R	29	1005.4	1009.2	31.1	24.4	27.8	0.6	32.8	21	22.8	28+	4	0	24.4	84	355	- 9	97	19	1	0	0	0.7	16	9.8	SE	27	0	7	23	8.4	54
KWAJALEIN	2	1009.1	1009.8	30.0	24.4	27.2	- 0.5	31.7	10	22.8	16+	0	0	23.9	82	318	59	71	22	0	0	0	3.3	10	12.5	9	27+	1	5	24	8.7	
MAJURO	3	1010.5	1010.7	29.4	25.0	27.1	0.2	31.1	11	22.8	22	0	0	23.3	79	201	-105	44	21	1	0	0	3.3	8	8.5	NE	18+	0	5	25	9.1	65
PAGO PAGO	4	1012.9	1013.2	28.9	22.8	25.8		30.6	24	17.8	28	0	0	21.7	80	66		17	17	2	0	0	4.3	10	12.1	E	2	6	15	9	5.9	67
PONAPE R	37	1008.4	1008.9	31.1	22.8	26.8	0.4	32.8	14	20.6	8	3	0	23.3	84	251	-150	53	23	0	0	0	1.6	13	6.7	E	19+	1	5	24	8.5	33
TRUK MOEN ISLAND	2	1008.8	1009.6	30.0	24.4	27.3	0.4	31.1	25+	22.8	21+	0	0	23.9	83	369	50	126	23	2	0	0	1.0	13	10.3	NW	12	0	4	26	9.4	68
WAKE	3	1010.5	1010.6	29.4	24.4	27.1	- 1.0	32.2	1	22.2	9	1	0	22.8	78	434	301	160	21	2	0	0	3.6	12	21.6	SW	5	6	9	15	6.8	55
YAP R	13			30.6	23.9	27.1	- 0.3	31.7	23+	22.2	23+	0	0			352	- 4	73	25	4	0	0			12.1	SE	26	0	9	21	8.5	67
PENNSYLVANIA																																
ALLENTOWN	118	1005.8	1019.6	23.9	15.6	19.8	1.7	31.7	9	3.9	25	0	0	16.7	84	94	- 1	45	12	7	0	0	0.7	8	12.1	32	16	5	7	18	7.3	
ERIE	223	991.9	1018.4	21.7	13.9	17.8	0.4	28.3	8	4.4	25	0	0	14.4	82	89	- 1	27	10	5	0	0	0.6	17	9.4	34	23	7	5	18	7.1	
HARRISBURG	103	1006.4	1019.3	25.0	17.2	21.1	1.7	33.3	9	6.1	25	2	0	17.2		49	- 22	14	13	3	0	0	0.6	15	11.2	NW	16	6	9	15	6.8	41
PHILADELPHIA	2	1018.3	1019.2	26.1	17.8	22.0	2.7	33.3	9	8.9	25	2	0	17.8	79	148	60	57	7	5	0	0	0.9	13	10.3	SE	10	6	8	16	7.1	45
PITTSBURGH	347	974.9	1018.4	25.0	15.6	20.3	2.4	32.8	9	5.0	25	2	0	15.0	76	98	34	20	13	4	0	0	0.1	22	10.3	29	20	5	6	19	7.4	38
SCRANTON	283	985.4	1019.3	22.8	14.4	18.6	1.7	29.4	6+	1.7	25	0	0	15.6	86	49	- 26	16	10	4	0	0	0.7	15	12.1	W	16	3	8	19	7.6	43
WILLIAMSPORT	160	1000.3	1019.2	23.9	16.1	20.1	2.3	31.7	9	4.4	25	0	0	15.6	78	85	2	26	11	4	0	0	0.7	8	9.4	19	20+	3	10	17	7.8	
RHODE ISLAND																																
BLOCK ISLAND	34			22.8	16.7	19.7	1.9	26.1	16+	9.4	23	0	0			8	- 73	5	6		0	0										
PROVIDENCE	16	1017.6	1020.0	25.0	15.6	20.4	3.1	32.8	9+	3.9	25	2	0	15.6	76	65	- 25	28	7	2	0	0	0.4	20	9.4	35	24	6	7	17	6.7	49

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
SOUTH CAROLINA																																
CHARLESTON	12	1014.9	1016.6	30.0	20.0	25.1	0.8	32.8	15	15.6	26	3	0	20.0	78	13	-135	5	8	2	0	0	1.4	3	13.9Y	NW	30+	10	11	9	5.3	69
CHARLESTON U	3			29.4	22.2	25.8	0.7	32.2	15	18.3	26+	1	0			21	-139	12	6		0	0			12.1	N	29					
COLUMBIA	65	1009.5	1017.4	30.6	19.4	25.1	1.0	32.8	21+	15.0	14+	7	0	20.0	80	128	18	76	9	4	0	0	1.4	3	9.4	4	10	8	11	11	6.1	55
GRNVLLE-SPRTNBRG	292	983.7	1017.8	28.3	17.2	22.7	0.1	31.7	30+	11.7	14	0	0	18.3	81	83	- 15	20	11	2	0	0	1.4	3	8.9	N	12	3	13	14	6.9	49
SOUTH DAKOTA																																
ABERDEEN	395	966.8	1013.4	22.8	7.8	15.4	- 0.5	37.2	2	- 1.1	23+	4	4	8.9	69	58	23	46	7	4	T	T	1.2	20	12.5	35	13	9	9	12	5.5	
HURON	393	967.5	1013.6	22.8	8.3	15.6	- 1.1	37.2	2	0.0	23+	5	3	8.3	65	45	6	27	7	3	0	0	1.5	18	16.5	W	5	11	7	12	5.1	70
RAPID CITY	964	904.2	1014.4	21.7	6.7	14.1	- 2.3	38.3	2	- 1.1	19	4	3	3.3	56	59	35	30	9	3	0	0	1.6	32	24.1	NW	5	14	8	8	4.5	61
SIOUX FALLS	432	964.1	1015.2	23.9	8.9	16.4	- 0.2	37.8	7	0.0	19	3	1	8.9	65	82	16	41	8	4	0	0	0.9	21	14.3	19	30+	10	7	13	5.4	
TENNESSEE																																
BRISTOL	459	965.1	1018.5	28.3	16.7	22.4	1.8	33.3	9	12.8	15+	5	0	16.7	78	74	7	20	12	3	0	0	0.4	5	9.8	22	16	6	9	15	6.8	
CHATTANOOGA	203	992.9	1017.1	29.4	18.9	24.2	0.9	33.3	15+	13.3	14	6	0	18.3	76	93	15	77	8	4	0	0	0.3	12	8.0	NW	12	5	9	16	6.8	46
KNOXVILLE	299	983.1	1017.7	27.8	18.3	22.9	0.6	32.2	10+	12.8	14	2	0	17.8	79	87	22	31	9	4	0	0	0.6	2	9.8	N	12	6	9	15	6.8	43
MEMPHIS	79	1006.1	1016.2	29.4	19.4	24.5	1.2	34.4	14	10.6	21	10	0	17.8	69	87	15	25	9	3	0	0	1.1	14	8.9	SE	26+	10	10	10	5.7	72
NASHVILLE	180	995.3	1016.7	28.9	18.3	23.6	0.9	32.8	15	12.2	21	3	0	17.2	73	54	- 19	22	9	6	0	0	0.4	19	11.6	NW	25+	8	8	14	6.1	61
OAK RIDGE R	276			27.8	17.2	22.6	0.9	33.3	15	12.2	14	3	0			84	1	29	11		0	0			11.2Y		12	2	13	15	7.2	
TEXAS																																
ABILENE	537	953.6	1014.1	28.3	17.2	22.9	- 1.4	36.1	7	5.0	20	9	0	16.7	71	135	83	64	7	2	0	0	2.0	17	18.8	NW	17	11	12	7	5.2	68
AMARILLO	1098	891.6	1013.0	26.1	13.3	19.5	- 2.6	35.0	6	3.9	20	7	0	8.9	56	119	71	64	6	4	0	0	2.3	18	14.3	NE	17	18	4	8	3.8	74
AUSTIN	182	991.5	1013.2	31.1	21.7	26.3	0.1	36.7	6	11.1	20	14	0	20.0	75	54	- 33	23	10	3	0	0	1.6	10	12.1	SE	24+	6	11	13	6.8	48
BROWNSVILLE	6	1010.8	1011.4	31.7	23.3	27.4	0.1	37.2	7	17.2	20	14	0	22.2	77	274	147	90	15	4	0	0	1.1	11	14.3	W	11	4	10	16	7.1	50
CORPUS CHRISTI	12	1010.2	1011.5	31.1	23.3	27.3	0.2	36.7	7+	15.6	20	10	0	23.3	83	309	197	119	15	3	0	0	2.7	9	29.5	NW	10	2	14	14	7.1	46
DALLAS	147	997.0	1014.2	31.1	21.1	26.2	0.7	37.8	6	10.0	20	18	0	18.3	67	46	- 25	25	6	2	0	0	2.1	13	10.3	SE	24+	9	12	9	5.4	62
DEL RIO	313	977.0	1012.4	31.1	20.6	25.8	- 0.8	37.2	7	10.6	20	16	0	18.9	70	13	- 54	7	7	2	0	0	2.7	11	11.6	33	18	6	12	12	6.3	
EL PASO	1194	881.1	1010.6	30.6	15.6	23.1	- 0.6	35.6	16	6.7	20	18	0	8.9	44	24	- 5	20	6	5	0	0	0.5	14	15.6	E	5	19	9	2	3.1	87
FORT WORTH	164	994.2	1014.4	30.6	20.0	25.1	- 0.7	35.6	6	7.8	20	16	0	18.9	74	82	18	31	6	2	0	0	1.3	13	8.9	34	18	6	15	9	5.7	
GALVESTON U	2			28.9	24.4	26.6	- 0.2	33.9	6	16.7	20	1	0			259	130	132	14		0	0			19.2	E	9					65
HOUSTON INTERCON	29	1009.8	1013.7	30.6	21.1	25.7	0.0	36.1	6	13.9	20	9	0	21.7	83	131	28	56	10	7	0	0	2.0	7	11.2	19	3	2	13	15	7.2	50
LUBBOCK	992	903.8	1013.2	27.8	15.0	21.3	- 0.6	35.6	6	5.0	20	11	0	13.3	66	133	73	58	7	5	0	0	1.7	16	11.2	36	17	19	4	7	3.8	
MIDLAND	869	916.0	1012.7	28.3	15.6	22.0	- 2.1	35.0	8+	5.6	20	13	0	13.9	65	65	19	45	6	2	0	0	2.7	13	13.4	S	17	17	4	9	4.0	
PORT ARTHUR	5	1013.2		29.4	21.1	25.4	- 0.2	33.3	6+	14.4	20	4	0	21.7	84	129	5	75	15	7	0	0	2.7	8	17.9	E	16	3	15	12	6.7	61
SAN ANGELO	580	947.5	1012.8	29.4	17.2	23.5	- 2.2	35.6	6	7.8	20	12	0	16.1	68	91	24	41	6	2	0	0	1.6	14	11.6	18	29	7	14	9	5.5	
SAN ANTONIO	240	985.4	1012.9	31.1	22.2	26.7	0.8	35.6	7+	12.2	20	15	0	20.0	71	116	27	50	12	4	0	0	1.7	8	14.3	NE	10	4	13	13	6.7	54
VICTORIA	32	1008.5	1012.5	30.6	22.2	26.5	0.3	35.6	7+	13.9	20	10	0	21.7	80	306	198	144	16	6	0	0	2.7	7	21.9Y	N	10	4	10	16	7.1	
WACO	153	996.3	1013.9	31.1	21.1	26.2	0.1	36.7	6	9.4	20	19	0	19.4	71	19	- 52	12	5	1	0	0	1.4	12	9.4	33	19+	6	13	11	5.9	
WICHITA FALLS	303	977.3	1013.3	30.0	18.3	24.2	- 1.1	37.2	6	7.2	20	17	0	17.8	71	130	71	50	8	6	0	0	2.1	12	21.9	31	4	16	7	7	4.3	
UTAH																																
MILFORD	1533	846.3		25.0	4.4	14.8	- 2.4	34.4	13	- 3.9	19	4	6			12	2	9	3		28	T						25	2	3	1.5	
SALT LAKE CITY	1286	871.3	1013.9	23.3	7.2	15.4	- 2.6	32.2	11+	0.0	28	3	1	1.7	44	44	31	30	6	0	102	102	1.2	17	17.0	SW	25	19	9	2	2.5	85
WENDOVER	1291	870.6	1014.6	22.8	9.4	16.0	- 3.3	32.2	11	1.1	28	1	0	- 3.3	30	9	1	8	3		0	0						22	4	4	2.5	
VERMONT																																
BURLINGTON	101	1006.4	1018.9	22.8	12.2	17.5	2.8	30.0	5	3.3	24	0	0	13.9	81	41	- 43	20	13	0	0	0	1.2	19	14.8	SW	29	2	12	16	7.2	55
VIRGINIA																																
LYNCHBURG	279			26.1	16.1	21.1	0.7	31.1	6	11.1	15	0	0			47	- 38	22	10		0	0			9.8	NE	30	4	10	16	7.1	40
NORFOLK	7	1017.3	1018.2	26.7	18.9	22.9	0.3	31.1	11	12.2	26	0	0	18.3	78	139	31	89	4	1	0	0	2.1	6	21.9	NE	30	8	12	10	5.9	66
RICHMOND	50	1012.5	1018.8	27.2	16.7	21.9	0.7	31.7	8+	8.9	25	0	0	18.3	83	60	- 33	40	5	3	0	0	0.7	8	9.4	NE	30	4	14	12	6.6	52
ROANOKE	350	977.0	1018.7	26.1	16.1	21.0	0.4	31.1	9+	12.8	15	0	0	16.7	79	98	15	46	13	3	0	0	0.5	18	13.0	31	14	3	8	19	7.4	
WALLOPS ISLAND	3			26.7	20.6	23.3		29.4	11	12.2	26+	0	0			137		111	5		0	0			17.0Y	NE	30					
WASHINGTON																																
OLYMPIA	59	1009.1	1016.5	20.6	5.0	12.9	- 1.8	26.7	22	0.0	21	0	1	8.3	78	78	25	30	12	0	0	0	1.0	20	8.0	18	27+	10	8	12	5.5	
QUILLAYUTE	55	1008.8	1016.5	18.3	6.7	12.5	- 1.5	24.4	18	1.1	30	0	0	7.8	77	151	32	49	12	0	0	0	0.3	7	12.5	SW	10	10	6	14	5.9	45
SEATTLE-TACOMA	122	1000.0	1016.5	18.9	10.0	14.2	- 1.3	24.4	22+	6.1	29	0	0	8.3	74	89	37	28	12	0	0	0	0.4	17	10.7	N	20	9	8	13	5.9	62
SPOKANE	718	932.3	1016.0	19.4	6.1	12.9	- 3.2	30.0	10	- 0.6	30	0	1	2.8	57	35	16	11	11	0	0	0	1.2	20	14.3	NE	19	15	4	11	4.5	70
STAMPEDE PASS R	1206	880.5		11.7	5.0	8.3	- 2.8	18.3	10	0.0	29	0	1			100	- 11	32	13		T	0						9	7	14	6.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

SEPTEMBER 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max 32.2 °C or above	Temperature: No. of days Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 25 mm or more	Precipitation: No. of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb.	C.	C.	C	C	C.		C.				C.	%	Mm.	Mm	Mm.			Mm.	Mm	M.p.s		M.p.s							%
WASHINGTON																																
WALLA WALLA C	289			22.2	9.4	15.7	- 3.2	30.6	5	2.2	30	0	0			46	26	30	6		0	0			9.8	#	2	17	5	8	3.6	72
YAKIMA	321	978.0	1016.3	22.8	3.3	13.1	- 3.2	30.6	10	- 2.2	29	0	6	2.8	56	19	10	17	3	1	0	0	1.3	30	11.2	32	13	18	7	5	3.4	
WEST INDIES																																
SAN JUAN P.R.	4	1012.2	1014.8	32.2	25.6	28.8	1.9	34.4	26	23.9	3	22	0	21.1	65	56	-116	36	9	4	0	0	2.5	10	13.9	E	1	7	20	4	4.9	74
WEST VIRGINIA																																
BECKLEY	763	931.6	1018.3	23.3	14.4	18.9	1.2	28.9	15	7.8	25	0	0	15.6	86	115	55	21	16	6	0	0	1.5	17	9.4	14	25+	5	7	18	7.5	
CHARLESTON	286	984.4	1018.0	26.1	16.7	21.5	1.4	32.2	6	8.9	25	1	0	17.8	83	193	119	58	14	3	0	0	0.1	23	8.0	7	6	5	5	20	7.6	
ELKINS	594	949.2		24.4	13.3	19.0	2.0	30.0	10	3.9	24	0	0			160	82	55	14		0	0						0	7	23	8.3	
HUNTINGTON	252	988.2	1017.8	26.1	17.2	21.7	1.6	32.2	10	10.0	25	1	0	17.2	81	66	2	26	11	6	0	0	0.4	16	7.6	24	20+	2	9	19	7.6	
PARKERSBURG U	187			26.1	16.7	21.2	1.2	32.8	9+	7.2	25	4	0			117	48	74	8		0	0			11.6	NE	16					35
WISCONSIN																																
GREEN BAY	208	990.9	1016.3	22.8	11.1	16.8	1.0	30.6	4+	1.7	24	0	0	11.7	74	85	11	34	11	5	0	0	0.9	21	13.4	SW	28	8	10	12	6.4	46
LA CROSSE	198	991.9	1016.4	23.9	11.7	17.9	1.2	35.0	2	3.3	20	3	0	13.3	80	62	- 27		12	6	0		1.3	16								
MADISON	262	985.1	1016.3	25.6	11.7	18.4	2.3	32.2	8+	0.6	24	2	0	12.2	72	47	- 37	16	9	4	0	0	0.6	19	12.5	SW	28	7	11	12	6.1	61
MILWAUKEE	205	991.5	1016.7	23.3	13.3	18.3	2.6	33.3	8	2.2	24	1	0	13.3	75	33	- 36	15	7	3	0	0	1.2	19	13.4	S	28	8	12	10	5.8	68
WYOMING																																
CASPER	1627	837.8	1014.6	20.6	3.9	12.2	- 3.2	32.2	11+	- 4.4	18	2	9	- 0.6	51	19	- 4	8	9	1	71	25	2.0	25	13.9	21	29	14	10	6	4.1	
CHEYENNE	1867	812.7	1014.9	18.9	4.4	11.7	- 3.1	30.0	2+	- 4.4	18	0	7	- 0.6	49	45	17	21	8	1	188	102	2.4	28	15.2	NW	20+	17	7	6	3.8	68
LANDER	1696	829.7	1014.8	19.4	4.4	11.9	- 3.1	30.6	11+	- 2.8	18	0	10	- 1.1	49	58	31	13	8	2	257	51	1.3	26	14.3	SW	29	16	6	8	4.3	74
SHERIDAN	1208	879.1	1015.6	21.7	3.3	12.5	- 2.4	35.6	11	- 5.6	18	3	10	0.6	48	23	- 7	9	6	0	T	T	1.9	31	17.0	NW	11	14	5	11	4.7	66

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1 C. or above for Alaskan Stations.
Y Peak Gust
; And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	0	0	6
HUNTSVILLE	0	0	12
MOBILE	C	0	0
MONTGOMERY	0	0	0
ALASKA			
ANCHORAGE	561	1154	1003
ANNETTE	349	714	777
BARROW	990	2715	2678
BARTER ISLAND	1031	2612	2497
BETHEL	621	1393	1325
BETTLES	782	1394	
BIG DELTA	664	1209	
COLD BAY	608	1639	1424
FAIRBANKS	600	1005	1145
GULKANA	686	1324	
HOMER	568	1337	
JUNEAU	504	1021	1122
KING SALMON	541	1171	1148
KOTZEBUE	700	1475	1550
MC GRATH	597	1122	1179
NOME	697	1627	1670
ST. PAUL ISLAND	677	2018	1756
SHEMYA	556	1752	1553
SUMMIT	779	1702	
TALKEETNA	594	1126	1109
UNALAKLEET	648	1387	
YAKUTAT	608	1339	1159
ARIZONA			
FLAGSTAFF	352	416	315
PHOENIX	0	0	0
TUCSON	0	0	0
WINSLOW	59	59	6
YUMA	0	0	0
ARKANSAS			
FORT SMITH	23	23	12
LITTLE ROCK	[illegible]	9	9
CALIFORNIA			
BAKERSFIELD	16	16	0
BISHOP	100	100	42
BLUE CANYON	207	244	204
EUREKA U	242	695	785
FRESNO	20	20	0
LONG BEACH	1	1	12
LOS ANGELES	3	3	71
LOS ANGELES U	[illegible]	0	6
MT SHASTA R	228	283	182
OAKLAND	34	148	148
RED BLUFF	35	35	0
SACRAMENTO	33	33	12
SANDBERG R	103	109	30
SAN DIEGO	[illegible]	0	21
SAN FRANCISCO	47	201	219
SAN FRANCISCO U	85	430	468
SANTA MARIA	76	208	288
STOCKTON	18	18	6
COLORADO			
ALAMOSA	361	488	443
COLORADO SPRINGS	285	323	166
DENVER	273	297	132
GRAND JUNCTION	134	134	30
PUEBLO	180	183	54
CONNECTICUT			
BRIDGEPORT	27	31	66
HARTFORD	55	68	105
DELAWARE			
WILMINGTON	23	25	51
DIST.OF COLUMBIA			
WASHINGTON DULLES	34	36	
WASHINGTON NATIONAL	12	12	33
FLORIDA			
APALACHICOLA U	0	0	0
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	0	0	0
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	0	0	0
TALLAHASSEE	0	0	0
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	0	0	12
ATLANTA	0	0	18
AUGUSTA	0	[illegible]	0
COLUMBUS	0	0	0
MACON	0	0	0
ROME	0	0	24
SAVANNAH	0	0	0
IDAHO			
BOISE	210	226	132
LEWISTON	206	233	123
POCATELLO	374	406	172
ILLINOIS			
CAIRO U	9	9	36
CHICAGO O HARE	64	74	129
CHICAGO MIDWAY	56	63	81
MOLINE	94	114	108
PEORIA	85	107	93
ROCKFORD	95	114	129
SPRINGFIELD	65	75	72
INDIANA			
EVANSVILLE	23	23	66
FORT WAYNE	71	78	114
INDIANAPOLIS	49	53	90
SOUTH BEND	86	115	117
IOWA			
BURLINGTON	94	113	93
DES MOINES	96	108	108
DUBUQUE	127	180	199
SIOUX CITY	126	139	117
WATERLOO	146	223	169
KANSAS			
CONCORDIA	99	102	57
DODGE CITY	110	112	33
GOODLAND	193	204	87
TOPEKA	69	73	57
WICHITA	77	81	33
KENTUCKY			
COVINGTON	31	31	75
LEXINGTON	8	8	54
LOUISVILLE	13	13	54
LOUISIANA			
ALEXANDRIA	1	1	0
BATON ROUGE	0	0	0
LAKE CHARLES	0	0	0
NEW ORLEANS	0	0	0
SHREVEPORT	4	4	0
MAINE			
CARIBOU	274	474	529
PORTLAND	147	170	260
MARYLAND			
BALTIMORE	24	24	48
MASSACHUSETTS			
BLUE HILL OBS R	68	83	130
BOSTON	37	39	69
WORCESTER	98	136	187
MICHIGAN			
ALPENA	193	408	446
DETROIT	56	60	87
DETROIT METRO	72	91	122
FLINT	108	165	165
GRAND RAPIDS	107	133	170
HOUGHTON LAKE	183	348	382
LANSING	129	203	166
MARQUETTE U	182	395	380
MUSKEGON	120	173	160
SAULT STE MARIE	262	596	480
MINNESOTA			
DULUTH	273	517	510
INTERNATIONAL FALLS	318	535	546
MINNEAPOLIS	164	202	242
ROCHESTER	170	230	245
ST CLOUD	221	307	300
MISSISSIPPI			
JACKSON	0	[illegible]	0
MERIDIAN	0	0	0
MISSOURI			
COLUMBIA REGIONAL	71	77	54
KANSAS CITY	57	61	39
ST JOSEPH	106	127	66
ST LOUIS	47	47	60
SPRINGFIELD	61	64	45
MONTANA			
BILLINGS	305	337	207
GLASGOW	267	294	348
GREAT FALLS	326	365	339
HAVRE	312	344	387
HELENA	454	567	384
KALISPELL	470	614	470
MILES CITY	245	256	186
MISSOULA	386	473	411
NEBRASKA			
GRAND ISLAND	131	137	114
LINCOLN U	89	93	81
NORFOLK	148	162	120
NORTH PLATTE	210	222	129
OMAHA	95	101	96
SCOTTSBLUFF	243	256	138
VALENTINE	215	240	186
NEVADA			
ELKO	351	371	268
ELY	369	391	305
LAS VEGAS	4	4	[illegible]
RENO	264	286	334
WINNEMUCCA	306	312	244
NEW HAMPSHIRE			
CONCORD	165	240	233
MT WASHINGTON OBS	587	1668	1749
NEW JERSEY			
ATLANTIC CITY	47	66	39
ATLANTIC CITY U	27	29	29
NEWARK	12	13	39
TRENTON U	31	34	57
NEW MEXICO			
ALBUQUERQUE	101	101	12
CLAYTON	180	213	72
ROSWELL	82	82	18
NEW YORK			
ALBANY	109	174	157
BINGHAMTON	144	274	288
BUFFALO	87	127	197
NEW YORK U	14	14	30
NEW YORK KENNEDY	11	11	36
NEW YORK LA GUARDIA	17	18	27
ROCHESTER	74	124	166
SYRACUSE	96	160	166
NORTH CAROLINA			
ASHEVILLE	6	6	75
CAPE HATTERAS R	0	0	0
CHARLOTTE	4	4	[illegible]
GREENSBORO	9	9	33
RALEIGH	3	3	21
WILMINGTON	0	0	0
NORTH DAKOTA			
BISMARCK	271	343	284
FARGO	241	334	284
WILLISTON	283	330	335
OHIO			
AKRON	68	86	105
CINCINNATI ABBE OB	29	29	54
CLEVELAND	63	85	116
COLUMBUS	52	60	90
DAYTON	50	50	84
MANSFIELD	54	69	69
TOLEDO	78	108	133
YOUNGSTOWN	76	118	145
OKLAHOMA			
OKLAHOMA CITY	59	59	15
TULSA	53	53	18
OREGON			
ASTORIA	212	462	486
BURNS U	381	480	259
EUGENE	169	252	197
MEACHAM	460	655	496
MEDFORD	108	136	78
PENDLETON	182	202	111
PORTLAND	123	161	167
SALEM	169	248	179
SEXTON SUMMIT R	276	473	333
PENNSYLVANIA			
ALLENTOWN	52	60	90
ERIE	97	184	198
HARRISBURG	40	43	63
PHILADELPHIA	17	17	60
PITTSBURGH	41	48	114
SCRANTON	90	117	151
WILLIAMSPORT	58	65	120
RHODE ISLAND			
BLOCK ISLAND	31	43	94
PROVIDENCE	42	49	112
SOUTH CAROLINA			
CHARLESTON	0	0	0
CHARLESTON U	0	0	0
COLUMBIA	0	0	0
GRNVLLE-SPRTNBRG	2	2	[illegible]
SOUTH DAKOTA			
ABERDEEN	220	267	239
HURON	211	251	186
RAPID CITY	267	312	199
SIOUX FALLS	177	218	212
TENNESSEE			
BRISTOL	0	[illegible]	51
CHATTANOOGA	0	0	18
KNOXVILLE	0	0	30
MEMPHIS	9	9	18
NASHVILLE	0	0	30
OAK RIDGE R	0	0	39
TEXAS			
ABILENE	44	44	0
AMARILLO	120	121	18
AUSTIN	3	3	0
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	8	8	0
DEL RIO	9	9	0
EL PASO	31	31	0
FORT WORTH	12	12	0
GALVESTON U	0	0	0
HOUSTON INTERCON	2	2	0
LUBBOCK	83	83	18
MIDLAND	51	51	0
PORT ARTHUR	0	0	0
SAN ANGELO	23	23	0
SAN ANTONIO	1	1	0
VICTORIA	2	2	0
WACO	6	6	0
WICHITA FALLS	37	37	0
UTAH			
MILFORD	224	224	99
SALT LAKE CITY	201	201	81
WENDOVER	186	186	48
VERMONT			
BURLINGTON	131	192	300
VIRGINIA			
LYNCHBURG	13	13	51
NORFOLK	3	3	0
RICHMOND	11	11	36
ROANOKE	12	12	51
WALLOPS ISLAND	5	5	
WASHINGTON			
OLYMPIA	286	448	337
QUILLAYUTE	305	632	568
SEATTLE-TACOMA	214	313	280
SPOKANE	297	380	202
STAMPEDE PASS R	536	958	957
WALLA WALLA U	157	174	87
YAKIMA	282	355	156
WEST VIRGINIA			
BECKLEY	46	62	155
CHARLESTON	13	14	63
ELKINS	54	72	169
HUNTINGTON	11	13	63
PARKERSBURG U	22	23	60
WISCONSIN			
GREEN BAY	155	244	252
LA CROSSE	140	177	184
MADISON	131	180	239
MILWAUKEE	119	176	264
WYOMING			
CASPER	352	388	214
CHEYENNE	364	426	260
LANDER	366	378	229
SHERIDAN	328	392	275

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sities.

COOLING DEGREE DAYS

(Base 65°F.)

SEPTEMBER 1971

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	309	1625	
HUNTSVILLE	263	1535	
MOBILE	441	2526	
MONTGOMERY	388	1964	
ALASKA			
ANCHORAGE	U	1	
ANNETTE	0	53	
BARROW	0	0	
BARTER ISLAND	U	U	
BETHEL	0	0	
BETTLES	0	83	
BIG DELTA	0	22	
COLD BAY	U	U	
FAIRBANKS	0	89	
GULKANA	0	12	
HOMER	0	1	
JUNEAU	0	0	
KING SALMON	0	5	
KOTZEBUE	0	16	
MC GRATH	0	29	
NOME	0	4	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	3	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	153	
PHOENIX	623	3401	
TUCSON	430	2397	
WINSLOW	156	1412	
YUMA	627	3375	
ARKANSAS			
FORT SMITH	321	1740	
LITTLE ROCK	355	1780	
CALIFORNIA			
BAKERSFIELD	372	2277	
BISHOP	148	1187	
BLUE CANYON	97	470	
EUREKA U	0	2	
FRESNO	279	1681	
LONG BEACH	342	1272	
LOS ANGELES	184	724	
LOS ANGELES U	296	1364	
MT SHASTA R	15	346	
OAKLAND	84	135	
RED BLUFF	316	1730	
SACRAMENTO	254	1192	
SANDBERG R	204	874	
SAN DIEGO	224	758	
SAN FRANCISCO	91	142	
SAN FRANCISCO U	83	96	
SANTA MARIA	35	84	
STOCKTON	287	1458	
COLORADO			
ALAMOSA	0	46	
COLORADO SPRINGS	41	464	
DENVER	53	653	
GRAND JUNCTION	86	1310	
PUEBLO	101	998	
CONNECTICUT			
BRIDGEPORT	154	818	
HARTFORD	142	867	
DELAWARE			
WILMINGTON	214	1123	
DIST.OF COLUMBIA			
WASHINGTON DULLES	181	1010	
WASHINGTON NATIONAL	258	1441	
FLORIDA			
APALACHICOLA U	453	2391	
DAYTONA BEACH	445	2413	
FORT MYERS	458	2874	
JACKSONVILLE	424	2306	
KEY WEST	536	3740	
LAKELAND U	439	2694	
MIAMI	476	3409	
ORLANDO	510	3070	
PENSACOLA	428	2376	
TALLAHASSEE	414	2054	
TAMPA	463	2734	
WEST PALM BEACH	486	3126	
GEORGIA			
ATHENS	286	1604	
ATLANTA	265	1521	
AUGUSTA	336	1779	
COLUMBUS	394	1987	
MACON	439	2204	
ROME	301	1586	
SAVANNAH	414	2219	
HAWAII			
HILO	354	2356	
HONOLULU	431	3148	
KAHULUI	413	2846	
LIHUE	456	3178	
IDAHO			
BOISE	42	909	
LEWISTON	20	844	
POCATELLO	9	396	
ILLINOIS			
CAIRO U	295	1659	
CHICAGO O HARE	213	956	
CHICAGO MIDWAY	226	1081	
MOLINE	212	1036	
PEORIA	210	1036	
ROCKFORD	193	885	
SPRINGFIELD	254	1233	
INDIANA			
EVANSVILLE	260	1523	
FORT WAYNE	149	802	
INDIANAPOLIS	189	971	
SOUTH BEND	155	735	
IOWA			
BURLINGTON	216	1071	
DES MOINES	194	1092	
DUBUQUE	130	627	
SIOUX CITY	134	1013	
WATERLOO	104	515	
KANSAS			
CONCORDIA	201	1236	
DODGE CITY	213	1408	
GOODLAND	106	926	
TOPEKA	273	1374	
WICHITA	259	1554	
KENTUCKY			
COVINGTON	195	1112	
LEXINGTON	239	1096	
LOUISVILLE	237	1226	
LOUISIANA			
ALEXANDRIA	357	2028	
BATON ROUGE	421	2390	
LAKE CHARLES	457	2548	
NEW ORLEANS	424	2403	
SHREVEPORT	403	2309	
MAINE			
CARIBOU	16	125	
PORTLAND	43	393	
MARYLAND			
BALTIMORE	208	1166	
MASSACHUSETTS			
BLUE HILL OBS R	97	631	
BOSTON	132	833	
WORCESTER	57	469	
MICHIGAN			
ALPENA	57	219	
DETROIT	133	866	
DETROIT METRO	128	685	
FLINT	105	530	
GRAND RAPIDS	132	641	
HOUGHTON LAKE	62	316	
LANSING	113	544	
MARQUETTE U	73	290	
MUSKEGON	114	477	
SAULT STE MARIE	34	89	
MINNESOTA			
DULUTH	47	163	
INTERNATIONAL FALLS	42	184	
MINNEAPOLIS	106	640	
ROCHESTER	88	531	
ST CLOUD	66	454	
MISSISSIPPI			
JACKSON	406	2082	
MERIDIAN	367	1936	
MISSOURI			
COLUMBIA REGIONAL	266	1324	
KANSAS CITY	295	1659	
ST JOSEPH	191	1200	
ST LOUIS	279	1454	
SPRINGFIELD	267	1419	
MONTANA			
BILLINGS	29	641	
GLASGOW	22	634	
GREAT FALLS	22	549	
HAVRE	7	541	
HELENA	0	210	
KALISPELL	0	227	
MILES CITY	38	874	
MISSOULA	0	381	
NEBRASKA			
GRAND ISLAND	122	1064	
LINCOLN U	188	1298	
NORFOLK	103	887	
NORTH PLATTE	59	633	
OMAHA	188	1230	
SCOTTSBLUFF	50	634	
VALENTINE	78	827	
NEVADA			
ELKO	4	342	
ELY	2	249	
LAS VEGAS	390	2794	
RENO	15	440	
WINNEMUCCA	13	666	
NEW HAMPSHIRE			
CONCORD	55	403	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	129	732	
ATLANTIC CITY U	122	659	
NEWARK	222	1307	
TRENTON U	182	1036	
NEW MEXICO			
ALBUQUERQUE	149	1153	
CLAYTON	82	691	
ROSWELL	220	1577	
NEW YORK			
ALBANY	109	455	
BINGHAMTON	84	341	
BUFFALO	107	493	
NEW YORK U	218	1288	
NEW YORK KENNEDY	221	1217	
NEW YORK LA GUARDIA	199	1100	
ROCHESTER	155	600	
SYRACUSE	117	548	
NORTH CAROLINA			
ASHEVILLE	149	878	
CAPE HATTERAS R	325	1508	
CHARLOTTE	251	1395	
GREENSBORO	195	1125	
RALEIGH	222	1319	
WILMINGTON	319	1797	
NORTH DAKOTA			
BISMARCK	32	423	
FARGO	56	375	
WILLISTON	23	440	
OHIO			
AKRON	123	681	
CINCINNATI ABBE 08	200	1124	
CLEVELAND	152	673	
COLUMBUS	144	747	
DAYTON	153	925	
MANSFIELD	147	680	
TOLEDO	138	662	
YOUNGSTOWN	114	522	
OKLAHOMA			
OKLAHOMA CITY	313	1762	
TULSA	298	1795	
OREGON			
ASTORIA	4	17	
BURNS U	0	414	
EUGENE	2	253	
MEACHAM	1	333	
MEDFORD	44	639	
PENDLETON	12	840	
PORTLAND	7	413	
SALEM	2	299	
SEXTON SUMMIT R	18	296	
PACIFIC AREA			
GUAM TAGUAC R	429	3832	
JOHNSTON	487	3697	
KOROR R	521	4613	
KWAJALEIN	488	4469	
MAJURO	480	4268	
PAGO PAGO	410	3885	
PONAPE R	467	4086	
TRUK MOEN ISLAND	491	4490	
WAKE	479	4226	
YAP R	481	4333	
PENNSYLVANIA			
ALLENTOWN	140	761	
ERIE	75	338	
HARRISBURG	195	1020	
PHILADELPHIA	223	1254	
PITTSBURGH	153	699	
SCRANTON	113	566	
WILLIAMSPORT	160	768	
RHODE ISLAND			
BLOCK ISLAND	111	511	
PROVIDENCE	158	877	
SOUTH CAROLINA			
CHARLESTON	369	2067	
CHARLESTON U	409	2150	
COLUMBIA	369	2021	
GRNVLLE-SPRTNBRG	246	1410	
SOUTH DAKOTA			
ABERDEEN	67	668	
HURON	69	755	
RAPID CITY	43	550	
SIOUX FALLS	79	730	
TENNESSEE			
BRISTOL	228	1099	
CHATTANOOGA	324	1633	
KNOXVILLE	252	1333	
MEMPHIS	349	1894	
NASHVILLE	293	1485	
OAK RIDGE R	232	1245	
TEXAS			
ABILENE	297	2123	
AMARILLO	189	1261	
AUSTIN	436	2805	
BROWNSVILLE	498	3529	
CORPUS CHRISTI	489	3201	
DALLAS	436	2648	
DEL RIO	423	2607	
EL PASO	293	2028	
FORT WORTH	382	2283	
GALVESTON U	448	2545	
HOUSTON INTERCON	409	2493	
LUBBOCK	252	1611	
MIDLAND	256	1781	
PORT ARTHUR	388	2483	
SAN ANGELO	308	2199	
SAN ANTONIO	459	2973	
VICTORIA	452	2931	
WACO	436	2709	
WICHITA FALLS	357	2390	
UTAH			
MILFORD	41	786	
SALT LAKE CITY	50	926	
WENDOVER	66	1183	
VERMONT			
BURLINGTON	90	450	
VIRGINIA			
LYNCHBURG	170	1018	
NORFOLK	259	1403	
RICHMOND	209	1256	
ROANOKE	163	961	
WALLOPS ISLAND	281	1151	
WASHINGTON			
OLYMPIA	0	141	
QUILLAYUTE	0	26	
SEATTLE-TACOMA	0	219	
SPOKANE	9	558	
STAMPEDE PASS R	0	130	
WALLA WALLA U	22	921	
YAKIMA	M	564	
WEST INDIES			
SAN JUAN P.R.	577	4402	
WEST VIRGINIA			
BECKLEY	86	442	
CHARLESTON	190	943	
ELKINS	99	426	
HUNTINGTON	197	930	
PARKERSBURG U	181	956	
WISCONSIN			
GREEN BAY	77	469	
LA CROSSE	126	624	
MADISON	140	657	
MILWAUKEE	123	496	
WYOMING			
CASPER	26	395	
CHEYENNE	13	276	
LANDER	25	460	
SHERIDAN	21	442	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

HURRICANE EDITH — SEPTEMBER 5 - 17, 1971

Dick De Angelis
Marine Services
Environmental Data Service

From the depths of the Tropics came one of the season's most potent hurricanes. Developing farther south than most September storms, Hurricane Edith made landfall three times during her lifetime. Nicaragua and Honduras felt her blow first and worst. Then British Honduras and the Yucatan Peninsula were stung. Finally, Edith swept ashore for the last time in Louisiana.

The powerful storm gave first indications of life near 11.5°N., 57.0°W., on the 5th. It was at the time that an exploratory reconnaissance team found a closed circulation. The normal stillness of a tropical evening on Grenada, and other islands in the southern Windwards, was shattered by torrential downpours riding 30-kt. winds. The following day, coastal residents of Venezuela saw cloudiness and felt rain associated with the depression as it skimmed westward across the southern Caribbean. Edith became a tropical storm and was christened on the 7th. Less than 24 hours later, some 150 miles north of Barranquilla, Colombia, pressure fell to 993 mb., winds reached 75 m.p.h., and Edith became a hurricane. The real fireworks came on the 9th as the storm moved predictably west-northwestward toward Nicaragua. It was on this day that Edith explosively intensified to a great hurricane (central pressure less than 950 mb. for at least 24 hours). Her central pressure plummeted to 943 mb. (27.85 inches). Her winds spiraled to an estimated 160 m.p.h. She was described by reconnaissance crews as extremely turbulent. With a small, perfectly formed eye, just 5 miles in diameter, Edith was likened to a giant tornado.

Around midday on the 9th, Cape Gracias, Nicaragua, felt the awesome power of this super storm. A decade had elapsed since this region had known the fury a hurricane could bring. Edith made her way across Honduras. As she took her toll, the land took its toll and when Edith entered the Gulf of Honduras, early on the 10th, she was weak. A 1-day journey across the Gulf brought a minimal hurricane to the shores of British Honduras near Belize. Coastal winds surged to 55 to 60 m.p.h. on some keys, but as Edith moved ashore, her strength dwindled rapidly. She made an uneventful trip across Mexico's Yucatan Peninsula and limped into the Gulf of Mexico near Campeche on the night of the 11th. The beaten storm headed toward Mexico and showed no signs of change until the 13th. Then the life-restoring powers of the Gulf of Mexico began to take effect and Edith once again started to deepen. However, it looked like the end as the tropical storm headed inland near Soto La Marina, Mexico, but she changed her mind and turned north-northeastward back out to sea. After this moment of indecision, Edith accelerated, intensified, and headed for the Louisiana coast. She regained hurricane status about 100 miles northeast of Brownsville, Tex., on the 15th. Her 978-mb. pressure center crossed the Louisiana coast in Cameron Parish, between Grand Chenier and the Rockefeller Wildlife Refuge at about 0800 c.s.t. on the 16th. Edith moved rapidly across south, central, and eastern Louisiana during the next 6 hours; the eye passed near Lafayette at about 1000 c.s.t., 12 to 15 miles northwest of Baton Rouge shortly after noon, and into southern Mississippi near McComb by early afternoon.

The storm slowed and weakened as she moved through Mississippi and across central Alabama on the 17th. By the next morning, she gave out over northern Georgia.

Edith was responsible for widespread damage in a remote and sparsely populated area of Nicaragua. In this area, at least 28 persons lost their lives and 1,876 were left homeless. Poor roads and flooding isolated many of the villages. Food and relief supplies were flown in by United States helicopters and aircraft, in addition to the Nicaraguan effort.

The Texas coast felt the fringe effects of Hurricane Edith as she moved through the Gulf of Mexico toward Louisiana. She generated tides up to 6 feet above normal in the Sabine Pass area and buffeted Freeport and Port Arthur with sustained 40 m.p.h. winds. Gusts reached 53 m.p.h. at Galveston and pressure dropped to 29.53 inches at Brownsville. Rainfall was heaviest at Sabine Pass where 3.50 inches fell. Total damage in Texas was estimated at $180,000, of which $105,000 was to properties and $75,000 was to crops. Most property damage was in the Port Arthur area. Winter vegetables and rice, mainly in Cameron and Jefferson Counties, suffered from the rains.

As Hurricane Edith moved toward Louisiana on the night of the 15th, winds and tides increased. Highest sustained winds measured onshore were 69 m.p.h., with gusts to 96 m.p.h. at Cameron. The lowest reported pressure was 29.11 inches in Lafayette. Storm rainfall, accumulating over a 2-day period, ranged from near 2 inches over extreme southeast Louisiana to 6 to 8 inches near and to the north of Edith's track from the west Louisiana coast, northeastward to West Feliciana Parish. Two-inch totals were also common in sections of southwest, central, and northeast Louisiana which were on the fringe of the storm.

The fast forward movement of Edith as she approached the coast caused only a moderate buildup of Gulf waters in the low-lying coastal area. Tides ranged from near 5 feet to more than 8 feet m.s.l. Highest storm tides were reported in Vermilion and Cote Blanche Bays.

As the one strong hurricane rainband swept across southern Louisiana, during the morning of the 16th, several tornadoes were reported. One moved along an intermittent 7-mile path through eastern sections of Baton Rouge, damaging two schools, a shopping center, and some residences.

Edith's damages were mostly light to moderate throughout southern Louisiana. Trees were uprooted, windows broken, billboards toppled, and mobile homes damaged. In many areas, wind and rain did considerable damage to crops. The greatest losses were to sugarcane, soybeans, rice, cotton, pecans, sweet potatoes, and other vegetables. The Louisiana Wildlife and Fisheries Commission reported damage to levees, roads, and water control structures on the Rockefeller and Marsh Island Wildlife Refuges.

In Mississippi, maximum sustained winds along the coast and in the southeast were 45 m.p.h., with gusts to 70 m.p.h. Storm rainfall was heaviest in the southwest where amounts of 5 inches to more than 6 inches were recorded. Most of this resulted from an area of heavy thunderstorms in the Liberty-Breckhaven area during the morning of the 16th. Tides along the coast were 2 to 4 feet above normal. Wind damage was light, but there was some property and crop damage in areas of heavy rainfall. Minor wind damage and power outages were reported in southern Mississippi, and some storm traces were found as far north as Starkville, where 40 m.p.h. wind gusts filled city streets with branches and leaves. In northern Pike County, a number of small bridges were washed out by flash flooding. In Walthall County, power outages and fallen timber

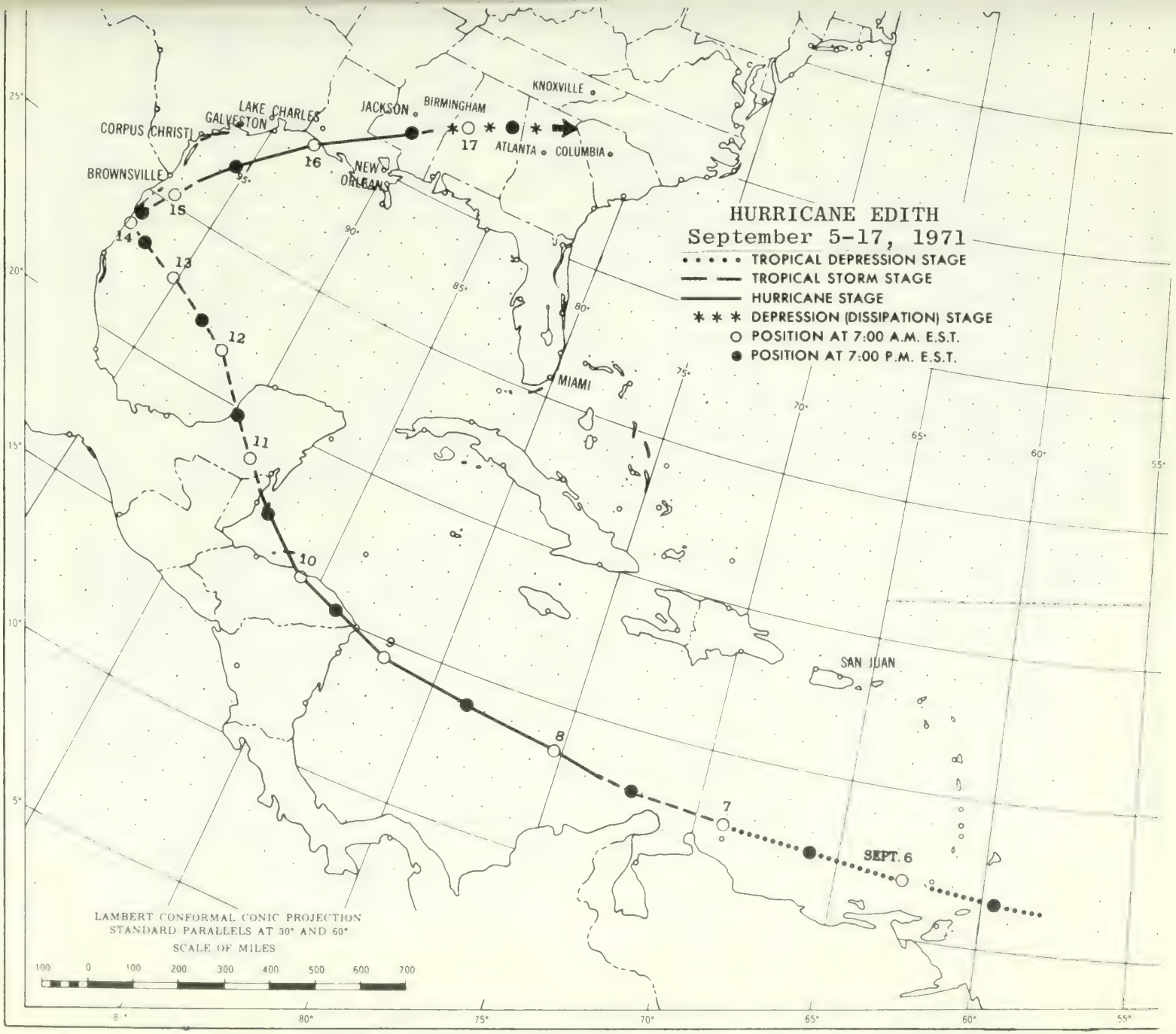
were the main problems. Minor wind damage was reportedly caused by thunderstorms, north of Gulfport. Several tornadoes were reported. One substantiated tornado was seen at about 1000 c.s.t. in Attala County. A motorist saw a small funnel dip down about 1 mile northeast of Ethel. The ropelike funnel caused intermittent damage along a 600-foot path about 25 to 50 feet wide.

Rain fell on Alabama Thursday night and Friday. Totals ranged from 1 to 3 inches with heaviest amounts in the central and southern parts of the State. Except for southeastern and extreme northwestern Georgia, rainfall was 2 inches or more over the State. There were 4-inch totals over Wilkinson, Washington, Johnson, and Laurens Counties in central Georgia and over the west-central counties of Muscogee, Chattahoochee, and Stewart. Rain began on the morning of the 16th in the west, and ended early on the 19th in the east. While there was some overflow of small streams, there was no flash flooding and only minor damage.

HURRICANE EDITH
September 5-17, 1971

Station	Date	Pressure (inches)		Wind (miles per hour)				Tide (feet)#		Storm Rainfall (inches)	Remarks
		Low	Time+	Fastest Mile	Time+	Gusts	Time+	Highest	Time+		
TEXAS											
Brownsville (WSO)	15	29.53	0600	NW 27	0958	W 32	1604	1.8	0515	2.34	
Corpus Christi	15	29.60	1620	NE 21	1213	NE 28	1318	2.2	0900	0.57	Tide at Port Aransas.
Freeport	16	29.54	0600	NNE 40	0500	NE 45	0500	3.0	0500		
Galveston (WSO)	16	29.54	0300	NE 35	15/2314	NE 53	15/2317	4.0	0150	0.82	
Houston (WSO) IAH	16	29.69	0155	ENE 18	15/2329	E 25	15/2209	3.3	15/1500	T	
Port Arthur (WSO)	16	29.54	0507	E 40	0443	NE 47	0443			3.02	Damage estimated at $125,000.
Sabine Pass	16	29.58	0300	NE 35	0300	NE 40	0200	4.0	0200	3.50	
LOUISIANA											
Baton Rouge (WSO)	16	29.25	1207	SE 46	1106	S 64	1122			4.31	Tornado reported in eastern residential suburbs.
Boothville	16	29.79	1500	SW 28	1234	SSW 58	1215			2.03	Tornado reported at Venice.
Cameron	16	29.39	0600	NNE 69	0700	NNE 96	0700	4.7	0400		
Lafayette	16	29.11	1014	ESE 46	0939	ESE 69	0939			5.15	
Lake Charles	16	29.49	0702	NNE 47	0803	NNE 58	0737			2.99	
Morgan City	16	29.60	1035	WSW 30	1115	SSE 72	1030	5.8	1215		Tide at Cypremort Point was 9.7 ft.
New Orleans (WSO)	16	29.71	1250	SSE 32	1105	SE 51	0921			4.64	
St. Francisville	16	29.51	1240	WNW 50	1135	WNW 61	1144			4.10	
MISSISSIPPI											
Bay St. Louis	16			SW 45	1230	SW 65	1230			2.85	
Columbia	16	29.61	1530	SE 42	1500	SE 55	1500			1.18	
Hattiesburg	16	29.74	1455	NW 45	1455	NW 70	1455				
Jackson (WSO)	16	29.71	1822	NE 33	1934	NE 49	1702			4.77	
							1806				
Liberty	16									6.15	
McComb	16	29.00	1400	WNW 21	1600	SSE 40	1300			2.85	
Tylertown	16	29.34	1500	SE 35	1500	SE 48	1500			3.45	
ALABAMA											
Mobile (WSO)	16	29.83	1645	SSE 29	1405	S 43	1403	2.7	1900	2.33	
Birmingham (WSO)	17	29.90	0300	NE 18	16/2319	E 31	16/2301			1.94	
FLORIDA											
Pensacola (WSO)	16	29.88	1658	S 21	1759	S 30	1759	0.8		0.53	Tornado reported near Pensacola.

+ Time is CST
Tide above MSL


HURRICANE EDITH
September 5-17, 1971
TROPICAL DEPRESSION STAGE
TROPICAL STORM STAGE
HURRICANE STAGE
DEPRESSION (DISSIPATION) STAGE
POSITION AT 7:00 A.M. E.S.T.
POSITION AT 7:00 P.M. E.S.T.
CORPUS CHRISTI
GALVESTON
LAKE CHARLES
JACKSON
BIRMINGHAM
KNOXVILLE
ATLANTA
COLUMBIA
BROWNSVILLE
NEW ORLEANS
MIAMI
SAN JUAN
SEPT. 6
LAMBERT CONFORMAL CONIC PROJECTION
STANDARD PARALLELS AT 30° AND 60°
SCALE OF MILES
100 0 100 200 300 400 500 600 700

HURRICANE FERN — SEPTEMBER 3 - 13, 1971

Dick De Angelis
Marine Services
Environmental Data Service

Hurricane Fern was probably spawned by a tropical wave that had moved out of the Caribbean in the beginning of the month. Early on the 3d, a tropical depression was located in the Gulf of Mexico near 27.5° N., 87.5° W. This depression moved slowly northwestward to north of Lake Ponchartrain by the morning of the 5th. At this point, the system turned southwestward. The depression drenched the New Orleans area with 6- to 7-inch rains. Once back over the warm Gulf waters, the depression began to intensify. Fern reached tropical storm strength late on the 7th as her central pressure dropped to 1000 mb. near 27.0° N., 92.5° W. The intensifying storm then began to turn and, on the following day, was heading toward the northwest and was generating hurricane-force winds near her center. Fern's central pressure was down to 987 mb. as she became a hurricane. Gale-force winds were already raking the coast from Galveston to Freeport on the night of the 9th, with Fern's center still 100 miles to the southwest. As the hurricane approached the Texas coast during the daylight on the 10th, she began to swing toward the southwest. Her central pressure dropped to its lowest point - 979 mb. (28.91 inches) - at 0600 c.s.t. on the 10th. Then part of the eye passed over Freeport. It moved past Port O'Connor, near Seadrift, and was over Matagorda Island by about 1100 c.s.t. The eye continued to hug the coastline until it neared Rockport, where it slowed and began to drift inland. At about 1300 c.s.t., the eye was southeast of Austwell. By 1500, it was east of Bayside. The now tropical storm hesitated for a few hours, and then around 1910 c.s.t. the eye moved into Aransas Pass. At 2030 c.s.t. Aransas Pass recorded a 981.4 mb. pressure. The lowest reported pressure by a land station was a 979.34 mb. reading at Ingleside. About 2-1/2 hours after eye passage Aransas Pass was belted with an east wind of 55 m.p.h. with gusts to 78 m.p.h. Indications are that the storm accelerated and by early morning was just south of Hebbronville. Later, the tropical storm crossed the Mexican border near Zapata. On the 13th, she finally broke up in the mountains north of Monterrey.

Hurricane Fern produced only moderate tides and winds, but her heavy rainfall was responsible for destructive floods. Maximum sustained winds of 66 m.p.h. were recorded at Corpus Christi. Sustained winds ranged up to 85 m.p.h. at Port O'Connor, where a wind gage was blown away when gusts reached 100 m.p.h. Gale-force winds were experienced from just north of Galveston to near Brownsville. Gusts of 60 m.p.h. or more were reported from Galveston to south of Corpus Christi. Tides from Port Arthur to Brownsville ran 2-6 feet above mean sea level with 5- to 6-foot levels confined to the Galveston-Freeport area. A tide 6 feet above m.s.l. was observed at the U.S. Coast Guard Station at Freeport at 0800 c.s.t. on the 10th.

Fern produced heavy rains in an area north and west of Corpus Christi. Downpours from 15 to 26 inches soaked Bee, Refugio, and San Patricio Counties. Highest totals were 26.0 inches 2 miles south-southeast of Beeville, 25.8 inches 3 miles north of Skidmore, and 21.5 inches at Papalote. Totals of 10 to 15 inches fell over Calhoun, Aransas, Matagorda, Goliad, and Dural Counties. Along the coast from Galveston to Rockport, rainfall amounts increased from 5 inches up to 12 inches. Five-inch totals extended inland as far as Houston. Amounts dwindled rapidly to 1.07 inches near Port Arthur in the north and to a paltry 0.02 inch at Brownsville. Fern was still potent as she made her way into Mexico. Laredo, some 75 miles north of the center, recorded 8.28 inches.

While dumping 10 to 26 inches of rain on the Coastal Bend area, Fern caused the worst flooding in south Texas since Hurricane Beulah in September 1967. Numerous towns were isolated, and many were flooded. The heavy rainfall sent floodwaters crashing over Wesley Seale Dam at Lake Corpus Christi, causing major flooding along the lower Nueces River. Considerable flooding also occurred on the Frio, Lavaca, Navidad, San Antonio, Guadalupe, Mission, and Aransas Rivers. Water inundated most sections of Robstown where a levee broke in two places. Water was 2 to 3 feet deep in some houses at Sinton. Some rural areas suffered the worst flooding of this century. In the Alice area, creeks reportedly rose to about the same height as during Beulah, but rose more rapidly and consequently caused more damage.

Five small tornadoes were observed during Hurricane Fern. Two tornadoes occurred at Texas City on the 10th, one near Riveria and Falfurrias on the 11th, and one near Orange Grove on the 12th. Total tornado damage was estimated at $17,000. There were no injuries. Six funnel clouds aloft were observed.

Because of flooding, both property and crop damage was greatest in San Patricio County. Wind damage was minimal except in Calhoun and Aransas Counties. Fortunately, most coastal area crops had been harvested prior to Fern's arrival; thus, agricultural losses were minimal - totalling $5,060,000 for the storm-affected area. While there was some permanent damage to fall and winter vegetables, and some reduction in yields and quality of cotton, sorghum, peanuts, and soybeans, the second cutting of the rice harvest was the most seriously affected by the heavy rains.

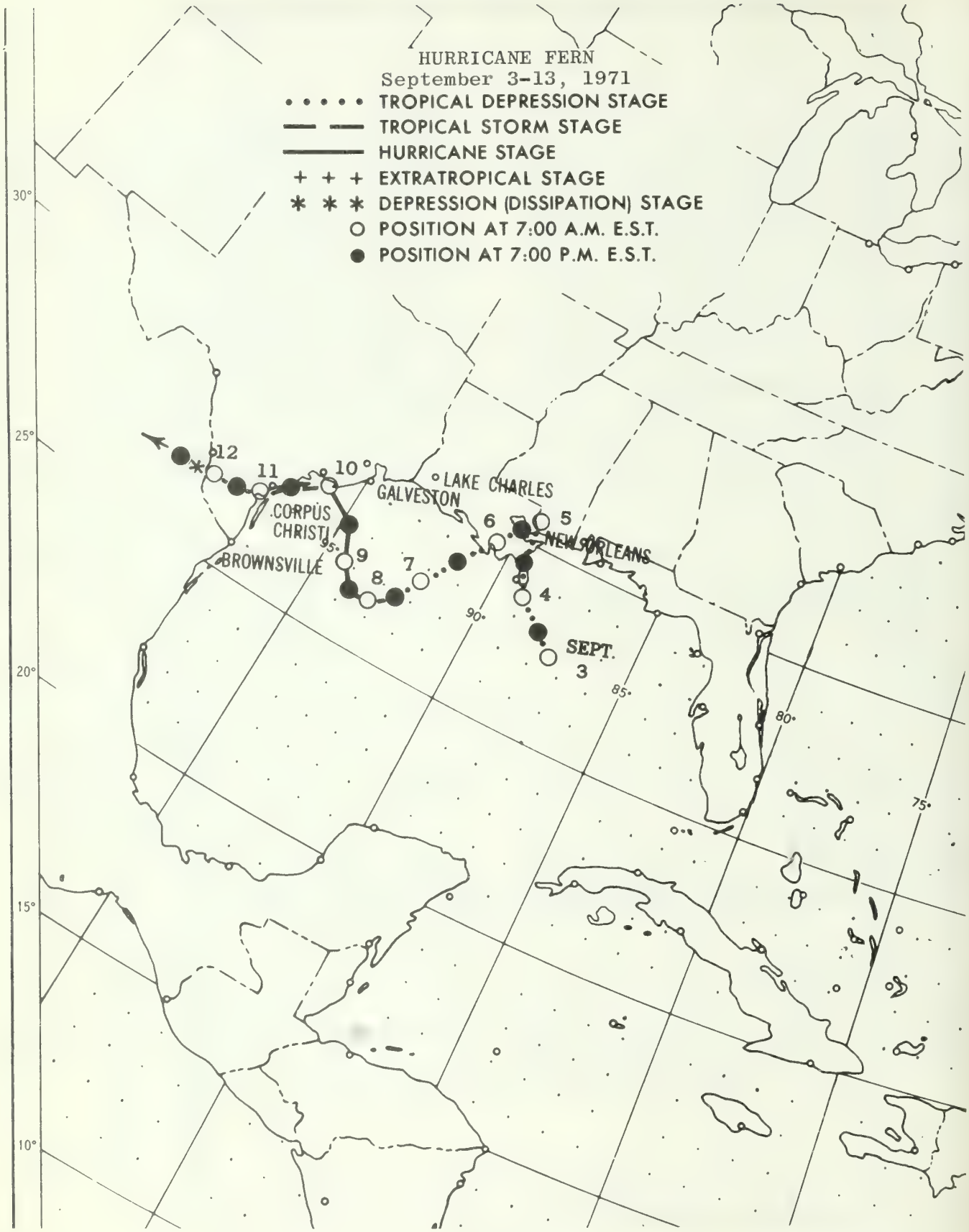
The property damage in Texas was estimated at $25.17 million, making the total storm damage $30.23 million.

Hurricane Fern was directly responsible for only two deaths in Texas. One swimmer drowned at the Corpus Christi City Marina on the 11th, and another person drowned near Refugio on the 12th.

TROPICAL CYCLONE DATA
HURRICANE FERN
September 3-13, 1971

Station	Date	Pressure (inches) Low	Pressure (inches) Time*	Wind (miles per hour) Fastest Mile	Wind (miles per hour) Time*	Wind (miles per hour) Gusts	Wind (miles per hour) Time*	Highest Tide (feet) #	Highest Tide (feet) Time	Storm Rainfall (inches)	Remarks
TEXAS											
Beaumont/ Port Arthur	10	29.60	0344	E 28	0001	NE 36	9/2341	3.0	0300	1.07	Funnel cloud sighted 20 miles west of Jefferson County Airport at 1012 on the 10th.
Houston (International Airport)	10	29.56	0310	ENE 27	1255	E 32	1255		0800	2.62	Total rainfall downtown was 4.79 in. Tide at Baytown 5.3 MSL at 0900 on the 10th.
Sabine Pass (USCG)	10	29.60	0600	E 28	0400			4.0	0540	3.50	Tide between Sabine Pass and High Island was 4.8 ft MSL.
Galveston	10	29.44	0215	E 43	9/2241	E 60	9/2238	5.5	0100	5.26	Galveston Coast Guard Station reported a peak gust of 70 m.p.h. ; 5.3 ft tide at Baytown.
Freeport	10	29.35	0700	NNE 39	9/2300	NNE 58	0130	6.0			
Palacios (FSS)	10	29.33	0556			NW 63	0430			10.38	
Victoria	10	29.44	1700	N 49	0949					6.20	
Point Comfort	10	29.36	0800	N 52	0812	N 62	0720				
Seadrift	10	29.37	1300	NNE 55	1300	NNE 65				9.48	Reports from Matagorda Island indicate winds of 60 to 70 m.p.h. with gusts to 90 m.p.h.
Bayside	10	29.20	1400	50		NW 65	1400			16.00	
Rockport	10	29.12	1915	NNE 35		NNW 56	1438			7.61	
Aransas Pass	10	29.04	2030	E 55	2355	E 78	2355	5 AN		11.50	Gusts on St. Joseph Island reported at 85 m.p.h. Thousands of swallows seen in the eye of Fern.
Corpus Christi	11	28.98	0154	NW 66	10/2118	NW 70	10/2128	3.0	2330		Tide at Port Aransas. Tide at Rockport was 3.9 ft MSL at 0500 on the 12th. One swimmer drowned at Corpus Christi City Marina on the 11th. Another reported death near Refugio on the 12th.
Brownsville (WSO)	11	29.58	1555	W 32	1434	NW 41	10/1726	2.1		0.02	

* All times are CST
\# Unless indicated, tides are above mean sea level
AN Above normal


HURRICANE FERN
September 3-13, 1971
TROPICAL DEPRESSION STAGE
TROPICAL STORM STAGE
HURRICANE STAGE
EXTRATROPICAL STAGE
DEPRESSION (DISSIPATION) STAGE
POSITION AT 7:00 A.M. E.S.T.
POSITION AT 7:00 P.M. E.S.T.
30°
25°
20°
15°
10°
95°
90°
85°
80°
75°
12
11
10
9
8
7
6
5
4
SEPT.
3
CORPUS CHRISTI
BROWNSVILLE
GALVESTON
LAKE CHARLES
NEW ORLEANS

HURRICANE GINGER — SEPTEMBER 5 TO OCTOBER 5, 1971

Dick De Angelis
Marine Services
Environmental Data Service

At midday on September 10, the National Hurricane Center proclaimed that Tropical Storm Ginger had been born, some 275 miles south of Bermuda. At midday on October 5, a bulletin was issued that Ginger was dying some 420 miles northwest of that same island. These reports marked the beginning and the end of the longest-lived hurricane to ever roam the North Atlantic Ocean. It was probably the world's longest-lived tropical cyclone. For almost the entire month of September and into October, Ginger owned a large piece of the North Atlantic, threatening any trespassing ships with hurricane-force winds and dangerous seas.

Ginger, detected as a depression on the 5th near 25.5° N., 71.5° W., wound up slowly, and it wasn't until 1200 on the 10th that she reached tropical storm strength. However, the next day near 27.9° N., 63.3° W., Ginger was a hurricane. Her well-defined eye had a 991 mb. pressure at this time. She continued on an east-northeastward heading at about a 10 m.p.h. speed. On the 12th, the ship ADONIS was whipped by 58 m.p.h. winds some 120 miles south of the storm's center. Winds near the center were about 85 m.p.h. On the 13th, Ginger continued to grow and intensify as her 959 mb. center turned eastward. This was the lowest pressure in Ginger's long life. Maximum sustained winds were up to 104 m.p.h. Suddenly, Ginger slowed and reversed her field. By the 14th, she was moving westward. While her intensity abated somewhat, Ginger remained big and strong as she meandered westward. On the 16th, 52 m.p.h. winds lashed the ATHELDUKE some 90 miles north of Ginger's center and the DALILA some 100 miles to the west.

Ginger's central pressure continued to rise on the 17th and 18th, as she turned southeastward. On the 19th and 20th, she completed a counterclockwise loop near 32° N., 52° W. After these acrobatics, the hurricane began a definite westward trek. On the 22d, Ginger crossed her path of 10 days before. At this time, her rising central pressure topped out at 995 mb., and Ginger was a large loosely organized storm with gales out to 200 miles. On the night of the 22d, gales and heavy surf began to pound Bermuda. Early the next day, Ginger slipped by Bermuda about 100 miles to the south. Bermuda experienced gale-force winds in gusts for 17 hours because of the large size and slow movement of the storm. Highest winds reported were 35 m.p.h. with gusts to 70 m.p.h. at Kindley Naval Air Station. Ginger's large circulation was also creating heavy surf along the north coast of Puerto Rico, Hispaniola, the Bahamas, and along the southeast coast of the United States.

Ginger slowed again and turned southward by the night of the 24th. At the same time, her central pressure began to fall. On the 25th, the BORNHEIM battled 58 m.p.h. winds, 150 miles northwest of the deepening pressure center. Winds rose to 85 m.p.h. near the center as swells continued to fan out and pound distant coastal areas. On the 26th and 27th, the ORE-SATURN and URSHALIM both within 60 miles of Ginger's eye encountered 60 to 70 m.p.h. winds. During this period the storm underwent another change in direction as she swung around toward the northwest. On the afternoon of the 27th, Ginger's central pressure dropped to a secondary minimum of 969 mb. Maximum sustained winds were near 100 m.p.h.

Ginger accelerated on the 29th, but then slowed the following day as she approached the North Carolina coast. She came ashore near Morehead City late on the 30th. This was close to where Tropical Storm Doria had moved inland just 1 month before. Once inland, the large storm weakened rapidly. It was just a dissipating depression by October 1. On the 2d, the weakening storm moved northward into southern Virginia, then turned eastward, and moved back out into the North Atlantic near the mouth of the Chesapeake Bay. Early on the 5th, the remnants of Ginger were last seen at 36° N., 70° W., heading east-southeastward.

As Ginger moved toward the North Carolina coast, wind gusts up to 92 m.p.h. were reported at Atlantic Beach. Gusts from 40 to 75 m.p.h. were common along the Outer Banks and the shores of Pamlico Sound. Maximum sustained winds were less than 50 m.p.h. over eastern North Carolina and southern Virginia. Ocean tides ran 2 to 4 feet above normal from Norfolk to Morehead City. Tides on Pamlico Sound and its estuaries ran 4 to 7 feet above normal. At Washington, Aurora, New Bern, and Cherry Point, tides were all 6 feet or more above normal.

Rain was heaviest along the shores of the Pamlico Sound, where 10 to 13 inches doused several east-central North Carolina counties. It was here that crops suffered heavily. Thousands of acres of corn and soybeans were seriously affected with preliminary damage estimates placed at $10 million. This was the greatest economic impact of any hurricane on North Carolina since Donna in September of 1960. Rainfall totals of greater than 10 inches were reported at Bayboro, Belhaven, Aurora, and on Roanoke Island. Property damage was minor in most areas. In areas of flooding it was termed light to moderate.

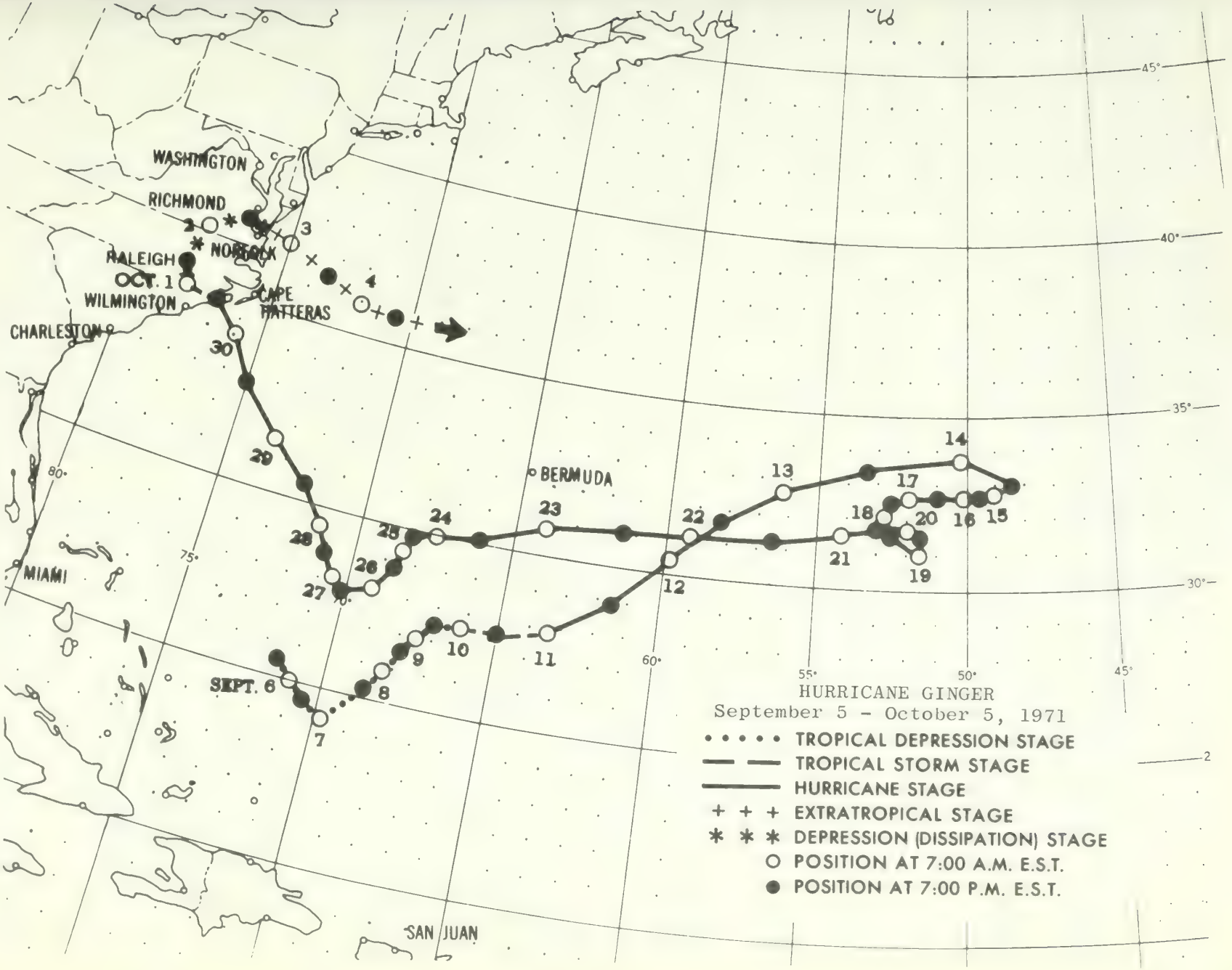
Rainfall was moderate in southern Virginia. Norfolk reported a storm total of 7.61 inches between September 30 and October 3. Totals throughout the southeastern part of the State generally exceeded 2 inches and many exceeded 5 inches. Along the Maryland-Delaware Eastern Shore, rainfall totals of 0.5 to 2 inches were common. A maximum sustained wind of 28 m.p.h. was reported at Indian River Coast Guard Station.

No deaths or injuries were reported anywhere, and there were no tornadoes associated with Ginger.

HURRICANE GINGER
September 5 - October 5, 1971

Station	Date	Pressure (inches)		Wind (miles per hour)				Tide (feet)#		Storm Rainfall (inches)	Remarks
		Low	Time+	Fastest Mile	Time+	Gusts	Time+	Highest	Time+		
NORTH CAROLINA											
Atlantic Beach	30	29.56	0130			NW 92	0305	4.0AN			
Hatteras	30	29.43	1157	SE 44	0857	SE 70	0912			9.68	Ocean tides 2-3 ft above normal.
Topsail	30	29.35	1600			WNW 58	1600				
Holden Beach	30	29.52	1700			WNW 35	1700				
Wilmington	30	29.46	1901	NW 32	1200	WNW 44	1122			1.19	
Raleigh	01	29.67	0500	NNW 32	30/1709	N 46	30/1444			3.50	
Charlotte	01	29.82	1359	N 22	30/1150	NNE 30	30/1256			2.21	
VIRGINIA											
Norfolk	30	29.77	1430	NE 49	0935	NNE 50	0920	2.5AN	1830	7.61	Near North Carolina border tides 3-4 ft above normal.
Richmond	02	29.76	1355	NE 21	30/1500	N 25	30/1320			1.83	
MARYLAND											
Salisbury (FAA)	02	29.82	0000	SSE 13	1430	SSE 26	1200			0.82	
Indian River Inlet	03	29.91	0200	NE 28	0200			2.3	1934		
Ocean City	03	29.71	0300	E 26	0700					0.33	
DELAWARE											
Dover AFB	02	29.83	1555	ENE 23	01/1406	ENE 29	01/1420			0.18	

+ Eastern Standard Time
Tide MSL


WASHINGTON
RICHMOND
NORFOLK
RALEIGH
OCT. 1
WILMINGTON
CAPE HATTERAS
CHARLESTON
MIAMI
BERMUDA
SEPT. 6
SAN JUAN
45°
40°
35°
30°
80°
75°
60°
55°
50°
45°
HURRICANE GINGER
September 5 - October 5, 1971
TROPICAL DEPRESSION STAGE
TROPICAL STORM STAGE
HURRICANE STAGE
EXTRATROPICAL STAGE
DEPRESSION (DISSIPATION) STAGE
POSITION AT 7:00 A.M. E.S.T.
POSITION AT 7:00 P.M. E.S.T.

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama	5	2			5									1		3												5	3
Alaska*																													
Arizona	3	2			5							5			1													6	
Arkansas	2	1												1	1	?													
California*																													
Colorado																				°5	C								
Connecticut																												5	
Delaware																												4	
Florida	4	3		1	4									2	1														
Georgia																												5	4
Hawaii*																													
Idaho												?				?													
Illinois								4	3			5			2	4													
Indiana	1	1		1	3			3	?					1															
Iowa								4	4			4	4	1		4													
Kansas								3				4	3		1	4	4												
Kentucky								?	?			4	?	4	1	4													
Louisiana	8	2		9	6																						50	7	7
Maine																4													
Maryland	1	1			5																							6	
Massachusetts	1	1			4							4				3												3	
Michigan														2		5												4	
Minnesota	1	1										4				5												2	
Mississippi	3	1			4						1	5	5	1		?												5	5
Missouri												4				4													
Montana											1	6																	
Nebraska									4						1														
Nevada*																													
New Hampshire												3			2	3												3	
New Jersey																												6	5
New Mexico	2	2			3																								
New York														1		4												5	
North Carolina									4			5	7			5												5	4
North Dakota																													?
Ohio	1	1			4							5		1	9	5												6	
Oklahoma												5			1	5												6	?
Oregon											1	?	4																
Pacific Area*																													
Pennsylvania	1	1			4							4		1		4												7	C
Puerto Rico*																													
Rhode Island*																													
South Carolina	1	1			3																								
South Dakota											5	5																	
Tennessee								°4	C			4		4		4													
Texas	7	5			4			5	7		2	5			1													7	7
Utah	1	1																		4	3								
Vermont												4				2													
U.S. Virgin Is.*																													
Virginia																												4	
Washington*																													
West Virginia															1														
Wisconsin	5	3		11	6							4			1	5													
Wyoming*																													

° Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS SEPTEMBER 1971

Elmer R. Nelson, Office of Hydrology

The most destructive flooding during September occurred in New Jersey and southeastern Pennsylvania. This was the second consecutive month that the most damaging floods in the nation occurred in this area. The total damages during September were estimated from $80 million to $100 million with 14 deaths.

The second most damaging flood during September occurred in southern Texas from the heavy rains accompanying Hurricane Fern. The total damages in the lower Nueces Basin and the coastal plains of Texas were estimated at $21.5 million with one death.

ATLANTIC SLOPE DRAINAGE

Heavy rains between the 11th and 14th caused minor stream overflows in western Connecticut. The rainfall totalled near 7 inches in western Connecticut with sharply reduced amounts north and eastward through New England. Damages were reported from extensive street and road flooding due to clogged sewers and insufficient capacity culverts. Underpasses and cellars were also subjected to flooding in areas of heavy downpours.

Heavy intermittent precipitation from the 11th through the 15th in southeastern Pennsylvania and central and northeastern New Jersey caused record flooding on some small creeks. Precipitation was especially heavy on the 13th when over 12 inches of rain was recorded in extreme southeastern Pennsylvania. Record flooding occurred on Wissahickon, Cobbs, and Chester Creeks in the Philadelphia, Pa., area. A 40-year record on Chester Creek was broken when the record gage height of 16.21 feet of June 25, 1950, was exceeded on the 13th by nearly 8 feet when it reached a height of about 24 feet. In North Jersey, the Pascack Brook at Westwood and Saddle River at Lodi reported record gage heights. Two separate areas recorded heavy damage due to the flooding on the 11th-14th. The Philadelphia, Chester, Delaware, Bucks, and Montgomery Counties of southeastern Pennsylvania and Bergen, Passaic, Essex, and Union Counties of northeastern New Jersey reported heavy damages and record stages. Damage estimates by Civil Defense officials range from $80 million to $100 million for both private and public sectors. These counties were declared a disaster area. In New Jersey, the disaster declared for the flood of Aug. 27-28 was extended to include all flood damages through Sept. 14. Eleven deaths were reported in southeastern Pennsylvania and three deaths in New Jersey. Around 3,000 families were evacuated in southeastern Pennsylvania and 700 families in northeastern New Jersey.

Reservoir storage in New Jersey increased again in September due to above normal rainfall. In the 13 principal reservoirs of New Jersey storage increased by about 2 billion gallons during the month. Several reservoirs were at capacity or spilling at the end of September. New York City's three reservoirs on the upper Delaware remained at about 62 percent of usable capacity at the end of September.

Heavy rains on the 30th in advance of Hurricane Ginger in eastern North Carolina caused only minor rises on the last day of September but some bankfull stages and overflow early in October.

Major flash flooding occurred at and upstream from Elkin, N. C. on Elkin River (Big Elkin Creek) in the Yadkin-Pee Dee Basin. Minor flooding occurred along the Yadkin River at and downstream from Elkin, N. C., and along the Broad River at and below Blair, S. C. Minor flooding was observed along the Waccamaw River and the lower reaches of the Edisto River in South Carolina and the Lumber River in North Carolina. Losses occurred mainly on tributaries and small streams of the Yadkin River in and near Elkin, N. C. The total losses were estimated at $308,000.

EAST GULF OF MEXICO DRAINAGE

Heavy precipitation on the 17th and 18th associated with tropical depression Edith caused moderate rises on the Chattahoochee and slight flooding on tributaries in Georgia. No damage resulted from the slight overflows.

Flash flooding occurred in southern Mississippi from the heavy rains associated with Edith. Low-lying roads and areas of poor drainage were briefly inundated. Little damage resulted from the flash flooding except in Pike County where there was some road damage.

Minor flooding occurred on the lower Pearl River at Monticello, Miss., on the 17th-18th and at Bogalusa, La., on the 19th-23d. Farming and timber cutting operations were delayed by the light flooding. The overflow at Bogalusa, La., hampered work at construction sites adjacent to the river.

MISSISSIPPI SYSTEM

Missouri Basin--River levels in the Missouri Basin remained generally at low flow during September.

Localized excessive rains of 2 to more than 4 inches on the North Fork of the Solomon River in Kansas during the evening of Aug. 31 and early morning of Sept. 1 produced some minor small stream flooding. Rises were well within banks along the main stem of the Solomon River. Damages, if any, were minor.

Ohio Basin--Heavy rain on the 11th-14th produced considerable flooding in the Monongahela Basin in West Virginia and Pennsylvania on the 14th-15th. Four to 5.1 inches of rain during the night of the 13th-14th produced major flooding on the Youghiogheny River and tributaries from Confluence, Pa., to Sutersville, Pa. The runoff was excessive as the soil was already saturated from previous rains. The greatest damage occurred in Connellsville, Pa., where as many as 50 homes were affected. Flooding and a considerable number of evacuations occurred in West Newton and Sutersville, Pa. This was the highest water on the Youghiogheny below Connellsville since the major flood of 1954. A bucket survey showed a storm total of 9.3 inches at Champion, Pa., where major flooding occurred on Indian Creek.

Considerable flash flooding occurred on the mountain streams in Pennsylvania on the 14th. The high water on Dunbar Creek cut a new channel through a part of the city of Dunbar. Fifty homes were affected in Dunbar, Pa., 15 in Dawson, Pa., and 15 in Everson, Pa. Up to 12 bridges were destroyed in Fayette County which was declared a disaster area. The heaviest rains occurred in eastern Fayette County. Heavy rains and flooding occurred in Cambria and Somerset Counties. Other small towns hard hit were Laurelville on Jacobs Creek and Melcroft on Indian Creek. Some 20 homes were flooded by Jacobs Creek in Scottdale, Pa. Other towns affected were Monarch, Markleysburg, Normalville, and Springfield township.

Heavy rains in excess of 3 inches on the 12th-13th produced minor flooding on the Tygart, Cheat, and lower West Fork Rivers in West Virginia. The rains continued for another 48 hours with an additional amount

of 1 to 2-1/2 inches. Little, if any, damage occurred in this area.

Locally heavy rain (4.21 inches) during the night of the 6th-7th caused some flooding of farmland in Roane County around Walton, W. Va. Most of the rain fell on the 6th between 8 p.m. and 11 p.m. Several county roads in Kanawha County were inundated from the heavy rain. Some streets and basements in the Charleston, W. Va., area were also flooded. The county Agricultural Extension agent estimated damage in Roane County at $2,200.

Locally heavy rains on the 12th-13th caused some minor flooding in Ritchie, Wetzel, Nicholas, Roane, Braxton, Clay, and Doddridge Counties in West Virginia. Some highways were flooded in low places. The Clay County agent reported 100 acres of farmland flooded and some wooden bridges washed out.

A flash flood occurred on the 27th on the Little Birch River in the southeastern corner of Braxton County in West Virginia due to locally heavy rain. Some basements and a road were flooded. Damage was minor.

Arkansas Basin--Flash flooding occurred in the Bird Creek Basin in Oklahoma from torrential rains on the 4th-6th and 18th-19th. During the first storm, the precipitation averaged 6 to 8 inches with some unofficial amounts of up to 16 inches reported west and southwest of Tulsa. Precipitation in the Spring River Basin averaged around 3 inches. During the second storm, the precipitation averaged 3 to 4 inches.

Bird Creek reached its highest crest since September 1961 during the first rise. Pole Cat Creek crested about 7 feet above flood stage at Sapulpa, Okla., during the first storm and 2 feet above flood stage during the second storm. Flooding occurred from just below Heyburn Dam to its confluence with the Arkansas River south of Tulsa, Okla. Spring River at Carthage, Mo., crested 3 feet above flood stage on the 6th but remained within banks downstream at Waco, Mo. Damages were extensive in Oklahoma especially at Kiefer, Jenks, Sperry, and northeastern Tulsa. Houses were flooded, roads and bridges washed out, crops damaged, livestock drowned, and farm machinery and fences damaged. Three people lost their lives. Flood damages for the city of Tulsa and surrounding counties were estimated in excess of $2 million. Little or no significant damage resulted from the flooding on Spring River in southwest Missouri.

Heavy rains totalling more than 5 inches during the 24-hour period ending on the morning of the 6th caused minor flooding on the Deep Fork at Begga, Okla., on the 6th-8th. The crest on the 6th was 1.4 feet above flood stage.

Red Basin--Heavy rain during the evening of the 4th caused flooding on the North Fork of the Red River and Headrick, Okla., on the 5th-6th. Five to 7 inches of rain were reported in 2 to 3 hours in the Elk Creek Basin in western Oklahoma. The areas near Hobart and Altus, Okla., experienced flash flooding during the evening of the 5th. The damages were estimated at $60,000.

The Red River at Burkburnett, Tex., rose to near flood stage on the 19th and 26th due to heavy thundershowers. Beaver Creek at Electra, Tex., reached near flood level on the 25th.

WEST GULF OF MEXICO DRAINAGE

Light flooding occurred on the Mermentau Rivers at Mermentau, La., on the 19th-22d and on the Calcasieu River at Hineston, La., on the 21st-22d. These overflows were due to heavy rainfall associated with Hurricane Edith which moved inland on the 16th just east of the Mermentau River. The heaviest rainfall occurred at Mermentau which totalled 8.21 inches during the storm.

Flash flooding occurred in Garland and Mesquite, Tex., during the evening of the 24th. Two inches of rain in a 2-hour period caused the flash flooding.

Locally heavy rains of 4 to 6 inches during the morning of the 24th produced nearly a 5-foot overflow on the San Saba River at San Saba, Tex. Damage was insignificant and was confined to farm roads and low water crossings. A major rise occurred on the Colorado River of Texas on the same date from Winchell, Tex., to Lake Buchanan, but no overflow occurred.

Heavy rainfall, associated with Hurricane Fern, on the 10th-12th caused flooding on the Navidad, Lavaca, and Guadalupe Rivers in Texas. The heaviest rainfall reported during the 3 days was 17.75 inches on the Guadalupe River at Goliad, Tex. Rainfall amounts generally ranged from 4 to 8 inches. Some flooding occurred on the San Antonio River southward to its confluence with the Guadalupe River. No significant damage resulted from the overflows.

Hurricane Fern moved inland on the Texas coast about 70 miles southwest of Galveston about 6 a.m. on the 10th with minimal hurricane force winds dominating the weather. Only minor property damage, by hurricane standards, resulted from storm tides as the tropical cyclone moved along the coastline to Corpus Christi with winds 60 to 70 m.p.h. From Corpus Christi the storm turned southwestward to the Rio Grande south of Laredo. Ten to 20 inches of rain fell in the coastal counties northwest of Corpus Christi and near 10 inches south of Laredo, Tex. During the approach of the storm, northwesterly gale winds splashed water from Lake Corpus Christi over Wesley Seale Dam, causing flash flooding along the extreme lower Nueces beginning near midday on the 10th.

Flash flooding occurred throughout the coastal plains from the Nueces River northeastward during the evening and night of the 10th. Drainage flooding and stream flooding along the creeks and small rivers continued to spread southwestward later that night through the 12th. Fields were flooded throughout the area with considerable soil erosion, but crop damage was relatively minor as most harvesting had been completed. Most of the roads in the coastal plains were closed by the high water and most of the towns were isolated at one time or another.

Flooding was extensive in the towns. At Refugio, drainage flooding was added to by water from the Mission River, which reached a stage of 41 feet on the night of the 11th, 2 feet higher than the previous record, and isolated the town for 12 hours. Automobiles were washed off highways in the vicinity, and water was up to 10 feet deep in parts of the town. Sixty to 65 buildings were flooded including 37 homes, and 75 families were evacuated. A traveler seeking to cross the floodwaters from Melon Creek on U. S. Highway 77 north of the town was drowned.

In San Patricio County, the town of Sinton was flooded with water up to 4 feet deep. Fifteen hundred homes sustained major damage, and 2,300 persons were evacuated. Sixty persons were evacuated at Mathis, 100 to 150 at Odem, 20 to 30 at Ingleside, and 75 at Taft. At Taft, 200 homes and 50 businesses were damaged.

In Nueces County, Robstown suffered the most extensive flood in its history. Twenty-two hundred persons were evacuated. At Driscoll, 200 homes and 30 businesses were damaged, the water supply was contaminated, and 200 persons were evacuated. At Bishop,

300 homes and 40 businesses were damaged. About 50 homes and businesses were damaged in each of the towns of Banquete and Agua Dulce.

In Jim Wells County, heavy damage occurred to streets and homes, and in Alice where about 1,200 persons were evacuated.

Drainage flooding was relatively minor in Kleberg and Brooks Counties, but Falfurrias, in Brooks County, sustained heavy stream flooding from several creeks which run through the vicinity and drain large areas of Jim Wells, Duval, Brooks, and Jim Hogg Counties. More than 500 persons were evacuated, and 500 homes and businesses were damaged.

On the extreme lower Nueces River, rainfall runoff added to the flooding which resulted from splashover at Wesley Seale Dam and raised the water level at Calallen to 9 feet, 2 feet above flood stage, by the evening of the 11th. Major Flood Warnings were issued in the morning of the 12th. The river continued to rise, reaching a stage of nearly 14 feet at Calallen in the morning of the 13th, which was second only to the Hurricane Beulah flood of 1967. Many persons were evacuated by helicopter.

Runoff into the middle Nueces, mainly from creeks to the south, but also from the lower Frio, caused flooding to begin on the 12th from above Tilden to Lake Corpus Christi. Flooding became extensive about the 15th, and increasing flow through the lake brought a second rise and extensive flooding on the extreme lower Nueces from about the 19th through the 22d. The river receded below flood stage at all points by the end of the month.

The total damages in the lower Nueces Basin and the coastal plains were estimated at $21.5 million.

GULF OF CALIFORNIA DRAINAGE

Colorado Basin--Flash flooding was reported in portions of southern Arizona on Sept. 1-8 and on Sept. 29-30. Flash flooding occurred at Tucson, Ariz., on the 1st, 2d, 8th, and 29th and at Yuma, Ariz., on the 29th-30th.

Flooding occurred on the Little Colorado River in northeastern Arizona from Sept. 29 to Oct. 1. It crested at Winslow, Ariz., on Sept. 30 to Oct. 1. Damage from the flooding was estimated at $1.4 million.

ALASKA

Tazlione, the lake dammed by Tazlina Glacier in the Copper Valley began releasing its water into Tazlina Lake during the latter part of August. One cabin was flooded from the 6-foot rise in the lake during early September. Due to the advance warning of the breakout by the National Weather Service, food supplies and equipment were removed from the cabin and no damage resulted. The highest water from the outburst of Tazlione crested in the Tazlina River at the Valdez highway bridge on Sept. 4. The U. S. Geological Survey reported that the river rose about 6 feet at the bridge site but did not overflow. No flooding occurred along the Copper River downstream from its confluence with the Tazlina River.

An aerial reconnaissance by the National Weather Service on Sept. 10 revealed that the lake dammed by Skilak Glacier on the Kenai Peninsula was dumping and may threaten residences along the lake and the Kenai River. The exact day the release of water began is not known but began sometime between Sept. 3 and Sept. 8. The outburst of water from the dump resulted in a 4- to 5-foot wave on the 38-square-mile Skilak Lake and a rise of 3 feet, but no flooding, on the Kenai River. The previous time the lake overflowed, in January 1969, extensive damage occurred to cabins along the lake and the Kenai River. The glacier-dammed lake on Skilak Glacier requires 2 to 3 years to fill to capacity and should not present a flood hazzard again until late 1973.

The first statement warning of possible flooding was issued by the National Weather Service River Forecast Center on Aug. 27. Jokulhlaup statements were issued twice weekly through Sept. 14. Damage to areas that were flooded was minimal as a result of the timely and accurate warnings.

PUERTO RICO

Locally heavy showers caused flooding on the Mayaguesino River, a tributary of the Anasco River on Sept. 2. Minor damages resulted to some houses at the community of Maravilla near the town of Las Marias.

Heavy thundershowers over the northwest central portion of Puerto Rico during the afternoon of the 8th caused some minor flooding in Aguada and Aguadilla. Some people living near the river in the town of Aguada were evacuated by the Civil Defense.

FLOOD STAGE DATA

(All dates in September unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft.			*Ft.*	
ATLANTIC SLOPE DRAINAGE					
Ramapo:					
Mahwah, N. J.	8	12	12	9.0	12
Pompton Lakes, N. J.	2	13	14	2.4	13
Saddle:					
Lodi, N. J.	5	12	13	11.0	13
Passaic:					
Chatham, N. J.	6	12	12	9.0	12
Little Falls, N. J.	7	14	17	8.0	15
Millstone:					
Blackwells Mills, N. J.	7	13	13	10.6	13
Raritan:					
Manville, N. J.	12	12	13	15.1	12
Assunpink Creek:					
Trenton, N. J.	7	13	14	8.8	14
Perkiomen Creek:					
Graterford, Pa.	11	13	14	16.2	13
Rancocas Creek:					
Pemberton, N. J.	2.7	13	15	3.0	14
Schuylkill:					
Norristown, Pa.	17	13	14	19.3	13
Philadelphia, Pa.	11	13	14	13.3	14
Neshaminy Creek:					
Langhorne, Pa.	9	13	13	9.2	13
Brandywine Creek:					
Chaddsford, Pa.	9	13	14	14.3	13
Wilmington, Del.	11	13	14	13.8	14
Yadkin:					
Elkin, N. C.	16	19	19	19.4	19
Elkin:					
Elkin, N. C.	U	19	19	U	U
		21	21	U	U
Lumber:					
Lumberton, N. C.	9	18	21	9.1	18-21
Waccamaw:					
Conway, S. C.	7	Aug. 18	1	# 8.0	Aug. 19
Broad:					
Blair, S. C.	14	20	20	#16.8	20
Edisto:					
Givhans Ferry State Park, S.C.	10	Aug. 18	2	#12.8	Aug.23-24
EAST GULF OF MEXICO DRAINAGE					
Pearl:					
Monticello, Miss.	19	17	18	19.1	17
Bogalusa, La.	15	19	23	17.8	21
MISSISSIPPI SYSTEM					
Ohio Basin					
Tygart:					
Belington, W. Va.	14	14	15	14.6	15
Philippi, W. Va.	17	14	15	19.0	14
West Fork Monongahela					
Clarksburg, W. Va.	7	14	14	7.05	14
Cheat:					
Parsons, W. Va.	11	14	14	11.95	14
Rowlesburg, W. Va.	12				

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft.			*Ft.*	
MISSISSIPPI SYSTEM - Continued					
Ohio Basin - Continued					
Youghiogheny:					
Confluence, Pa.	12	14	14	13.15	14
Connellsville, Pa.	16	14	14	18.6	14
Sutersville, Pa.	20	14	15	24.6	14
Monongahela:					
Lock 2, Braddock, Pa.	19	14	14	19.5	14
Arkansas Basin					
Bird Creek:					
Sperry, Okla.	21	5	8	29.0	8
		18	19	22.5	19
Owasso, Okla.	24.5	5	9	#33.1	8
		18	20	#26.1	19
Spring:					
Carthage, Mo.	12	M	M	15.0	6
Deep Fork:					
Beggs, Okla.	18	6	8	19.4	6
Red Basin					
North Fork Red:					
Headrick, Okla.	12	5	6	15.45	6
WEST GULF OF MEXICO DRAINAGE					
Mermentau:					
Mermentau, La.	5	19	22	5.4	20,21
Calcasieu:					
Hineston, La.	12	21	22	12.6	22
San Saba:					
San Saba, Tex.	24	24	25	28.7	24
Navidad:					
Ganado, Tex.	21	12	15	27.45	13
Lavaca:					
Edna, Tex.	21	12	14	24.6	13
Guadalupe:					
Victoria, Tex.	21	12	12	22.3	12
Mission:					
Refugio, Tex.	20	11	12	41.0	12
Frio:					
Tilden, Tex.	12	13	13	14.05	13
Calliham, Tex.	12	12	14	14.0	12
Nueces:					
Tilden 11 S, Tex.	14	Aug. 9	4	20.1	Aug. 10
				22.05	Aug. 21
		12	23	23.5	16
Three Rivers 2 S, Tex.	25	Aug. 11	1	33.0	Aug. 13
				40.5	Aug. 23
		12	22	41.2	17
Mathis 3 SW, Tex.	15	Aug. 8	3	26.0	Aug. 14
				32.1	23
		10	25	39.2	12
				32.2	19
Calallen, Tex.	7	Aug. 9	5	8.7	Aug. 17
				10.6	Aug. 26
		11	27	13.9	13
				10.8	20

* Provisional M Missing

Highest Stage Observed U Unknown

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	86	14.8	13.2	20	.6
1000	30	172	14.8	12.4	22	1.1
950	30	608	15.2	11.3	24	2.0
900	30	1,066	13.0	9.3	26	3.4
850	30	1,545	10.7	5.5	27	4.8
800	30	2,050	8.9	.4	27	5.3
750	30	2,583	6.7	-3.9	27	6.7
700	30	3,146	3.6	-7.1	27	7.3
650	30	3,745	.7	-12.3	27	8.4
600	30	4,385	-2.3	-16.5	27	10.1
550	30	5,071	-5.8	-21.8	27	11.4
500	30	5,812	-10.5	-26.3	27	11.5
450	30	6,615	-15.7	-31.6	27	13.2
400	30	7,492	-22.0	-36.6	27	14.6
350	30	8,464	-29.2	-44.0	27	16.2
300	30	9,544	-37.6	-52.6	27	18.5
250	30	10,777	-47.0		27	20.1
200	30	12,225	-56.0		27	20.6
175	30	13,068	-59.3		27	20.7
150	30	14,025	-62.7		27	19.4
125	30	15,143	-65.1		27	16.7
100	30	16,503	-63.9		28	12.9
80	30	17,877	-61.6		28	6.5
70	30	18,709	-59.5		29	4.1
60	30	19,677	-58.0		31	2.0
50	29	20,834	-56.0		32	1.4
40	29	22,260	-53.8		33	.8
30	28	24,126	-50.7		03	.9
25	27	25,322	-49.3		04	1.0
20	26	26,793	-47.1		08	2.0
15	26	28,705	-45.5		07	2.6
10	22	31,429	-42.2		18	.9
7						
5						
4						

ALBUQUERQUE, N. MEX. — 839 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1,619	13.1	2.5	08	2.3
1000	30	114				
950	30	559				
900	30	1,023				
850	30	1,509				
800	30	2,022	14.5	-.7	19	.7
750	30	2,564	11.6	-3.1	29	2.8
700	30	3,137	7.8	-6.3	26	5.2
650	30	3,744	3.7	-9.1	26	7.0
600	30	4,389	-.7	-14.3	26	8.0
550	30	5,078	-5.6	-19.1	27	9.2
500	30	5,819	-9.9	-27.5	26	9.9
450	30	6,623	-15.4	-32.9	26	11.9
400	30	7,502	-21.6	-38.7	26	12.6
350	30	8,475	-28.9	-43.9	25	13.9
300	30	9,555	-37.3	-51.5	26	15.6
250	30	10,792	-45.8		26	17.7
200	30	12,251	-53.9		26	19.5
175	30	13,100	-58.4		26	18.8
150	30	14,058	-63.5		26	17.2
125	29	15,169	-68.2		27	15.0
100	29	16,501	-69.8		27	8.9
80	29	17,843	-65.5		27	3.0
70	29	18,660	-62.9		18	.5
60	29	19,615	-60.5		13	2.0
50	29	20,759	-57.8		10	3.0
40	28	22,173	-55.6		06	4.6
30	26	24,021	-52.8		09	8.4
25	26	25,203	-50.9		09	7.7
20	26	26,663	-49.0		08	7.5
15	24	28,568	-46.5		09	8.0
10	18	31,285	-42.9		09	7.6
7	7	33,738	-39.9			

AMARILLO, TEXAS — 892 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1,095	14.6	[illegible]	22	2.2
1000	30	115				
950	30	557				
900	30	1,019				
850	30	1,505	16.2	8.5	21	6.6
800	30	2,020	14.8	[illegible]	23	7.0
750	30	2,564	11.7	1.5	24	6.4
700	30	3,138	7.9	[illegible]	25	5.7
650	30	3,745	4.2	-7.4	25	5.3
600	30	4,392	.2	-13.3	25	5.6
550	30	5,084	-4.1	-18.7	25	6.2
500	30	5,829	-9.0	[illegible]	25	7.0
450	30	6,637	-14.4	[illegible]	26	9.0
400	30	7,519	-20.7	-35.9	25	10.7
350	30	8,495	-28.2	[illegible]	25	12.2
300	30	9,579	-36.8	-48.6	25	15.1
250	30	10,817	-46.1		25	18.0
200	30	12,272	-54.7		26	22.5
175	30	13,118	-59.2		26	21.5
150	30	14,072	-64.3		26	19.4
125	28	15,185	-69.1		26	14.3
100	28	16,522	-69.5		25	6.5
80	22	17,867	-66.1		21	.6
70	21	18,686	-63.6		09	2.3
60	21	19,640	-60.6		10	3.5
50	21	20,783	-57.7		10	3.6
40	21	22,198	-55.5		08	4.8
30	21	24,044	-52.7		08	7.6
25	20	25,227	-50.5		09	7.8
20	19	26,689	-47.8		09	7.3
15	16	28,601	-45.5		08	8.0
10	13	31,339	-42.6			

* ANCHORAGE, ALASKA — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	45	6.5	4.2	15	1.1
1000	30	88			17	1.2
950	30	511	6.5	.8	16	2.1
900	30	953	3.6	-1.2	15	2.5
850	30	1,414	.3	-3.3	15	[illegible]
800	30	1,899	-2.4	[illegible]	17	2.5
750	30	2,408	-5.4	-9.7	19	2.7
700	30	2,947	-8.4	-13.6	21	3.1
650	30	3,519	-11.6	-17.9	23	3.7
600	30	4,129	-15.1	-21.0	23	4.5
550	30	4,782	-19.1	-25.3	24	5.6
500	30	5,485	-23.5	-29.9	24	7.5
450	30	6,248	-28.3	-35.1	24	8.5
400	30	7,083	-33.7	-41.5	25	11.2
350	30	8,010	-40.2	-44.1	24	13.1
300	30	9,043	-47.5		23	14.2
250	30	10,230	-53.5		24	15.5
200	29	11,672	-51.0		25	14.8
175	29	12,542	-50.5		25	13.1
150	29	13,547	-50.6		25	12.1
125	29	14,734	-51.4		24	10.9
100	29	16,184	-50.8		24	9.9
80	28	17,632	-51.0		25	7.8
70	28	18,502	-50.5		24	7.1
60	27	19,511	-51.0		25	6.5
50	27	20,696	-51.5		25	5.9
40	26	22,141	-51.4		26	6.0
30	20	24,006	-52.0		28	6.5
25	19	25,194	-51.6		28	6.1
20	14	26,654	-51.7		29	4.4
15	11	28,514	-51.7		32	6.6

* ANNETTE, ALASKA — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	37	9.5	[illegible]	[illegible]	[illegible]
1000	30	[illegible]			33	[illegible]
950	30	544	[illegible]	[illegible]	[illegible]	[illegible]
900	30	[illegible]	4.9	[illegible]	[illegible]	3.2
850	30	[illegible]	2.4	[illegible]	19	3.2
800	30	[illegible]	.0	-4.5	21	3.7
750	30	2,456	-2.5	[illegible]	[illegible]	[illegible]
700	30	[illegible]	-5.8	-12.2	25	5.2
650	30	3,578	-9.1	-16.0	25	6.2
600	30	[illegible]	-12.9	-21.1	25	[illegible]
550	30	[illegible]	-17.1	[illegible]	[illegible]	8.6
500	30	5,560	-21.8	[illegible]	[illegible]	8.8
450	30	6,328	[illegible]	[illegible]	27	10.2
400	29	7,171	-32.5	[illegible]	28	11.0
350	29	8,102	-38.9	[illegible]	28	14.6
300	29	[illegible]	-46.1		28	16.7
250	29	10,337	-51.8		29	18.1
200	29	11,781	-52.4		29	17.2
175	29	12,645	-52.4		29	17.0
150	29	13,640	-53.4		28	15.1
125	29	14,810	-54.5		29	13.6
100	27	16,249	-54.5		29	10.1
80	[illegible]	17,677	-54.7		30	8.3
70	27	18,531	-54.7		30	6.8
60	26	19,518	-54.6		30	5.4
50	26	20,685	-54.6		32	3.5
40	26	22,116	-54.1		34	3.8
30	25	23,960	-54.4		35	4.5
25	23	25,133	-53.6		36	4.6
20	23	26,571	-52.7		35	4.6
15	20	28,444	-51.5		35	5.4
10	18	31,089	-48.8		33	4.0
7	13	33,477	-45.1		30	3.7
5	8	35,731	-41.5			
4	5	37,195	-40.3			

ATHENS, GEORGIA — 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	246	18.9	17.8	02	1.4
1000	30	151				
950	30	595	19.7	16.1	07	2.4
900	30	1,060	17.6	13.3	09	1.8
850	30	1,547	14.8	8.9	10	1.5
800	30	2,059	12.1	4.9	12	.5
750	30	2,597	9.4	-.2	29	.5
700	30	3,167	6.5	-4.3	30	1.4
650	30	3,773	3.5	-8.4	28	2.2
600	30	4,418	.1	-14.0	27	2.3
550	30	5,110	-4.0	-19.0	28	2.4
500	30	5,856	-8.6	-22.9	28	3.6
450	30	6,665	-13.7	-28.9	28	4.1
400	30	7,550	-19.6	-36.6	27	4.8
350	30	8,531	-26.7	-42.5	28	5.9
300	30	9,622	-35.0	-50.1	28	8.0
250	30	10,868	-44.4		28	11.1
200	30	12,330	-54.8		29	14.6
175	30	13,173	-60.2		29	13.3
150	30	14,122	-65.6		29	10.7
125	30	15,218	-69.9		28	7.5
100	29	16,540	-70.6		28	2.6
80	29	17,875	-66.7		03	1.1
70	29	18,689	-63.9		07	3.1
60	28	19,639	-61.3		07	4.9
50	28	20,779	-58.2		08	6.8
40	27	22,195	-55.5		09	8.0
30	24	24,046	-51.9		09	8.6
25	23	25,228	-50.6		09	9.5
20	21	26,695	-48.7		09	9.9
15	19	28,601	-46.1		08	11.0
10	17	31,328	-42.4		08	11.8
7						
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* BARROW, ALASKA — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	8	-.7	-1.1	07	.9
1000	28	111	-.6	-2.7	32	.3
950	28	519	-2.7	-4.1	28	1.6
900	28	947	-4.3	-5.4	26	1.8
850	28	1,397	-5.9	-9.1	26	2.2
800	28	1,871	-7.1	-12.5	26	3.0
750	28	2,373	-9.3	-16.5	26	3.6
700	28	2,903	-11.7	-20.2	27	3.2
650	28	3,469	-14.2	-23.6	28	3.7
600	28	4,072	-17.5	-26.7	28	4.3
550	28	4,719	-21.3	-31.3	28	5.2
500	28	5,416	-26.0	-35.9	28	5.8
450	28	6,171	-31.3	-40.5	28	6.4
400	28	6,995	-37.2	-45.3	28	8.1
350	28	7,908	-43.8		29	8.7
300	28	8,924	-51.0		28	8.9
250	28	10,095	-56.0		28	8.9
200	28	11,524	-52.0		27	6.7
175	28	12,392	-50.8		26	6.4
150	28	13,398	-50.0		25	6.8
125	28	14,591	-49.7		25	6.0
100	26	16,052	-49.2		25	6.4
80	26	17,514	-49.6		25	6.5
70	26	18,389	-49.7		25	6.6
60	25	19,398	-50.1		25	6.4
50	24	20,584	-50.7		25	5.9
40	23	22,039	-51.0		25	6.9
30	21	23,914	-51.0		25	4.3
25	14	25,109	-50.2		26	4.2
20	6	26,565	-50.4			

BARTER IS., ALASKA — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	22	15	-1.7	-2.7	25	.6
1000	22	91	-.2	-2.5	28	1.2
950	22	501	-1.3	-3.7	28	3.2
900	22	931	-3.2	-6.2	28	3.1
850	22	1,383	-4.2	-9.2	28	3.4
800	22	1,859	-6.1	-12.0	27	4.0
750	22	2,363	-8.0	-13.8	28	3.4
700	22	2,897	-10.1	-18.3	28	2.8
650	22	3,465	-13.0	-23.1	28	3.6
600	22	4,071	-16.5	-25.7	27	3.5
550	22	4,721	-20.2	-30.2	27	4.2
500	22	5,421	-24.5	-35.5	26	5.4
450	22	6,180	-29.7	-40.5	27	5.9
400	22	7,010	-35.7	-45.6	27	7.0
350	22	7,929	-41.9	-48.1	27	7.7
300	22	8,954	-49.2		27	8.3
250	22	10,135	-54.4		27	7.4
200	22	11,573	-50.8		26	6.5
175	21	12,443	-49.5		25	6.1
150	21	13,456	-48.7		25	6.5
125	21	14,654	-48.9		25	6.3
100	21	16,120	-48.7		25	5.3
80	19	17,585	-48.8		25	5.0
70	18	18,461	-48.8		25	4.3
60	18	19,473	-49.1		26	3.9
50	17	20,669	-49.6		26	3.8
40	17	22,130	-49.8		27	3.7
30	16	24,009	-49.6		29	3.8
25	16	25,203	-49.8		29	3.8
20	16	26,663	-49.8		28	3.6
15	14	28,588	-48.5		29	4.1
10	8	31,247	-45.3			

BETHEL, ALASKA — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	21	39	4.6	3.6	19	1.0
1000	21	98			19	1.8
950	21	518	4.7	.7	18	3.8
900	21	957	2.3	-1.6	19	4.5
850	21	1,417	-.6	-4.8	20	4.9
800	21	1,900	-2.6	-9.0	21	5.4
750	21	2,410	-5.4	-12.0	22	5.4
700	21	2,948	-8.4	-16.2	22	5.9
650	21	3,520	-11.7	-19.1	22	6.1
600	21	4,128	-15.5	-23.5	22	5.4
550	21	4,780	-19.5	-28.6	23	6.5
500	21	5,483	-23.7	-33.9	23	6.8
450	21	6,245	-29.0	-38.2	23	6.9
400	21	7,077	-34.9	-43.8	23	7.8
350	21	8,000	-41.0	-39.7	24	10.0
300	21	9,030	-47.9		24	13.0
250	21	10,221	-51.8		24	16.1
200	21	11,670	-51.1		24	17.5
175	21	12,538	-51.2		24	16.4
150	21	13,540	-51.1		24	13.7
125	21	14,727	-51.1		24	12.4
100	21	16,179	-51.0		24	10.3
80	21	17,632	-51.0		24	8.3
70	21	18,501	-51.1		24	7.5
60	20	19,501	-51.3		24	7.0
50	20	20,685	-51.3		25	6.2
40	19	22,135	-50.9		25	5.2
30	19	24,010	-50.6		25	5.1
25	19	25,199	-50.3		26	4.5
20	18	26,655	-49.8		26	5.0
15	15	28,528	-49.9		28	5.2
10	6	31,271	-46.0			

* BISMARCK, N. DAK. — 954 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	503	9.2	6.8	25	.6
1000	30	107				
950	30	536			30	1.5
900	30	987	10.9	3.2	26	2.0
850	30	1,463	9.0	.0	27	3.6
800	30	1,963	6.8	-4.7	27	4.9
750	30	2,491	4.0	-8.5	27	5.8
700	30	3,049	.9	-12.4	27	7.0
650	30	3,641	-2.7	-15.5	27	7.4
600	30	4,270	-6.9	-18.5	28	8.3
550	30	4,943	-11.9	-21.7	27	10.2
500	30	5,665	-16.9	-26.1	27	12.0
450	30	6,448	-22.3	-31.5	26	[illegible]
400	30	7,304	-28.1	-36.7	26	14.4
350	30	8,252	-34.9	-41.9	27	16.5
300	30	9,307	-42.9	-47.0	26	18.2
250	30	10,516	-50.0		26	20.4
200	30	11,963	-53.1		26	22.6
175	30	12,820	-55.2		26	20.9
150	30	13,801	-56.4		26	18.0
125	30	14,953	-58.1		26	14.2
100	30	16,356	-58.5		26	10.4
80	30	17,761	-57.6		27	7.3
70	30	18,606	-57.0		27	5.9
60	30	19,584	-56.3		27	4.2
50	30	20,745	-55.3		27	3.0
40	30	22,172	-54.6		28	2.5
30	28	24,026	-51.4		27	3.0
25	26	25,214	-50.0		27	4.1
20	28	26,679	-48.1		26	4.5
15	27	28,586	-46.3		26	4.9
10	26	31,314	-42.3		24	3.3
7	20	33,773	-38.4		23	1.9
5	5	36,193	-34.4			

BOISE, IDAHO — 916 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	871	9.9	-.3	13	2.4
1000	30	130				
950	30	562				
900	30	1,015	13.3	-.8	13	1.6
850	30	1,495	11.8	-3.8	27	.7
800	30	1,999	8.5	-6.0	29	2.2
750	30	2,529	5.1	-9.1	29	4.3
700	30	3,088	1.3	-12.2	28	5.6
650	30	3,681	-2.0	-14.7	28	6.8
600	30	4,313	-5.7	-18.7	27	8.5
550	30	4,989	-9.9	-24.2	27	9.8
500	30	5,718	-14.9	-28.7	27	11.2
450	30	6,507	-20.3	-34.0	27	11.9
400	30	7,368	-26.8	-39.3	28	13.7
350	30	8,321	-33.9	-44.4	28	15.0
300	30	9,380	-41.8	-51.1	28	16.3
250	30	10,597	-48.3		28	19.5
200	30	12,051	-52.9		28	20.3
175	30	12,908	-55.3		28	19.6
150	30	13,885	-58.1		28	18.2
125	28	15,026	-60.7		28	13.7
100	28	16,413	-60.6		28	9.3
80	27	17,801	-59.7		28	5.3
70	27	18,638	-59.1		29	3.4
60	27	19,608	-58.1		29	2.5
50	27	20,759	-56.9		32	1.5
40	26	22,177	-55.4		29	1.3
30	26	24,023	-52.8		28	2.3
25	26	25,205	-51.3		25	2.9
20	25	26,657	-49.3		25	4.6
15	19	28,563	-47.3		25	2.0
10						
7						

BOOTHVILLE, LA. — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1	25.1	23.4	11	1.7
1000	30	115	25.5	23.2	11	2.5
950	30	566	22.8	20.1	13	4.6
900	30	1,037	19.9	16.1	14	4.6
850	30	1,528	16.9	11.9	14	5.0
800	30	2,045	14.4	7.6	14	4.5
750	30	2,588	11.4	5.0	15	3.7
700	30	3,162	8.3	.4	15	2.7
650	30	3,772	5.3	-5.6	16	2.5
600	30	4,422	1.3	-8.9	17	2.4
550	30	5,117	-2.8	-12.8	17	2.5
500	30	5,867	-7.2	-16.0	19	2.2
450	30	6,681	-12.1	-20.3	21	2.2
400	30	7,573	-17.9	-27.9	22	2.2
350	30	8,561	-24.6	-34.9	24	3.1
300	30	9,663	-32.6	-43.3	25	5.1
250	30	10,921	-42.5		27	7.2
200	29	12,389	-54.2		28	8.9
175	29	13,234	-60.5		28	8.9
150	29	14,178	-67.5		29	7.9
125	29	15,260	-73.5		30	5.7
100	27	16,556	-74.8		01	1.6
80	27	17,867	-69.7		08	4.3
70	27	18,672	-65.0		09	5.8
60	27	19,618	-62.6		08	7.7
50	27	20,751	-59.5		09	9.3
40	26	22,158	-57.1		09	11.2
30	23	23,997	-53.1		09	14.4
25	22	25,175	-51.3		09	15.4
20	22	26,634	-48.5		09	15.5
15	18	28,537	-45.0		09	16.1
10	7	31,283	-42.9			

* BROWNSVILLE, TEXAS — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	7	24.1	21.5	10	.5
1000	30	96	24.4	22.1	12	1.2
950	30	546	22.1	19.7	13	3.2
900	30	1,016	19.6	16.2	14	3.9
850	30	1,507	16.8	12.8	14	3.7
800	29	2,023	14.3	8.8	14	3.1
750	29	2,566	11.4	3.7	14	2.9
700	29	3,140	8.2	.0	14	2.4
650	29	3,749	5.1	-2.2	12	2.0
600	28	4,399	1.3	-6.0	13	1.8
550	28	5,095	-2.5	-11.7	16	1.2
500	28	5,846	-6.8	-18.1	16	1.1
450	28	6,661	-11.4	-25.0	21	.9
400	28	7,555	-16.7	-32.1	27	1.1
350	28	8,548	-23.6	-40.1	27	2.3
300	28	9,653	-31.8	-47.9	27	3.7
250	28	10,915	-42.2		27	3.8
200	28	12,385	-54.3		27	4.7
175	28	13,228	-61.0		28	4.8
150	28	14,168	-65.6		30	3.7
125	28	15,243	-75.3		34	1.5
100	28	16,521	-77.8		05	3.8
80	27	17,823	-70.2		08	7.6
70	27	18,625	-66.1		09	8.2
60	27	19,566	-63.7		10	9.2
50	27	20,692	-61.2		09	10.3
40	27	22,089	-57.8		08	14.2
30	25	23,922	-53.9		09	15.9
25	25	25,098	-51.9		09	17.6
20	23	26,555	-48.6		09	17.8
15	17	28,459	-45.6		08	19.0
10	[illegible]	31,185	-40.6		09	18.3
7	7	33,623	-38.7			

BUFFALO, N. Y. — 993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	218	15.3	13.3	19	1.6
1000	30	159				
950	30	597	16.1	11.8	22	2.7
900	30	1,055	13.9	8.7	24	3.1
850	30	1,536	11.6	4.6	25	4.1
800	30	2,042	9.5	-.1	26	5.6
750	30	2,575	7.2	-4.8	26	7.3
700	30	3,140	4.0	-6.7	26	8.4
650	30	3,739	.9	-12.4	27	8.9
600	30	4,379	-2.5	-16.1	26	10.0
550	30	5,065	-6.1	-21.4	26	11.1
500	30	5,804	-10.9	-27.6	26	12.0
450	30	6,606	-16.0	-33.0	26	13.7
400	30	7,482	-22.5	-38.6	26	15.0
350	30	8,452	-29.6	-44.4	26	16.1
300	30	9,530	-37.9	-50.2	26	18.4
250	30	10,761	-47.3		26	19.5
200	30	12,209	-55.5		27	21.3
175	30	13,054	-58.6		27	20.9
150	30	14,015	-62.2		27	18.4
125	30	15,133	-64.7		27	16.4
100	30	16,493	-64.3		26	13.6
80	30	17,870	-61.4		26	9.2
70	30	18,703	-59.1		27	7.5
60	30	19,673	-57.7		28	3.7
50	29	20,827	-56.1		31	2.1
40	29	22,252	-54.0		32	1.3
30	28	24,110	-50.9		33	1.5
25	27	25,297	-49.6		33	1.1
20	[illegible]	26,767	-47.3		03	1.1
15	[illegible]	28,687	-45.4		[illegible]	1.1
10	[illegible]	31,430	-41.8			

CAPE HATTERAS, N. C. — 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	4	21.9	19.4	07	2.9
1000	30	149	23.1	19.3	06	3.3
950	30	596	20.3	16.8	08	3.4
900	30	1,062	17.4	13.1	09	2.9
850	30	1,549	14.9	8.5	07	[illegible]
800	30	2,061	12.6	[illegible]	06	1.9
750	30	2,601	10.1	-1.7	06	[illegible]
700	30	3,172	7.0	-4.8	[illegible]	1.5
650	30	3,778	4.0	[illegible]	02	.8
600	30	4,425	.2	-12.2	[illegible]	.2
550	30	5,117	-3.5	-17.8	26	.5
500	30	5,864	-8.0	[illegible]	27	1.3
450	30	6,676	-12.7	-25.8	26	1.9
400	30	7,564	-19.0	-32.7	24	3.1
350	30	8,548	-26.0	-39.1	26	3.7
300	30	9,642	-34.5	-47.8	27	4.3
250	30	10,890	-44.3		29	6.3
200	30	12,353	-54.1		28	7.3
175	30	13,201	-59.1		29	7.7
150	30	14,154	-64.4		29	[illegible]
125	30	15,258	-68.6		28	5.1
100	30	16,589	-69.2		29	2.7
80	30	17,934	-65.5		02	1.2
70	30	18,752	-62.9		04	2.5
60	30	19,707	[illegible]		06	3.9
50	30	20,851	-57.1		07	5.6
40	28	22,271	[illegible]		09	[illegible]
30	27	24,135	-50.6		09	7.8
25	24	25,329	-49.0		09	8.4
20	23	[illegible]	-46.4		09	9.1
15	20	28,726	-44.1		09	8.7
10	15	31,459	[illegible]			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	CARIBOU, MAINE 996 MB						CHARLESTON, S. C. 1015 MB						CHATHAM, MASS. 1018 MB						CHIHUAHUA, MEXICO 857 MB						* COLD BAY, ALASKA 1008 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	191	10.6	7.8	22	1.0	30	13	21.0	19.5	01	2.1	30	16	16.9	14.8	31	.3	30	1,428	16.6	12.4	33	.5	30	30	6.3	4.6	20	2.0
1000	30	154					30	143	22.2	20.2	04	2.8	30	169	16.9	13.1	26	.9	30	86					30	92			19	3.1
950	30	583	10.9	5.7	26	4.2	30	590	20.9	16.8	06	3.8	30	607	15.7	10.0	26	1.5	30	536					30	512	4.8	2.1	24	2.7
900	30	1,033	9.0	3.5	28	6.7	30	1,057	18.5	13.8	06	2.7	30	1,065	13.3	7.2	26	2.5	30	1,005					30	952	2.5	.0	24	3.3
850	30	1,505	7.2	-1.2	28	8.8	30	1,546	15.6	11.0	04	2.3	30	1,544	10.5	3.0	28	3.6	30	1,495	17.9	11.7	33	.3	30	1,412	.1	-3.8	25	4.0
800	30	2,003	5.2	-4.8	28	10.1	30	2,059	13.1	5.9	04	1.9	29	2,047	9.2	-2.9	27	5.3	30	2,016	17.7	8.1	14	.9	30	1,897	-1.9	-8.2	25	4.3
750	30	2,529	3.1	-8.4	28	11.1	30	2,600	10.5	.0	02	2.0	28	2,581	6.9	-5.8	27	5.8	30	2,565	14.1	5.5	12	2.2	30	2,408	-4.4	-12.4	25	5.4
700	30	3,085	.3	-10.7	28	12.9	30	3,171	7.5	-3.8	36	1.7	28	3,146	4.5	-11.2	28	6.6	30	3,144	10.1	2.6	13	2.1	30	2,949	-7.2	-16.0	25	6.2
650	30	3,677	-2.4	-14.9	27	14.8	30	3,779	4.4	-7.7	33	1.9	27	3,745	1.6	-15.8	28	7.3	30	3,736	5.9	-2.3	11	2.7	30	3,523	-10.6	-20.1	25	7.0
600	30	4,308	-5.7	-19.2	27	15.4	30	4,427	.9	-14.6	31	2.1	27	4,386	-1.6	-18.8	27	8.2	30	4,406	1.7	-9.8	12	2.5	30	4,135	-14.0	-24.7	25	8.8
550	30	4,985	-9.8	-23.7	27	17.6	30	5,121	-3.1	-20.6	31	2.9	27	5,074	-5.5	-24.2	27	9.8	30	5,103	-2.4	-16.2	09	1.7	30	4,791	-18.3	-29.3	25	9.4
500	30	5,715	-13.9	-29.0	28	19.4	30	5,869	-7.6	-24.9	30	3.4	27	5,815	-10.2	-28.3	27	10.9	30	5,853	-6.7	-22.8	13	1.5	30	5,496	-22.9	-34.2	25	10.4
450	30	6,508	-19.0	-33.7	28	21.0	30	6,681	-12.6	-28.0	29	4.0	27	6,619	-15.5	-32.4	27	12.5	30	6,669	-11.6	-27.7	16	1.1	30	6,260	-28.0	-38.4	25	11.4
400	30	7,374	-24.9	-38.6	28	23.6	30	7,570	-18.4	-35.2	28	4.5	27	7,497	-21.8	-37.4	27	13.4	30	7,561	-17.7	-32.9	25	3.0	30	7,096	-33.8	-41.9	25	13.5
350	29	8,336	-31.6	-44.0	28	25.1	30	8,556	-25.5	-41.2	29	4.8	27	8,469	-29.0	-43.4	27	13.8	30	8,550	-24.3	-40.0	26	5.4	30	8,023	-39.9	-45.9	24	15.3
300	29	9,406	-39.7	-49.7	28	27.8	30	9,653	-33.8	-49.8	30	5.3	27	9,549	-37.5	-50.1	27	16.0	30	9,652	-32.3	-47.4	26	9.4	30	9,060	-45.6	-48.0	23	17.0
250	29	10,628	-48.8		28	30.9	30	10,905	-43.4		31	8.0	27	10,783	-46.9		27	18.4	30	10,914	-41.8		25	12.8	30	10,266	-48.9		24	16.6
200	29	12,068	-56.2		28	30.2	30	12,372	-53.9		31	9.3	27	12,232	-55.5		27	19.1	30	12,389	-53.1		25	15.3	30	11,731	-49.6		24	16.2
175	29	12,913	-58.0		28	28.5	30	13,219	-59.3		31	9.5	27	13,076	-59.2		27	20.6	29	13,238	-59.2		26	14.8	30	12,602	-50.7		24	15.8
150	29	13,879	-60.2		28	23.7	30	14,172	-64.8		31	6.3	27	14,033	-63.0		27	18.8	29	14,188	-66.2		26	13.4	30	13,605	-51.3		26	13.1
125	29	15,013	-61.2		28	21.0	30	15,273	-69.3		30	4.3	27	15,147	-66.1		28	16.4	29	15,278	-72.1		26	9.3	30	14,788	-52.2		25	12.6
100	29	16,402	-59.9		28	15.2	30	16,599	-69.8		34	1.5	27	16,499	-65.4		27	11.8	27	16,581	-74.0		25	3.0	30	16,232	-52.2		25	11.1
80	29	17,800	-58.5		28	10.0	30	17,938	-66.3		05	1.9	26	17,865	-62.4		29	5.8	26	17,896	-69.1		06	2.5	29	17,685	-52.0		25	7.8
70	29	18,642	-57.3		28	8.2	29	18,755	-63.3		06	3.9	26	18,693	-60.5		30	3.7	26	18,702	-65.3		09	6.0	29	18,549	-52.3		25	6.5
60	29	19,618	-56.7		29	6.6	29	19,709	-60.7		08	6.1	26	19,658	-58.7		31	2.0	26	19,649	-62.0		10	7.0	28	19,546	-52.0		25	6.3
50	29	20,780	-54.5		29	5.2	29	20,853	-57.2		08	8.4	26	20,810	-56.2		34	1.1	26	20,784	-59.7		09	8.5	28	20,728	-51.9		24	5.5
40	29	22,214	-53.2		28	5.2	28	22,276	-54.1		09	10.0	26	22,236	-53.8		34	1.3	26	22,189	-56.8		08	11.5	27	22,179	-51.5		24	4.2
30	27	24,084	-50.4		29	2.2	28	24,138	-50.5		09	10.0	23	24,098	-51.1		05	1.8	26	24,026	-53.7		09	13.8	27	24,051	-50.5		24	3.2
25	26	25,278	-48.9		26	.0	25	25,340	-48.4		09	10.2	21	25,280	-49.8		07	2.3	25	25,201	-51.5		09	14.6	26	25,244	-50.3		24	2.7
20	26	26,780	-47.2		09	1.0	24	26,816	-47.0		09	11.2	20	26,746	-47.6		08	2.5	23	26,656	-48.8		08	15.1	25	26,703	-49.9		24	2.6
15	24	28,667	-45.1		36	.6	21	28,733	-44.1		08	12.7	18	28,660	-45.1		07	3.9	20	28,556	-45.7		09	16.0	23	28,592	-49.3		24	1.6
10	20	31,393	-42.3		11	1.8	15	31,500	-40.2		09	12.9	14	31,393	-42.1		08	2.7	11	31,282	-42.8				20	31,259	-47.9		33	2.3
7	13	33,825	-38.0										11	33,839	-38.2										14	33,598	-46.0			
5													5	36,195	-34.5										8	35,789	-46.0			

Standard pressure surface (mb)	DAYTON, OHIO 984 MB						DEL RIO, TEXAS 977 MB						DENVER, COLO. 839 MB						DODGE CITY, KANS. 924 MB						EL PASO, TEXAS 881 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	298	16.4	15.3	12	.6	29	314	21.7	19.1	10	2.3	30	1,611	8.5	3.2	19	1.8	30	791	15.0	8.7	19	1.4	30	1,193	17.9	9.7	19	.5
1000	30	155					29	110					30	131					30	115					30	95				
950	30	595	17.9	14.6	20	2.0	29	557	21.4	18.5	14	4.3	30	568					30	556					30	544				
900	30	1,058	16.0	11.4	24	2.7	29	1,025	19.0	16.2	15	6.1	30	1,024					30	1,016	16.6	8.5	19	3.9	30	1,012				
850	30	1,542	13.3	7.4	26	3.5	29	1,516	17.0	13.5	15	5.7	30	1,502					30	1,503	16.4	4.5	22	7.6	30	1,504	20.1	8.2	19	1.6
800	30	2,051	11.0	2.1	26	4.4	29	2,032	14.5	9.8	15	4.1	30	2,006	10.6	-1.8	25	2.4	30	2,018	13.9	.9	23	7.6	30	2,026	17.3	3.4	23	2.7
750	30	2,587	8.3	-3.3	26	5.6	29	2,577	12.2	2.3	14	2.0	30	2,562	8.4	-5.9	27	3.2	30	2,559	10.6	-1.7	24	6.9	30	2,574	13.7	3.0	23	2.5
700	30	3,154	4.9	-7.5	26	6.5	29	3,152	8.9	-3.8	08	1.1	30	3,109	5.2	-9.6	27	4.2	30	3,130	6.8	-5.4	25	7.2	30	3,150	9.3	-.4	21	1.8
650	30	3,755	1.8	-12.5	26	6.7	29	3,761	5.0	-6.6	06	1.4	30	3,716	1.2	-12.9	27	6.1	30	3,735	3.0	-9.0	25	8.1	30	3,761	5.0	-4.6	22	2.6
600	30	4,397	-1.5	-16.6	26	7.6	29	4,410	1.3	-13.9	07	1.5	30	4,348	-2.8	-17.9	27	8.4	30	4,378	-1.0	-14.8	25	8.3	30	4,409	.7	-11.6	24	2.6
550	30	5,086	-5.2	-21.0	26	8.6	29	5,105	-2.8	-18.5	09	1.1	30	5,032	-7.0	-22.9	26	10.2	30	5,068	-4.9	-22.0	25	9.4	30	5,102	-3.8	-18.4	25	3.7
500	30	5,828	-9.9	-26.5	26	9.4	29	5,854	-7.3	-23.9	14	.9	30	5,769	-12.0	-28.0	26	12.4	30	5,811	-9.7	-28.3	25	11.8	30	5,848	-8.6	-23.7	25	3.7
450	30	6,632	-15.2	-31.5	26	10.6	29	6,668	-12.1	-28.8	20	.9	30	6,567	-17.2	-33.2	26	14.2	30	6,615	-15.3	-34.5	25	13.5	30	6,658	-13.7	-30.5	25	5.1
400	30	7,512	-21.6	-36.9	25	10.8	29	7,558	-18.2	-33.9	26	3.6	30	7,439	-23.8	-40.3	26	15.8	30	7,494	-21.8	-40.1	25	15.6	30	7,542	-20.2	-36.3	25	6.5
350	30	8,485	-28.7	-43.9	26	12.2	29	8,545	-24.8	-39.8	27	7.3	30	8,403	-31.1	-45.9	26	17.9	30	8,465	-29.2	-45.2	25	17.1	30	8,520	-27.3	-42.5	25	8.6
300	30	9,566	-37.2	-51.2	26	13.9	29	9,646	-32.8	-46.9	26	9.5	30	9,475	-39.5	-51.0	26	20.0	30	9,545	-37.8	-50.8	25	18.8	30	9,609	-35.6	-49.2	26	11.0
250	30	10,801	-46.7		26	16.0	29	10,904	-42.5		26	12.6	30	10,699	-47.8		26	22.6	30	10,776	-47.2		25	21.8	30	10,854	-44.3		26	16.0
200	30	12,251	-55.1		26	18.2	29	12,374	-53.7		26	15.1	30	12,148	-54.8		26	23.8	30	12,225	-55.6		26	23.0	30	12,318	-54.2		25	18.0
175	30	13,096	-59.1		26	17.7	29	13,221	-59.9		27	14.5	30	12,996	-57.8		26	24.0	29	13,064	-59.3		26	24.8	30	13,164	-59.4		26	18.1
150	30	14,053	-63.4		27	16.3	29	14,168	-66.7		26	11.3	30	13,962	-60.8		26	21.8	29	14,020	-63.3		26	21.1	30	14,115	-65.5		26	16.4
125	30	15,165	-66.5		26	12.5	25	15,257	-73.3		26	9.1	30	15,088	-63.3		26	17.3	27	15,129	-67.2		26	17.9	30	15,211	-70.7		26	13.1
100	30	16,512	-66.3		26	9.6	25	16,553	-74.9		28	1.8	30	16,453	-64.5		26	9.3	25	16,476	-66.8		26	9.6	29	16,522	-73.2		26	6.9
80	30	17,876	-63.0		27	5.5	23	17,866	-69.5		09	3.2	30	17,824	-62.2		27	5.2	22	17,824	-64.4		26	4.2	29	17,844	-68.8		25	.8
70	30	18,702	-61.2		27	3.1	23	18,670	-65.7		10	5.5	30	18,653	-60.5		26	2.9	22	18,646	-61.8		24	2.1	29	18,651	-64.9		11	2.3
60	29	19,659	-59.4		27	1.4	22	19,614	-62.3		10	7.5	30	19,618	-58.7		24	.8	21	19,604	-59.4		18	.9	29	19,599	-62.0		10	3.3
50	28	20,810	-56.6		02	2.6	22	20,748	-59.4		09	8.2	30	20,767	-57.2		20	.6	19	20,755	-57.6		08	1.6	29	20,734	-59.4		10	5.4
40	28	22,232	-54.5		08	1.5	22	22,156	-56.4		09	10.9	30	22,186	-55.1		10	1.4	17	22,172	-55.6		07	3.4	27	22,137	-57.0		08	8.4
30	27	24,091	-51.0		07	2.6	22	23,996	-53.0		09	14.2	29	24,038	-51.9		09	2.4	17	24,016	-53.2		09	5.3	26	23,975	-53.8		09	10.9
25	27	25,282	-49.5		08	2.2	22	25,176	-51.3		09	14.5	29	25,223	-50.5		08	2.8	16	25,193	-51.6		09	5.5	26	25,152	-51.8		09	11.4
20	25	26,751	-47.5		09	2.9	21	26,642	-47.9		09	15.7	29	26,686	-48.5		09	2.7	14	26,648	-49.1		08	6.2	25	26,605	-49.3		08	12.5
15	21	28,667	-45.1		07	2.3	18	28,557	-45.0		09	16.4	26	28,590	-46.4		07	2.6	12	28,538	-47.4		08	5.9	19	28,510	-47.1		09	12.1
10	7	31,371	-41.6				17	31,300	-40.0		09	15.9	21	31,307	-43.5		10	4.0	6	31,222	-45.5				16	31,220	-43.3		09	13.5
7							5	33,771	-37.4																					

Standard pressure surface (mb)	ELY, NEV. 810 MB						EMPALME, MEXICO * 1007 MB						* FAIRBANKS, ALASKA 995 MB						FLINT, MICH. 990 MB						FORT WORTH, TEXAS 993 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	1,908	3.6	-6.7	19	3.0	30	12	25.8	21.3	07	1.0	29	135	4.5	-.5	35	1.3	30	236	14.4	12.1	21	.9	30	180	21.1	18.1	18	.7
1000	30	160					30	74	26.7	21.2	08	1.0	29	95					30	151					30	121				
950	30	591					30	528	25.8	17.6	13	1.7	29	514	4.6	-1.2	03	.5	30	587	15.4	11.0	23	2.5	30	566	20.9	16.8	18	4.8
900	30	1,040					30	1,003	23.3	12.5	14	1.7	29	953	2.3	-2.2	20	.9	30	1,045	13.6	8.6	26	3.1	30	1,034	19.2	13.6	18	5.6
850	30	1,511					30	1,500	20.3	10.2	12	1.9	29	1,413	-.3	-4.4	23	2.3	30	1,525	11.3	6.1	27	4.2	30	1,525	16.6	10.7	19	4.6
800	30	2,008	9.0	-4.3	19	1.9	30	2,021	17.3	6.4	11	2.4	29	1,896	-3.1	-6.6	24	3.5	30	2,030	8.6	1.7	27	5.1	30	2,040	14.0	4.5	19	3.8
750	30	2,544	8.8	-6.2	21	.6	30	2,570	13.9	1.2	12	2.7	29	2,405	-6.1	-9.8	24	4.4	30	2,562	6.5	-4.8	26	6.3	30	2,582	11.5	-1.7	18	3.0
700	30	3,111	5.3	-9.7	27	2.5	30	3,148	10.5	-3.1	13	2.3	29	2,942	-9.5	-14.0	24	5.1	30	3,126	3.5	-8.7	26	7.1	30	3,155	8.0	-5.7	18	2.0
650	30	3,712	1.4	-13.7	27	5.1	30	3,760	6.1	-5.3	13	1.9	29	3,511	-12.9	-18.2	24	5.8	30	3,724	.3	-10.9	26	8.5	30	3,763	4.5	-10.9	19	1.1
600	30	4,352	-2.4	-17.7	26	7.2	30	4,411	1.8	-9.4	12	1.4	29	4,117	-16.4	-23.7	25	5.3	30	4,362	-3.0	-15.4	26	10.5	30	4,411	1.0	-16.0	19	1.0
550	30	5,037	-6.8	-23.0	27	8.9	30	5,107	-2.9	-14.0	11	.5	29	4,767	-20.3	-27.4	26	5.6	30	5,046	-6.7	-21.6	25	12.6	30	5,105	-3.0	-22.5	21	1.5
500	30	5,774	-11.5	-28.6	27	10.9	30	5,856	-7.2	-23.2	33	1.2	29	5,466	-25.0	-31.9	26	6.2	30	5,784	-11.3	-26.9	25	14.3	30	5,853	-7.4	-26.7	24	1.7
450	30	6,574	-16.5	-33.4	27	13.9	30	6,670	-12.3	-28.5	29	1.6	29	6,224	-30.1	-37.7	26	6.5	30	6,585	-16.8	-31.7	26	16.3	30	6,665	-12.8	-32.1	24	2.5
400	30	7,448	-23.2	-38.6	27	16.5	30	7,561	-17.9	-34.9	28	4.5	29	7,033	-36.0	-42.8	26	8.0	30	7,459	-22.9	-37.0	26	18.1	30	7,552	-19.6	-36.6	26	4.9
350	30	8,415	-30.3	-44.6	27	17.7	30	8,549	-24.6	-42.0	27	7.8	29	7,971	-42.4	-42.8	25	9.3	30	8,427	-29.9	-43.3	26	20.2	30	8,532	-26.5	-42.0	26	8.2
300	30	9,490	-38.6	-51.5	27	20.7	30	9,650	-32.6	-48.3	27	10.4	29	8,995	-49.0		26	11.6	30	9,504	-38.1	-49.6	25	22.7	30	9,627	-34.1	-49.0	26	11.4
250	30	10,720	-46.9		28	22.2	30	10,909	-42.1		28	11.8	29	10,177	-54.5		26	12.2	30	10,734	-47.4		26	24.5	30	10,878	-43.6		26	13.0
200	30	12,175	-54.2		27	23.6	29	12,384	-53.3		26	14.0	29	11,613	-51.6		26	11.9	30	12,183	-55.0		26	24.9	29	12,345	-53.9		27	17.1
175	30	13,025	-57.5		28	22.7	29	13,232	-59.4		26	13.7	29	12,481	-50.7		26	11.6	30	13,029	-58.2		26	25.0	29	13,192	-59.4		27	16.6
150	30	13,991	-60.7		28	19.3	28	14,181	-66.3		25	11.7	29	13,487	-50.4		26	10.8	30	13,993	-61.4		26	22.2	28	14,144	-65.0		27	15.6
125	30	15,117	-63.9		28	16.1	27	15,269	-72.8		26	8.8	29	14,676	-50.5		26	9.5	30	15,117	-63.9		26	16.6	27	15,241	-70.5		27	11.8
100	29	16,488	-64.7		29	8.3	24	16,567	-74.9		27	3.0	29	16,132	-50.4		26	9.0	29	16,487	-63.4		26	12.6	26	16,557	-71.6		26	5.9
80	29	17,857	-62.3		28	4.7	24	17,878	-69.7		06	3.7	28	17,591	-50.6		26	7.6	28	17,868	-60.8		27	6.8	23	17,887	-67.6		19	1.0
70	29	18,886	-60.6		29	2.5	23	18,683	-65.7		09	5.4	28	18,462	-50.8		26	7.5	28	18,702	-59.0		27	5.0	23	18,698	-64.0		12	2.7
60	29	19,650	-58.8		34	.8	23	19,627	-62.7		10	7.0	28	19,466	-51.1		26	7.0	27	19,675	-57.8		28	2.7	23	19,651	-60.7		11	4.8
50	29	20,801	-56.5		08	1.3	23	20,760	-59.9		09	8.7	28	20,651	-51.5		27	6.8	27	20,830	-55.9		29	1.2	23	20,793	-58.0		10	5.4
40	29	22,223	-34.9		10	1.0	22	22,164	-57.3		09	11.8	28	22,099	-51.5		27	6.7	27	22,257	-53.8		27	1.0	22	22,211	-55.4		08	7.2
30	28	24,075	-51.7		10	2.3	21	23,996	-53.9		09	14.4	28	23,967	-51.5		27	6.6	24	24,129	-50.4		03	1.4	20	24,051	-52.2		09	10.6
25	27	25,260	-50.1		10	2.0	20	25,171	-52.3		09	15.7	27	25,152	-51.1		28	7.4	24	25,322	-49.0		07	.6	18	25,235	-49.9		09	10.7
20	25	26,729	-48.1		08	2.5	17	26,622	-49.4		09	15.5	25	26,606	-50.9		29	7.2	20	26,791	-47.8		08	1.0	15	26,697	-47.6		09	11.0
15	21	28,640	-46.5		08	3.5	15	28,524	-46.8		09	17.7	23	28,478	-50.4		29	7.7	16	28,706	-45.8		08	1.7	11	28,603	-45.1		09	11.4
10	15	31,331	-43.6		08	1.4	8	31,240	-42.8				8	31,212	-47.5				9	31,447	-42.2				6	31,320	-42.0			
7	8	33,801	-40.0																											

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SEPTEMBER 1971

Standard pressure surface (mb)	GLASGOW, MONT. 933 MB						GRAND JUNCTION, COLO. 852 MB						GREAT FALLS, MONT. 888 MB						HAVRE, MONT. 942 MB						GREENSBORO, N. C. 981 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	696	8.3	2.3	31	.8	30	1,472	11.5	.4	12	2.7	30	1,118	8.2	-.6	29	3.1	30	210	12.9	11.1	22	1.0	30	279	17.5	16.9	03	.9
1000	30	119					30	112					30	123					30	134					30	188				
950	30	548					30	553					30	556					30	548	14.7	9.6	24	3.7	30	571	19.4	15.1	03	1.3
900	30	998	11.3	.8	31	3.3	30	1,013					30	1,007					30	1,025	13.1	4.6	25	5.1	30	1,055	18.0	13.8	03	1.5
850	30	1,475	9.6	-2.4	31	5.0	30	1,495			11	2.6	30	1,484	8.6	-3.4	28	5.2	30	1,514	10.7	0.4	25	6.4	30	1,554	16.5	9.9	03	.8
800	30	1,975	6.2	-4.5	31	5.5	30	2,006	12.9	-2.7	16	3.2	30	1,980	5.3	-5.5	27	5.7	30	2,001	7.7	-1.8	25	7.4	30	2,059	13.6	5.4	31	.9
750	30	2,501	2.4	-7.5	30	6.2	30	2,545	9.7	-5.0	22	2.1	30	2,504	1.9	-8.8	28	5.8	30	2,536	4.7	-6.1	25	8.6	30	2,602	9.3	1.6	33	1.3
700	30	3,054	-1.0	-10.4	29	7.2	30	3,113	5.4	-8.3	25	3.8	30	3,057	-1.6	-11.5	28	6.6	30	3,096	1.8	-11.1	25	9.8	30	3,171	5.1	-3.1	33	1.4
650	30	3,643	-4.2	-13.6	28	8.1	30	3,714	1.3	-11.3	26	6.3	30	3,643	-5.4	-15.	27	8.2	30	3,690	-1.4	-14.5	25	10.6	30	3,775	2.8	-4.8	29	4.0
600	30	4,270	-8.0	-18.0	27	8.9	30	4,354	-3.0	-16.1	26	8.3	30	4,267	-9.1	-21.1	27	9.2	30	4,323	-5.1	-21.4	25	9.2	30	4,442	-.5	-10.8	29	6.0
550	30	4,940	-12.6	-22.8	27	9.4	30	5,037	-7.3	-21.6	26	10.2	30	4,935	-13.5	-25.8	27	10.3	30	5,002	-8.8	-24.7	25	10.2	30	5,111	-4.3	-17.5	29	8.4
500	30	5,661	-17.7	-28.5	27	10.8	30	5,774	-11.6	-27.9	26	11.7	30	5,653	-18.5	-31.6	27	10.9	30	5,724	-13.4	-27.9	26	8.6	30	5,855	-8.4	-21.7	29	9.4
450	30	6,441	-22.9	-34.4	27	11.8	30	6,574	-16.6	-32.7	26	13.8	30	6,431	-23.8	-35.3	27	12.4	30	6,528	-18.3	-33.0	28	10.0	30	6,666	-13.0	-28.7	29	9.3
400	30	7,294	-29.2	-40.3	27	12.3	30	7,448	-23.5	-38.3	27	14.5	30	7,281	-29.9	-39.8	27	14.6	30	7,397	-24.4	-37.2	25	10.3	30	7,556	-19.0	-34.5	29	9.6
350	30	8,237	-36.1	-44.4	27	13.9	30	8,412	-31.0	-44.6	27	15.6	30	8,221	-36.9	-44.4	27	16.8	30	8,360	-31.4	-44.4	25	10.3	30	8,531	-25.4	-40.2	28	9.6
300	30	9,288	-43.6	-50.0	27	14.7	30	9,484	-39.2	-51.4	27	17.4	30	9,269	-44.2	-51.1	27	17.7	30	9,429	-39.8	-51.0	25	15.3	30	9,606	-31.5	-45.7	28	9.1
250	30	10,494	-50.6		26	16.3	30	10,712	-47.2		27	20.6	30	10,475	-49.9		28	17.5	30	10,652	-48.6		25	17.6	30	10,855	-44.9		29	10..
200	30	11,940	-52.4		27	18.7	30	12,164	-54.1		27	21.5	30	11,923	-53.0		28	16.2	30	12,097	-54.8		24	16.4	30	12,329	-51.0		29	10.4
175	30	12,802	-53.2		27	16.4	30	13,015	-57.2		27	21.6	30	12,782	-54.0		28	15.8	30	12,946	-57.3		24	14.8	30	13,179	-53.5		29	11.3
150	30	13,792	-54.8		27	14.7	30	13,982	-60.9		27	19.9	30	13,768	-55.6		28	14.8	30	13,915	-59.8		24	13.1	30	14,124	-56.3		28	9.8
125	29	14,953	-55.7		28	12.4	30	15,109	-63.3		27	15.2	29	14,749	-56.7		27	12.7	30	15,049	-62.6		24	10.1	30	15,227	-60.6		28	7.8
100	29	16,369	-56.5		28	9.6	28	16,476	-64.7		26	8.7	29	16,339	-57.5		27	8.9	30	16,431	-61.6		24	7.1	30	16,561	-62.4		27	4.7
80	29	17,785	-56.2		28	6.2	25	17,842	-62.8		25	4.6	29	17,749	-57.2		27	6.6	29	17,818	-59.4		24	4.4	30	17,909	-63.5		20	4.2
70	29	18,634	-55.9		28	5.0	25	18,670	-60.3		24	2.3	29	18,594	-56.8		28	4.8	29	18,657	-58.1		26	6.5	30	18,727	-63.0		08	1.4
60	29	19,615	-55.8		28	4.0	25	19,632	-59.7		23	.6	29	19,572	-56.6		29	3.7	29	19,629	-57.4		26	5.4	29	19,686	-62.4		07	1.0
50	28	20,782	-55.0		28	2.8	25	20,779	-57.6		11	.4	29	20,730	-55.9		29	2.4	29	20,787	-55.5		26	2.9	29	20,829	-61.3		08	4.7
40	28	22,209	-54.5		27	1.6	24	22,194	-55.4		10	1.3	27	22,152	-55.0		28	1.8	28	22,213	-53.9		27	2.9	29	22,259	-59.4		08	8.8
30	28	24,062	-52.3		28	3.4	23	24,048	-52.0		08	2.4	27	23,999	-53.3		28	2.4	28	24,071	-51.0		27	2.8	29	24,118	-51.0		09	6.4
25	28	25,245	-50.9		27	3.9	21	25,234	-50.3		09	2.5	24	25,182	-51.4		28	3.3	28	25,262	-49.7		28	2.4	28	25,303	-49.2		09	7.4
20	27	26,710	-49.0		27	4.8	21	26,696	-48.8		09	2.5	24	26,631	-49.8		27	4.5	27	26,729	-48.0		28	2.1	28	26,778	-47.4		09	5.5
15	26	28,607	-47.1		27	5.6	21	28,596	-46.8		06	2.5	17	28,514	-47.7		26	6.2	23	28,564	-45.8		28	2.0	28	28,593	-44.3		09	5.4
10	21	31,330	-42.6		26	6.8	12	31,335	-43.5				10	31,181	-44.1				21	31,356	-42.1		26	4.0	19	31,415	-42.3		09	4.7
7	15	33,800	-38.5																											

Standard pressure surface (mb)	GUADALUPE IS., MEXICO 1009 MB						* GUAM, MARIANA IS. 997 MB						HILO, HAWAII 1015 MB						HUNTINGTON W. VA. 989 MB						* INTERNATIONAL FALLS, MINN. 971 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	27	23	19.6	17.1	34	5.2	28	111	25.0	23.5	08	.6	30	10	21.7	18.2	25	1.6	30	246	17.7	16.1	15	.6	30	359	8.4	7.2	18	2.7
1000	27	100	19.1	14.2	33	5.4	28	86					30	142	22.5	19.1	24	.8	30	152					30	113				
950	27	542	19.2	11.2	32	4.0	28	539	23.6	20.6	10	1.1	30	588	19.4	17.1	10	1.8	30	594	19.5	15.4	23	2.2	30	541	11.2	7.6	21	3.3
900	27	1,007	19.7	2.6	33	2.5	28	1,010	20.6	16.6	10	1.2	30	1,052	16.3	13.7	10	2.9	30	1,059	17.3	12.9	25	3.7	30	992	9.6	4.3	22	4.8
850	27	1,500	20.1	-1.1	35	.5	28	1,503	17.8	13.5	09	1.2	30	1,536	13.2	10.3	09	3.9	30	1,545	11.2	9.1	26	4.7	30	1,465	6.9	1.1	23	4.8
800	27	2,021	18.1	-3.0	11	.7	28	2,021	15.2	9.9	08	1.5	30	2,045	10.8	6.6	08	4.5	30	2,056	11.9	3.5	26	4.0	30	1,961	4.2	-3.5	23	5.6
750	27	2,570	15.2	-6.0	15	1.4	28	2,566	12.3	6.1	08	1.8	30	2,582	8.5	1.3	08	4.1	30	2,594	8.8	-1.2	26	4.7	30	2,484	1.3	-8.1	26	6.2
700	27	3,150	11.4	-9.5	15	.9	28	3,143	9.4	1.8	08	2.7	30	3,151	7.0	-9.7	09	3.8	30	3,162	5.4	-2.3	26	5.4	30	3,037	-1.1	-11.2	26	7.7
650	27	3,764	6.9	-11.8	13	.8	28	3,754	5.9	-2.7	08	3.0	30	3,758	4.8	-17.1	09	2.8	30	3,765	2.6	-9.3	26	5.4	30	3,625	-4.3	-17.6	26	8.6
600	27	4,416	2.3	-15.5	16	.9	28	4,406	2.1	-6.1	08	2.7	30	4,407	1.4	-22.6	09	2.5	30	4,409	-.4	-15.9	26	6.1	30	4,252	-7.8	-21.1	27	9.8
550	27	5,112	-2.2	-21.0	15	.9	28	5,104	-1.6	-12.3	08	2.8	30	5,101	-2.8	-26.6	10	2.4	30	5,099	-4.5	-20.3	27	7.0	30	4,923	-12.0	-26..	27	11.1
500	27	5,864	-6.3	-28.7	21	2.0	28	5,857	-5.9	-17.1	08	2.2	30	5,849	-7.6	-30.0	11	1.8	30	5,844	-9.1	-25.5	27	7.8	30	5,646	-16.9	-32..	24	13.4
450	27	6,679	-11.5	-32.8	25	2.0	28	6,675	-10.7	-22.7	09	3.2	30	6,660	-13.5	-33.8	14	1.2	30	6,651	-14.2	-30.8	27	8.2	30	6,429	-22.2	-33.9	26	14.7
400	27	7,571	-17.9	-38.1	27	3.8	28	7,572	-16.8	-28.3	07	2.9	30	7,544	-20.0	-38.4	21	1.8	30	7,534	-20.4	-35.8	27	9.9	30	7,284	-28.5	-37..	24	16.4
350	27	8,560	-24.5	-43.7	26	5.8	28	8,566	-23.3	-34.3	07	2.5	30	8,524	-27.1	-43.9	25	3.0	30	8,512	-27.5	-42.1	26	10.1	30	8,231	-35.1	-42..	24	17.7
300	27	9,691	-32.9	-50.8	27	7.1	28	9,672	-31.7	-41.8	06	2.0	30	9,613	-35.7	-50.9	25	6.7	30	9,598	-36.1	-49.9	26	11.3	30	9,286	-44.5	-47..	24	18.8
250	27	10,919	-42.4		25	6.4	28	10,935	-41.9		06	2.2	30	10,855	-45.6		26	10.0	30	10,839	-45.7		27	14.3	30	10,498	-49.2		24	21.9
200	27	12,391	-53.2		25	8.5	28	12,404	-54.7		07	3.1	30	12,306	-56.6		25	12.3	30	12,294	-54.7		27	16.9	30	11,947	-53.5		24	24..
175	26	13,242	-58.7		24	8.2	27	13,244	-61.9		07	4.0	29	13,142	-61.6		24	11.2	30	13,140	-59.0		27	15.9	30	12,804	-54.9		24	21.7
150	24	14,204	-65.0		24	6.4	26	14,178	-70.0		08	7.0	29	14,085	-66.7		23	7.6	30	14,097	-63.6		27	14.3	30	13,785	-56.6		24	18.8
125	23	15,296	-71.1		24	5.1	26	15,244	-76.9		09	9.4	29	15,175	-71.1		21	4.2	30	15,207	-67.1		27	10.3	30	14,940	-57.3		24	15.9
100	21	16,606	-72.5		08	.8	26	16,517	-78.3		09	11.1	29	16,490	-72.1		13	2.8	29	16,548	-67.1		26	7.7	30	16,369	-57.7		24	11.6
80	19	17,930	-68.0		06	4.7	24	17,838	-72.8		09	12.1	28	17,813	-69.7		09	7.3	28	17,906	-63.7		27	3.6	30	17,787	-57.2		24	8.1
70	19	18,741	-63.9		06	6.9	22	18,606	-69.0		09	12.3	28	18,613	-67.7		09	8.7	28	18,730	-61.8		27	1.4	30	18,604	-59.3		27	4.0
60	18	19,701	-61.2		08	7.3	22	19,533	-66.3		09	11.7	28	19,545	-65.5		09	10.3	27	19,690	-59.2		04	.4	30	19,585	-55.7		27	5.1
50	18	20,841	-58.6		07	8.4	22	20,648	-62.7		10	11.3	28	20,663	-62.3		09	12.9	27	20,839	-57.1		08	1.9	30	20,749	-54.8		28	4.1
40	18	22,253	-56.1		07	11.5	22	22,033	-60.0		09	10.8	28	22,052	-59.1		09	14.2	26	22,262	-54.1		07	3.1	30	22,179	-54.1		27	3.8
30	18	24,097	-52.5		08	13.3	22	23,847	-56.1		08	12.9	27	23,870	-55.3		09	15.3	25	24,121	-51.4		09	4.3	30	24,033	-52.2		28	3.5
25	15	25,286	-50.6		07	13.1	22	25,012	-54.0		09	13.0	25	25,037	-53.5		09	16.7	22	25,314	-49.8		09	4.3	29	25,211	-50.7		27	4.4
20	15	26,751	-47.5		07	15.7	20	26,456	-51.0		09	17.1	25	26,484	-50.1		09	18.7	21	26,786	-47.6		09	4.4	26	26,675	-48.6		24	5.5
15	11	28,646	-44.8				18	28,338	-49.1		09	19.3	20	28,384	-46.4		09	20.9	19	28,696	-45.8		09	3.7	23	28,588	-46.2		24	7.1
10							12	31,041	-44.4		09	24.8	14	31,108	-40.0		09	22.3	15	31,429	-41.5		13	1.2	18	31,328	-42.5		27	4.6
7							6	33,527	-38.8				7	33,544	-38.7										12	33,779	-38.8		24	4.2
5							5	35,882	-34.1																9	36,175	-33.8			

Standard pressure surface (mb)	JACKSON, MISS. 1004 MB						JOHN F. KENNEDY INT. AP NY 1019 MB						JOHNSTON IS., PACIFIC AREA 1014 MB						KEY WEST, FLA. 1014 MB						KING SALMON, ALASKA 1008 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	100	20.6	20.5	10	1.5	30	5	19.3	15.5	36	.8	30	3	26.6	22.4	09	6.8	30	3	26.7	23.2	11	1.9	30	15	5.7	2.7	13	.7
1000	30	136	20.8	19.4	12	1.9	30	166	18.4	14.6	35	.5	30	124	24.8	21.2	09	7.0	30	122	26.3	23.2	10	2.6	30	78			27	1.9
950	30	583	21.5	17.9	13	4.5	30	606	16.9	11.9	25	1.4	30	573	21.3	19.3	09	8.1	30	572	23.3	21.1	11	3.4	30	499	6.0	1.6	21	.7
900	30	1,051	19.1	13.9	14	4.0	30	1,086	14.5	9.5	25	2.0	30	1,041	18.5	15.0	09	8.4	30	1,046	20.5	15.5	12	3.0	30	941	3.4	-.8	22	.8
850	30	1,541	16.3	9.6	14	3.0	30	1,548	12.0	4.5	25	2.4	30	1,530	15.6	11.6	09	7.8	30	1,539	17.8	9.6	13	2.8	30	1,402	.6	-3.8	24	.6
800	30	2,035	13.6	5.6	14	2.1	30	2,055	10.1	.9	25	3.4	30	2,043	12.9	6.7	09	6.9	30	2,056	15.0	5.4	13	1.8	30	1,887	-1.9	-8.1	23	.7
750	30	2,597	10.6	2.6	16	1.6	30	2,590	7.8	-3.2	27	4.4	30	2,583	10.2	.4	09	5.8	30	2,595	12.0	1.7	18	1.1	30	2,398	-4.7	-11.7	24	3.6
700	30	3,169	7.3	-1.4	19	1.0	30	3,157	5.1	-7.3	27	6.2	30	3,155	8.0	-7.7	09	3.9	30	3,176	8.9	-2.7	19	.4	30	2,938	-7.8	-15.8	24	4.0
650	30	3,776	4.2	-5.7	21	1.5	30	3,758	1.9	-12.8	27	6.8	30	3,763	4.6	-12.4	08	2.8	30	3,779	5.6	-7.0	03	.2	30	3,511	-11.2	-19.9	24	5.0
600	30	4,424	.5	-9.4	22	1.8	30	4,400	-1.2	-18..	27	7.0	30	4,411	1.3	-18.2	07	2.4	30	4,438	2.1	-12.2	35	.7	30	4,121	-14.7	-23.5	24	6.2
550	30	5,117	-3.7	-15.3	22	1.5	30	5,090	-4.8	-22.9	27	7.9	30	5,106	-2.8	-22.9	10	1.6	30	5,127	-1.9	-14.2	21	1.0	30	4,775	-18.5	-26.1	24	7.4
500	30	5,864	-8.1	-19.0	22	2.5	30	5,833	-9.4	-27.7	26	9.3	30	5,854	-7.5	-26.0	12	1.5	30	5,888	-6.6	-19.8	01	1.0	30	5,441	-22.6	-31.6	24	8.9
450	30	6,675	-13.1	-25.5	23	2.1	30	6,639	-14.7	-32.2	27	10.5	30	6,666	-12.8	-29.3	17	.7	30	6,693	-11.9	-26..	32	2.1	30	6,247	-27.5	-36.6	24	10.3
400	30	7,562	-19.1	-31.8	24	3.2	30	7,520	-21.0	-36.6	27	11.3	30	7,554	-18.9	-35.3	23	2.4	30	7,595	-18.1	-31.3	02	2.1	30	7,084	-33.4	-41.6	24	12.2
350	30	8,545	-26.0	-38.9	25	5.8	30	8,495	-27.9	-42.9	27	13.3	30	8,537	-26.3	-38.6	24	3.6	30	8,579	-25.3	-37.6	03	2.8	30	8,011	-40.0	-41..	24	14.9
300	29	9,639	-34.2	-47.3	25	9.1	30	9,582	-36.2	-51.8	27	14.6	30	9,629	-35.0	-46.0	25	6.9	30	9,680	-33.7	-47.5	03	3.5	30	9,046	-46.9		25	14.7
250	29	10,890	-43.7		26	12.1	30	10,821	-45.8		27	16.6	30	10,874	-45.0		26	10.4	30	10,933	-43.7		21	4.1	30	10,240	-51.8		25	15.9
200	29	12,354	-54.3		26	14.8	30	12,275	-55.2		27	18.9	30	12,328	-56.3		25	14.1	30	12,394	-55.6		22	8.0	30	11,691	-50.9		24	14.9
175	28	13,199	-60.1		27	15.1	30	13,120	-59.2		27	18.9	30	13,165	-62.1		25	15.1	30	13,233	-62.0		02	9.8	30	12,559	-51.4		25	13.8
150	27	14,148	-65.9		27	11.2	30	14,076	-63.0		27	17.6	30	14,105	-67.5		26	11.8	30	14,172	-68.3		03	9.9	30	13,561	-51.4		25	13.9
125	27	15,241	-71.3		28	7.2	30	15,189	-66.0		27	15.0	28	15,193	-71.0		26	6.3	30	15,251	-73.5		04	7.4	30	14,745	-51.6		25	11.5
100	27	16,554	-71.9		30	1.8	30	16,541	-65.7		27	10.3	28	16,506	-72.6		09	2.3	30	16,553	-73.1		04	7.1	30	16,188	-51.2		25	9.5
80	27	17,880	-68.1		09	2.1	30	17,907	-62.5		29	4.9	25	17,826	-70.1		09	8.2	30	17,874	-69.0		08	7.3	28	17,635	-50.7		24	7.5
70	27	18,690	-64.4		08	2.8	30	18,735	-60.5		30	2.8	25	18,625	-67.5		09	9.7	30	18,678	-66.0		08	9.7	28	18,506	-50.9		24	6.6
60	26	19,641	-61.7		08	6.7	30	19,701	-58.3		33	1.4	23	19,558	-65.4		09	10.4	30	19,618	-63.5		08	11.1	24	19,508	-50.5		24	5.6
50	26	20,779	-58.3		09	7.6	30	20,855	-56.0		02	1.3	23	20,676	-62.1		09	11.1	30	20,745	-60.6		08	13.9	24	20,696	-50.8		24	5.7
40	26	22,191	-55.9		08	8.7	28	22,262	-53.5		04	1.2	22	22,063	-59.1		09	12.7	30	22,148	-57.2		09	15.9	24	22,147	-50.5		24	4.4
30	25	24,033	-52.5		09	11.0	26	24,142	-50.5		06	2.4	22	23,884	-55.2		09	14.9	30	23,986	-53.2		09	18.1	24	24,029	-50.2		25	..
25	25	25,217	-50.3		09	12.1	26	25,334	-49.2		08	2.2	21	25,053	-52.9		09	16.9	30	25,169	-50.5		09	16.6	24	25,231	-49.9		24	..
20	22	26,685	-47.7		09	13.3	26	26,806	-46.8		27	2.8	21	26,505	-49.6		09	19.7	30	26,634	-47.9		08	18.1	24	26,688	-49.7		25	..
15	21	28,598	-45.1		09	12.6	21	28,726	-44.6		27	3.7	17	28,416	-45.7		09	21.8	27	28,545	-44.5		28	20.0	18	28,592	-48.2			
10	17	31,310	-42.3		09	13.1	13	31,483	-41.0		11	3.8	15	31,124	-42.4				24	31,292	-40.1		20	20.3						
7	8	33,743	-39.0										7	33,566	-36.1				24	33,729	-37.7									

See reference note at end of table

+ KOROR, CAROLINE IS. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	27.9	24.4	13	.5
1000	30	89	26.9	22.3	19	.6
950	30	541	23.9	19.4	18	.7
900	30	1,014	21.0	15.8	15	1.3
850	30	1,507	17.9	11.9	12	1.6
800	30	2,025	15.3	8.9	10	1.6
750	30	2,570	12.5	5.3	09	2.3
700	30	3,146	9.3	1.5	09	3.0
650	30	3,758	6.0	-2.7	09	3.3
600	30	4,409	2.2	-6.3	09	4.1
550	30	5,108	-1.7	-10.3	09	3.9
500	30	5,861	-5.9	-16.8	09	3.9
450	30	6,680	-10.4	-22.2	09	4.8
400	30	7,578	-15.9	-29.2	09	5.3
350	30	8,574	-22.7	-36.3	09	6.3
300	30	9,683	-31.2	-44.5	09	7.0
250	30	10,947	-41.7	-52.0	08	8.3
200	30	12,419	-54.2		08	12.0
175	30	13,262	-61.1		08	12.3
150	30	14,203	-68.6		08	12.3
125	30	15,276	-75.4		07	11.2
100	30	16,555	-78.3		07	11.4
80	30	17,848	-72.4		08	9.8
70	30	18,643	-67.7		08	7.7
60	30	19,580	-63.8		08	5.0
50	30	20,705	-61.7		09	2.3
40	30	22,096	-58.8		09	1.9
30	28	23,913	-55.6		09	3.4
25	28	25,083	-52.8		10	3.8
20	28	26,534	-49.7		09	5.1
15	27	28,427	-46.8		11	9.2
10	25	31,138	-43.3		09	18.2
7	12	33,556	-40.6			
5						

KOTZEBUE, ALASKA 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	6	5	2.3	-1.3		
1000	6	77				
950	6	490	-.3	-6.3		
900	6	921	-2.8	-8.4		
850	6	1,372	-4.1	-13.2		
800	6	1,849	-5.6	-17.1		
750	6	2,354	-7.2	-20.4		
700	6	2,889	-9.8	-19.7		
650	6	3,459	-12.5	-21.2		
600	6	4,066	-15.3	-23.8		
550	6	4,719	-19.2	-27.7		
500	6	5,422	-23.8	-32.3		
450	6	6,184	-29.0	-37.2		
400	6	7,015	-35.2	-42.7		
350	6	7,936	-41.3			
300	6	8,968	-47.3			
250	6	10,155	-54.4			
200	6	11,576	-54.9			
175	6	12,432	-53.3			
150	6	13,427	-52.5			
125	5	14,593	-51.0			
100	5	16,047	-50.6			
80	5	17,500	-50.9			
70	5	18,369	-51.1			
60	5	19,372	-51.2			
50	5	20,556	-51.4			

KWAJALEIN, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	26.8	23.9	10	3.2
1000	30	97	26.1	23.3	10	3.8
950	30	549	23.0	20.3	10	5.5
900	30	1,020	20.2	16.9	10	6.4
850	30	1,512	17.4	13.9	10	6.2
800	30	2,029	14.9	10.9	09	5.7
750	30	2,574	12.0	7.3	09	5.9
700	30	3,150	9.0	3.5	09	5.5
650	30	3,761	5.5	.0	09	5.3
600	30	4,412	1.6	-3.1	09	5.0
550	30	5,109	-2.4	-7.9	09	4.4
500	30	5,861	-6.6	-14.6	09	3.9
450	30	6,677	-11.3	-19.4	09	2.9
400	30	7,572	-17.1	-26.0	10	1.7
350	30	8,561	-23.8	-32.1	12	.7
300	30	9,668	-32.3	-40.7	19	.3
250	30	10,927	-42.8	-50.7	35	1.7
200	30	12,390	-55.5	-62.5	34	4.9
175	30	13,228	-62.4		34	6.1
150	30	14,163	-69.7		32	6.4
125	28	15,228	-76.9		30	5.7
100	24	16,501	-78.3		04	1.9
80	22	17,796	-72.7		08	7.0
70	21	18,589	-68.8		09	9.5
60	21	19,520	-65.6		09	7.4
50	21	20,635	-62.9		09	5.1
40	21	22,018	-60.1		08	5.4
30	21	23,830	-56.6		09	6.7
25	21	24,991	-54.6		09	7.0
20	21	26,427	-52.5		08	5.8
15	20	28,301	-48.8		08	12.4
10	18	30,992	-44.1		09	22.9
7	17	33,412	-38.7		09	32.6
5	15	35,753	-35.3		09	34.1

LAKE CHARLES, LA. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	22.9	21.6	06	3.2
1000	30	117	22.8	21.7	08	3.7
950	30	565	21.5	18.8	11	5.4
900	30	1,034	19.3	14.9	13	5.1
850	30	1,524	16.4	10.8	13	4.6
800	30	2,039	13.9	6.6	13	4.5
750	30	2,581	10.9	3.7	13	4.6
700	30	3,154	7.7	-1.7	13	3.1
650	30	3,762	4.5	-5.8	13	2.6
600	30	4,410	.8	-10.7	13	2.4
550	30	5,104	-3.1	-16.5	14	2.7
500	30	5,853	-7.6	-23.8	15	2.0
450	30	6,665	-12.6	-26.9	17	2.5
400	30	7,555	-18.3	-32.9	21	3.2
350	30	8,541	-25.0	-38.9	23	5.4
300	30	9,641	-33.0	-46.6	25	7.7
250	30	10,897	-42.6		26	10.8
200	30	12,367	-53.9		26	13.8
175	30	13,212	-60.0		27	13.1
150	30	14,161	-66.2		27	10.8
125	27	15,252	-72.0		28	7.3
100	27	16,557	-73.0		31	1.0
80	27	17,878	-68.7		08	3.4
70	26	18,687	-64.9		09	5.4
60	26	19,636	-61.5		09	7.0
50	26	20,775	-58.6		09	8.6
40	26	22,186	-56.2		09	10.9
30	25	24,029	-52.6		09	13.1
25	24	25,212	-50.7		09	14.4
20	21	26,676	-48.1		08	14.8
15	17	28,584	-45.2		08	16.0
10	10	31,299	-41.7			

LANDER, WYO. 830 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,697	7.1	-1.3	24	1.9
1000	30	133				
950	30	568				
900	30	1,023				
850	30	1,498				
800	30	2,000	8.9	-3.5	25	1.3
750	30	2,532	5.9	-6.5	29	2.3
700	30	3,093	2.1	-9.5	28	4.2
650	30	3,687	-1.6	-13.3	27	6.9
600	30	4,320	-5.6	-17.7	27	7.9
550	30	4,997	-9.9	-22.2	27	9.6
500	30	5,725	-14.8	-28.1	27	10.6
450	30	6,514	-20.3	-34.2	27	12.5
400	30	7,370	-26.5	-39.7	27	15.4
350	30	8,330	-33.5	-45.0	27	18.0
300	30	9,391	-41.6	-50.9	27	19.8
250	30	10,608	-48.8		27	21.7
200	30	12,057	-53.5		27	21.6
175	30	12,912	-55.8		27	20.0
150	30	13,887	-58.4		27	18.4
125	30	15,027	-60.9		27	14.1
100	30	16,410	-61.5		27	9.3
80	30	17,799	-59.6		28	4.8
70	30	18,636	-58.8		27	3.3
60	29	19,610	-57.7		25	2.3
50	29	20,764	-56.5		23	.9
40	29	22,185	-55.1		27	1.3
30	29	24,035	-51.7		25	1.4
25	29	25,221	-50.6		27	1.5
20	29	26,682	-48.8		29	1.5
15	23	28,586	-47.2		30	1.1
10	14	31,291	-44.2			

*** LIHUE KAUAI, HAWAII 1013 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	24.9	20.9	06	3.8
1000	30	152	23.7	20.3	07	4.4
950	30	600	20.2	18.3	07	6.6
900	30	1,065	16.8	14.8	08	7.3
850	30	1,551	13.6	11.5	08	7.5
800	30	2,060	11.2	6.2	08	7.4
750	30	2,598	8.9	-2.1	09	6.4
700	30	3,167	7.3	-13.4	09	5.8
650	30	3,773	4.2	-16.0	10	4.8
600	30	4,420	.9	-21.2	10	3.7
550	30	5,113	-3.5	-25.6	11	2.3
500	30	5,859	-8.9	-29.5	13	1.6
450	30	6,667	-14.4	-32.9	17	2.0
400	30	7,548	-20.9	-37.9	22	2.4
350	30	8,523	-28.5	-44.2	24	4.4
300	30	9,605	-37.3	-52.0	25	6.6
250	30	10,839	-46.7		25	9.2
200	30	12,287	-56.3		26	11.0
175	30	13,126	-60.6		25	8.6
150	30	14,077	-64.9		23	5.4
125	30	15,177	-69.1		20	2.2
100	30	16,500	-71.5		11	3.1
80	30	17,827	-69.0		09	6.1
70	30	18,630	-67.0		09	8.0
60	30	19,567	-64.5		09	10.2
50	30	20,687	-62.4		09	12.4
40	29	22,076	-59.0		09	15.0
30	29	23,899	-54.7		09	17.0
25	29	25,072	-52.3		09	17.9
20	29	26,524	-49.9		09	19.3
15	29	28,419	-46.7		09	21.4
10	28	31,140	-41.8		09	22.4
7	26	33,583	-38.1		09	24.8
5	16	35,907	-35.4			

LITTLE ROCK, ARK. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	79	19.4	18.0	34	.3
1000	29	135	20.1	18.7	13	.2
950	29	580	20.6	16.5	19	2.0
900	29	1,047	18.2	13.8	19	2.3
850	29	1,536	15.7	9.3	21	3.2
800	29	2,049	13.0	5.0	22	2.9
750	29	2,589	10.1	.4	22	3.1
700	29	3,160	6.7	-4.1	23	2.9
650	29	3,765	3.6	-8.7	24	3.7
600	29	4,411	.1	-15.2	24	3.4
550	29	5,104	-3.7	-20.0	25	3.9
500	29	5,850	-8.3	-26.3	24	4.7
450	29	6,659	-13.9	-30.1	24	5.4
400	29	7,543	-20.3	-35.7	25	6.7
350	29	8,521	-27.5	-41.9	25	8.3
300	29	9,609	-35.5	-47.6	25	11.6
250	29	10,854	-44.8		26	14.4
200	29	12,315	-54.4		26	16.1
175	28	13,163	-59.3		27	15.7
150	28	14,116	-64.5		28	11.3
125	28	15,217	-69.2		28	8.2
100	28	16,544	-69.6		28	4.2
80	28	17,885	-66.2		25	.7
70	28	18,700	-63.4		08	1.5
60	28	19,655	-60.2		09	3.2
50	28	20,800	-57.5		10	4.8
40	28	22,217	-55.3		09	5.7
30	27	24,068	-51.6		08	7.6
25	24	25,259	-49.9		09	9.0
20	19	26,730	-47.8		09	10.1
15	17	28,635	-45.6		09	11.5
10	10	31,359	-42.5			

MCGRATH, ALASKA 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	22	103	5.0	4.3	29	.4
1000	22	83			24	1.1
950	22	502	4.0	1.8	22	1.4
900	22	940	1.2	.0	22	3.0
850	22	1,398	-1.4	-3.8	22	3.8
800	22	1,880	-3.5	-7.2	23	3.5
750	22	2,388	-5.9	-12.0	23	3.4
700	22	2,926	-8.7	-15.5	24	3.0
650	22	3,497	-11.8	-18.3	25	3.7
600	22	4,106	-15.4	-21.3	25	4.8
550	22	4,758	-19.2	-25.2	25	5.4
500	22	5,461	-23.7	-30.8	26	6.5
450	22	6,224	-28.4	-36.0	26	6.8
400	22	7,059	-34.2	-40.1	27	9.6
350	22	7,983	-40.7	-44.5	26	11.7
300	22	9,015	-47.3		26	14.9
250	22	10,206	-52.5		28	13.7
200	22	11,652	-50.8		27	14.2
175	22	12,523	-50.3		27	12.5
150	22	13,531	-50.0		26	11.6
125	22	14,722	-50.3		26	10.6
100	22	16,179	-50.4		26	9.3
80	22	17,635	-50.5		25	8.3
70	21	18,509	-50.1		25	7.8
60	21	19,515	-50.8		26	7.3
50	21	20,702	-50.9		26	7.2
40	21	22,154	-51.2		26	5.9
30	20	24,019	-51.1		27	6.5
25	18	25,211	-50.8		28	6.1
20	17	26,663	-50.9		28	7.0
15	14	28,531	-50.3		28	8.4
10	6	31,160	-49.5			

+ MAJURO, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	28.6	24.1	09	3.8
1000	30	103	26.5	19.9	09	4.5
950	30	555	23.3	18.0	10	5.5
900	30	1,025	20.6	15.0	10	6.2
850	30	1,518	17.8	11.2	10	6.4
800	30	2,035	15.2	7.7	10	6.5
750	30	2,580	12.4	4.1	10	6.0
700	30	3,156	9.4	.0	09	5.4
650	30	3,767	6.1	-3.7	10	5.2
600	30	4,419	2.5	-7.4	09	4.8
550	30	5,118	-1.3	-11.7	09	4.3
500	30	5,873	-5.3	-16.9	09	3.5
450	30	6,694	-9.8	-22.7	08	2.9
400	30	7,593	-15.4	-28.7	09	.8
350	30	8,591	-22.2	-36.3	16	.7
300	30	9,703	-30.6	-44.4	36	.9
250	30	10,971	-41.2	-54.2	34	2.8
200	30	12,447	-53.5		33	4.3
175	30	13,293	-60.1		32	5.5
150	30	14,239	-67.3		30	4.8
125	30	15,320	-73.9		26	4.8
100	30	16,613	-75.3		30	.3
80	30	17,923	-69.9		08	6.0
70	30	18,726	-66.2		08	5.8
60	28	19,669	-63.0		08	5.2
50	27	20,799	-60.6		09	3.3
40	27	22,202	-56.8		10	1.1
30	26	24,038	-53.4		10	1.9
25	26	25,220	-50.6		11	2.9
20	26	26,685	-48.1		10	3.2
15	24	28,589	-45.3		10	7.6
10	23	31,325	-40.7		09	17.1
7	15	33,768	-35.1			

*** MEDFORD, OREG. 969 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	401	9.9	3.8	20	.4
1000	30	136				
950	30	565	12.3	3.1	23	.5
900	30	1,019	12.2	1.2	22	.7
850	30	1,496	10.4	-2.5	19	1.0
800	30	1,999	8.2	-5.0	25	1.4
750	30	2,530	5.9	-7.9	27	2.9
700	30	3,092	3.5	-12.7	28	4.6
650	30	3,690	.1	-17.2	28	6.2
600	30	4,327	-3.5	-21.2	28	7.7
550	30	5,009	-7.8	-25.0	28	9.3
500	30	5,743	-13.0	-30.2	28	11.1
450	30	6,537	-18.7	-35.2	28	12.6
400	30	7,404	-25.2	-40.6	28	14.3
350	30	8,363	-32.3	-46.3	29	15.5
300	30	9,430	-39.8	-52.9	28	16.8
250	30	10,656	-47.1		28	19.2
200	29	12,108	-53.2		28	19.1
175	29	12,963	-56.2		28	18.9
150	29	13,934	-59.9		28	18.8
125	27	15,073	-62.7		29	15.1
100	27	16,445	-62.8		29	11.1
80	27	17,824	-61.2		29	5.6
70	27	18,656	-59.9		31	3.4
60	27	19,621	-58.9		33	2.4
50	27	20,770	-57.4		36	.9
40	26	22,187	-55.2		06	.9
30	26	24,036	-52.3		30	1.0
25	26	25,219	-51.1		25	1.0
20	24	26,692	-49.0		23	1.5
15	23	28,597	-46.7		25	2.5
10	20	31,315	-43.8		18	1.1
7	17	33,711	-40.7		17	1.3
5	9	36,082	-36.4			

MERIDA, MEXICO 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	22.7	22.3	10	.9
1000	30	101	24.0	23.1	12	3.5
950	30	551	23.2	20.0	14	8.0
900	30	1,023	21.2	15.2	14	7.7
850	30	1,517	18.4	11.2	13	6.4
800	30	2,035	15.6	7.8	13	5.9
750	30	2,581	12.8	3.7	13	5.7
700	30	3,158	9.5	.3	13	5.1
650	30	3,769	5.8	-4.2	13	5.0
600	30	4,420	2.1	-8.8	13	5.1
550	30	5,118	-1.8	-14.1	11	4.9
500	30	5,870	-6.3	-18.4	10	4.7
450	30	6,687	-11.0	-24.7	08	3.9
400	30	7,582	-16.9	-31.0	08	4.2
350	30	8,574	-23.6	-37.5	06	4.2
300	30	9,680	-31.9	-47.3	06	4.3
250	30	10,941	-42.2		04	4.9
200	30	12,412	-54.2		03	6.8
175	29	13,257	-60.3		04	8.9
150	28	14,202	-67.5		04	9.4
125	27	15,285	-73.6		05	9.3
100	26	16,578	-75.2		06	9.3
80	25	17,891	-69.0		08	10.6
70	25	18,695	-66.6		09	11.0
60	25	19,636	-63.6		09	10.9
50	24	20,762	-60.4		09	12.1
40	23	22,167	-57.1		09	15.1
30	23	24,002	-53.3		09	16.5
25	23	25,184	-50.9		09	16.7
20	23	26,647	-47.6		09	18.5
15	23	28,560	-44.3		09	21.3
10	13	31,315	-39.9			

MIAMI, FLA. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	24.6	22.7	01	1.2
1000	30	127	25.5	22.5	07	1.4
950	30	578	22.5	19.7	10	2.8
900	30	1,048	19.6	15.6	11	1.7
850	30	1,539	16.9	11.4	12	.9
800	30	2,055	14.0	7.5	16	.5
750	30	2,597	11.1	4.0	27	.5
700	30	3,171	8.3	-.3	32	.3
650	30	3,780	5.1	-4.1	34	1.0
600	30	4,430	1.6	-9.0	34	1.5
550	30	5,127	-2.3	-13.0	35	1.9
500	30	5,878	-6.8	-16.4	01	1.9
450	30	6,693	-11.8	-23.7	36	2.5
400	30	7,584	-18.1	-27.7	36	2.5
350	30	8,572	-24.8	-35.8	35	3.1
300	30	9,672	-33.1	-44.1	35	4.6
250	30	10,928	-42.8		36	5.6
200	30	12,396	-54.4		01	7.2
175	30	13,240	-60.3		02	8.7
150	30	14,186	-66.8		03	8.2
125	30	15,273	-71.9		03	7.0
100	30	16,583	-72.1		06	6.9
80	30	17,910	-67.7		08	6.4
70	30	18,719	-64.9		08	7.7
60	30	19,665	-62.7		08	10.8
50	30	20,798	-59.6		09	13.9
40	29	22,203	-56.8		09	15.6
30	29	24,046	-52.1		09	15.9
25	28	25,234	-50.0		09	16.2
20	28	26,701	-47.5		09	17.0
15	22	28,622	-44.0		09	20.9
10	17	31,366	-39.3		09	22.0

MIDLAND, TEXAS 916 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	874	17.1	14.3	15	2.0
1000	30	114				
950	30	559				
900	30	1,023	18.4	14.3	17	4.2
850	30	1,514	17.7	10.0	18	7.0
800	30	2,031	15.6	5.3	19	3.5
750	30	2,577	12.8	.2	25	1.4
700	30	3,152	9.0	-4.4	28	1.6
650	30	3,762	5.3	-9.7	31	1.0
600	30	4,411	1.3	-14.5	32	1.6
550	30	5,106	-3.1	-20.5	26	1.4
500	30	5,853	-7.7	-26.5	24	2.1
450	30	6,665	-13.0	-31.8	25	3.4
400	30	7,551	-19.7	-37.0	26	5.4
350	30	8,531	-26.9	-43.1	25	7.5
300	30	9,623	-34.8	-49.5	25	11.8
250	30	10,873	-43.6		25	16.2
200	29	12,338	-54.2		26	18.7
175	29	13,184	-59.9		26	18.7
150	29	14,133	-65.8		26	17.0
125	28	15,229	-71.2		26	13.1
100	27	16,537	-73.1		26	5.9
80	26	17,861	-68.1		21	.5
70	26	18,671	-64.6		12	3.4
60	26	19,620	-61.7		11	4.9
50	26	20,757	-58.9		10	5.8
40	26	22,165	-56.8		08	8.5
30	26	24,005	-52.7		09	12.6
25	25	25,187	-51.1		09	12.4
20	25	26,647	-48.6		09	12.8
15	23	28,556	-46.1		09	12.4
10	18	31,285	-42.4		09	15.2

MONTERREY, MEXICO 962 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	423	21.5	20.2	12	.5
1000	28	108				
950	28	555	21.3	19.6	11	1.2
900	28	1,025	19.3	17.0	14	1.6
850	28	1,516	16.8	13.8	14	2.5
800	28	2,032	14.5	10.7	13	2.6
750	28	2,577	12.1	6.5	07	1.0
700	28	3,153	9.2	1.8	05	1.6
650	28	3,764	5.8	-3.2	02	1.9
600	28	4,416	2.1	-9.2	35	1.8
550	28	5,113	-1.9	-14.0	03	.7
500	28	5,865	-6.4	-21.2	30	.2
450	28	6,681	-10.8	-26.8	32	.7
400	28	7,578	-16.4	-33.3	31	1.0
350	28	8,571	-23.5	-40.5	28	2.7
300	28	9,677	-31.7	-47.3	27	4.3
250	28	10,940	-41.7	-50.8	26	5.7
200	28	12,415	-53.6		27	7.0
175	28	13,260	-60.2		27	6.0
150	28	14,206	-67.5		29	4.0
125	28	15,285	-74.2		27	1.7
100	28	16,572	-76.4		06	2.3
80	25	17,877	-70.0		08	6.0
70	25	18,679	-66.3		09	8.1
60	25	19,618	-64.2		09	8.9
50	25	20,742	-60.9		09	10.3
40	24	22,138	-57.8		08	13.3
30	22	23,974	-54.2		08	15.4
25	22	25,148	-52.3		08	16.7
20	21	26,606	-48.4		08	17.5
15	18	28,514	-45.2		08	17.9
10	14	31,261	-40.8			

MONETT, MO. 966 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	438	17.1	15.5	13	2.1
1000	30	138				
950	30	578	18.5	15.1	17	2.6
900	30	1,043	17.7	12.1	22	5.1
850	30	1,531	15.5	9.0	23	5.7
800	30	2,044	12.6	5.4	24	6.5
750	30	2,584	9.6	.7	24	6.5
700	30	3,153	6.0	-6.1	24	6.5
650	30	3,757	3.2	-11.9	24	6.2
600	30	4,401	-.3	-18.0	26	6.5
550	30	5,093	-4.1	-22.7	25	6.7
500	30	5,837	-9.1	-26.9	25	7.4
450	30	6,644	-14.7	-32.5	26	8.7
400	30	7,524	-21.4	-37.7	26	10.3
350	30	8,498	-28.4	-43.3	25	11.4
300	30	9,582	-36.6	-50.7	26	12.6
250	30	10,821	-45.6		26	14.9
200	30	12,277	-54.8		26	18.8
175	30	13,123	-59.1		27	18.1
150	30	14,079	-63.7		27	16.3
125	30	15,187	-67.3		27	12.7
100	29	16,528	-68.3		27	6.4
80	28	17,878	-64.9		24	3.1
70	27	18,702	-61.9		16	.6
60	27	19,661	-59.8		11	2.3
50	27	20,808	-57.1		09	2.9
40	26	22,232	-54.6		10	3.5
30	26	24,084	-51.9		09	5.4
25	26	25,270	-50.2		09	5.3
20	26	26,736	-47.8		09	6.4
15	23	28,646	-45.9		09	6.8
10	16	31,370	-41.9		10	7.0

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MONTGOMERY, ALA. 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	57	20.5	19.5	07	1.2
1000	30	143	21.5	20.1	10	1.7
950	30	590	21.4	18.1	12	3.7
900	30	1,058	19.1	15.0	13	2.7
850	30	1,548	16.2	11.4	14	2.0
800	30	2,063	13.9	6.3	14	1.4
750	30	2,605	11.0	1.4	18	.7
700	30	3,178	7.8	-3.3	24	1.2
650	30	3,786	4.8	-7.9	25	1.9
600	30	4,435	1.1	-13.2	25	2.3
550	30	5,129	-3.1	-17.2	24	2.6
500	30	5,878	-7.3	-22.8	25	2.6
450	30	6,690	-12.5	-26.8	27	2.9
400	30	7,580	-18.3	-32.9	26	4.1
350	30	8,567	-25.4	-39.2	27	5.8
300	30	9,664	-33.7	-47.0	27	8.5
250	30	10,917	-43.1		28	11.2
200	28	12,388	-53.9		28	12.7
175	28	13,234	-59.6		28	12.4
150	27	14,183	-66.1		28	9.4
125	27	15,276	-70.9		29	6.1
100	27	16,591	-71.7		30	1.9
80	27	17,920	-67.5		08	2.3
70	27	18,732	-64.1		08	4.4
60	27	19,683	-60.9		08	5.5
50	26	20,825	-57.7		08	7.5
40	25	22,245	-54.5		09	8.5
30	25	24,100	-51.7		09	10.4
25	25	25,288	-49.8		09	11.7
20	24	26,756	-47.6		09	11.7
15	21	28,669	-44.7		09	12.0
10	17	31,412	-40.5			
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NASHVILLE, TENN. 996 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	180	18.7	17.5	11	.3
1000	30	147				
950	30	590	20.1	16.3	20	3.1
900	30	1,057	17.9	13.1	24	3.2
850	30	1,544	15.2	9.2	25	3.2
800	30	2,057	12.4	6.7	26	3.6
750	30	2,596	9.4	2.2	26	3.5
700	30	3,165	5.9	-3.3	27	4.0
650	30	3,769	2.9	-9.0	27	4.5
600	30	4,413	-.4	-14.5	26	4.9
550	30	5,105	-4.2	-19.7	26	5.4
500	30	5,850	-8.9	-24.4	26	5.5
450	30	6,657	-14.2	-30.1	26	6.1
400	30	7,540	-20.4	-34.9	26	7.5
350	30	8,518	-27.5	-41.0	26	9.0
300	30	9,605	-35.9	-48.8	26	11.8
250	30	10,847	-45.1		27	14.5
200	30	12,307	-54.6		27	17.6
175	30	13,152	-59.6		27	16.9
150	29	14,107	-64.9		27	14.4
125	29	15,207	-69.1		27	10.4
100	29	16,537	-68.8		26	5.7
80	29	17,882	-65.6		27	1.5
70	29	18,700	-62.8		06	1.5
60	29	19,655	-60.5		08	3.0
50	29	20,798	-57.7		08	4.4
40	29	22,215	-55.2		08	4.8
30	29	24,067	-51.6		08	6.5
25	29	25,255	-50.0		08	6.8
20	28	26,722	-47.6		09	6.9
15	25	28,628	-45.6		08	6.4
10	21	31,351	-42.1		09	5.3
7	7	33,746	-39.9			
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* NOME, ALASKA 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	4.1	.8	06	.6
1000	30	74			15	1.4
950	30	492	3.0	-.2	15	2.1
900	30	928	.5	-3.1	18	2.0
850	30	1,385	-1.8	-6.9	19	2.0
800	30	1,866	-3.6	-10.2	19	2.7
750	30	2,374	-5.8	-13.9	20	2.4
700	30	2,912	-8.7	-17.1	20	2.1
650	30	3,483	-11.9	-20.4	19	1.5
600	30	4,092	-15.4	-24.0	19	1.3
550	30	4,744	-19.6	-29.2	20	1.4
500	30	5,445	-24.3	-33.9	22	2.1
450	30	6,206	-29.5	-38.5	22	2.4
400	30	7,036	-35.4	-43.9	21	3.7
350	30	7,956	-42.0	-45.3	21	4.6
300	30	8,979	-49.8		21	3.9
250	30	10,155	-55.4		23	4.8
200	30	11,589	-51.7		23	6.4
175	30	12,458	-50.7		24	5.8
150	30	13,463	-50.3		24	6.5
125	30	14,654	-50.2		24	6.7
100	30	16,112	-50.1		24	5.9
80	29	17,569	-50.4		24	6.0
70	29	18,441	-50.1		24	5.9
60	29	19,447	-50.4		25	6.2
50	29	20,636	-50.8		24	5.7
40	29	22,090	-51.0		25	6.2
30	26	23,958	-50.8		25	6.3
25	26	25,146	-50.6		25	6.8
20	24	26,601	-50.5		26	7.1
15	24	28,482	-49.3		26	8.5
10	20	31,142	-48.2		28	11.1
7	9	33,555	-45.4			
5	5	35,854	-42.8			

NORTH PLATTE, NEBR. 9.8 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	847	9.3	5.5	35	1.1
1000	30	128				
950	30	559				
900	30	1,011	12.0	5.2	35	1.0
850	30	1,491	12.6	1.3	26	1.8
800	30	1,999	11.1	-1.4	26	3.6
750	30	2,535	8.3	-4.5	25	5.2
700	30	3,102	5.0	-8.6	26	7.0
650	30	3,702	.8	-11.5	26	8.6
600	30	4,340	-3.3	-16.6	26	9.1
550	30	5,023	-7.7	-22.3	26	10.9
500	30	5,758	-12.3	-27.4	26	14.2
450	30	6,555	-17.6	-32.5	26	15.9
400	30	7,426	-24.0	-37.9	26	17.9
350	30	8,389	-31.3	-44.4	26	18.6
300	30	9,460	-39.6	-49.8	26	20.2
250	30	10,685	-47.8		26	23.7
200	30	12,133	-54.6		26	23.9
175	30	12,982	-57.6		26	22.1
150	29	13,949	-60.3		26	20.2
125	29	15,080	-62.8		26	15.9
100	29	16,451	-62.7		26	9.4
80	28	17,831	-61.2		26	5.2
70	28	18,664	-59.4		26	4.3
60	28	19,631	-58.5		26	1.9
50	28	20,783	-56.3		25	1.3
40	27	22,204	-54.2		20	1.0
30	27	24,062	-51.0		10	.9
25	24	25,251	-50.0		09	1.2
20	23	26,714	-48.1		08	1.0
15	21	28,624	-46.3		07	2.2
10	16	31,347	-42.4		07	3.8
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OAKLAND, CALIF. 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	14.9	12.2	28	1.2
1000	30	110	16.0	9.9	29	1.6
950	30	547	17.9	4.4	31	2.8
900	30	1,010	18.1	-3.3	33	3.8
850	30	1,497	16.2	-7.3	30	2.3
800	30	2,009	13.6	-11.4	27	2.2
750	30	2,549	10.7	-14.8	26	3.1
700	30	3,120	7.4	-17.4	26	4.4
650	30	3,726	4.0	-20.5	27	4.7
600	30	4,371	.3	-24.5	27	5.6
550	30	5,062	-4.3	-27.5	28	7.3
500	30	5,806	-9.1	-33.[illegible]	28	7.7
450	30	6,613	-14.5	-37.2	28	9.7
400	30	7,494	-21.5	-42.5	27	12.8
350	30	8,467	-28.9	-48.9	28	14.1
300	30	9,548	-37.4	-55.3	28	14.3
250	30	10,783	-46.4		28	16.3
200	30	12,238	-54.7		28	19.1
175	30	13,084	-58.8		28	16.9
150	30	14,043	-62.7		28	15.1
125	30	15,158	-65.9		28	13.0
100	30	16,507	-66.8		29	9.2
80	29	17,862	-64.4		32	3.7
70	28	18,681	-62.4		34	2.6
60	27	19,639	-60.1		04	1.5
50	27	20,783	-57.6		06	2.2
40	26	22,195	-55.5		07	2.5
30	26	24,047	-51.9		09	3.4
25	25	25,235	-50.3		10	3.9
20	25	26,698	-48.6		09	3.9
15	24	28,595	-46.7		10	4.1
10	12	31,310	-43.9			
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OMAHA, NEBR. 968 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	403	14.3	9.9	20	1.1
1000	30	120				
950	30	557	16.5	10.2	23	1.6
900	30	1,018	15.8	6.4	23	5.1
850	30	1,501	13.5	2.8	24	7.2
800	30	2,010	11.0	-.9	24	8.3
750	30	2,546	7.8	-4.9	24	7.5
700	30	3,111	4.2	-9.3	25	7.3
650	30	3,711	.9	-13.6	25	8.5
600	30	4,350	-2.9	-17.2	25	10.2
550	30	5,034	-6.9	-21.7	25	12.2
500	30	5,771	-11.7	-27.5	25	14.0
450	30	6,570	-17.2	-32.4	25	16.8
400	30	7,442	-23.4	-39.6	25	18.8
350	30	8,408	-30.7	-45.2	25	20.1
300	30	9,481	-38.9	-50.8	25	23.5
250	30	10,707	-48.0		25	25.0
200	29	12,152	-54.7		26	25.8
175	29	13,000	-57.8		26	25.0
150	29	13,966	-60.5		26	20.9
125	28	15,097	-63.8		26	15.6
100	28	16,462	-63.9		26	10.4
[illegible]	28	17,839	-61.3		26	6.0
70	28	18,671	-59.6		25	4.3
60	28	19,638	-58.4		26	2.8
50	27	20,791	-56.4		26	.9
40	27	22,214	-54.4		18	.2
30	26	24,076	-51.1		20	.2
25	24	25,258	-49.9		20	.3
20	23	26,726	-47.9		08	.6
15	18	28,637	-45.7		07	1.2
10	10	31,385	-42.6			
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* PAGO PAGO, AMERICAN SAMOA 1013 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	28.1	22.4	09	5.0
1000	30	122	26.0	18.3	09	5.8
950	30	572	22.3	15.8	09	7.3
900	30	1,040	18.7	12.2	08	7.0
850	30	1,529	15.6	7.7	08	7.0
800	30	2,042	13.7	2.1	08	6.5
750	30	2,584	11.5	-3.4	08	5.2
700	30	3,157	8.5	-8.4	08	4.7
650	30	3,766	5.1	-11.4	08	3.8
600	30	4,415	1.5	-15.3	09	2.8
550	30	5,111	-2.5	-19.8	12	1.6
500	30	5,861	-6.9	-25.2	16	1.6
450	30	6,675	-11.7	-29.6	20	2.6
400	30	7,567	-17.7	-35.2	20	3.2
350	30	8,555	-25.0	-41.2	20	4.7
300	30	9,654	-33.1	-49.0	20	7.7
250	30	10,909	-43.0		21	9.0
200	30	12,376	-54.6		22	10.9
175	30	13,219	-60.6		23	11.4
150	30	14,165	-66.4		23	11.5
125	30	15,255	-71.9		23	7.6
100	30	16,557	-74.9		25	3.8
80	29	17,860	-71.5		27	3.1
70	29	18,656	-67.6		27	3.6
60	29	19,593	-64.2		27	4.0
50	29	20,716	-61.4		28	3.7
40	29	22,110	-58.5		28	3.6
30	28	23,935	-53.9		30	2.0
25	28	25,115	-51.0		29	2.0
20	28	26,576	-48.3		30	1.1
15	23	28,478	-44.6		32	.5
10	16	31,212	-40.3		10	5.4
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* PEORIA, ILL. 993 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	200	15.5	13.2	17	1.1
1000	30	140				
950	30	580	17.7	12.0	22	2.9
900	30	1,041	15.5	8.7	25	3.9
850	30	1,524	12.8	4.2	26	4.0
800	30	2,032	10.0	.3	26	4.8
750	30	2,566	7.4	-4.3	25	6.4
700	30	3,131	4.4	-7.7	25	8.0
650	30	3,731	1.1	-11.9	25	8.8
600	30	4,372	-1.9	-17.6	25	10.6
550	30	5,059	-5.9	-21.7	26	12.1
500	30	5,798	-10.7	-26.8	25	13.5
450	30	6,600	-16.1	-31.3	25	14.3
400	30	7,476	-22.4	-38.0	25	15.6
350	30	8,446	-29.7	-44.1	25	16.1
300	30	9,523	-38.0	-50.0	25	17.6
250	30	10,755	-47.0		26	20.8
200	30	12,203	-55.5		26	22.2
175	29	13,056	-58.9		26	21.1
150	29	14,015	-62.5		26	19.4
125	29	15,131	-65.5		26	14.7
100	29	16,487	-65.0		26	10.3
80	29	17,856	-62.2		26	4.8
70	29	18,685	-60.3		26	3.1
60	29	19,650	-58.8		26	.9
50	29	20,801	-56.7		34	.3
40	28	22,227	-54.2		09	1.0
30	28	24,086	-51.3		07	1.9
25	27	25,277	-49.9		08	2.3
20	25	26,747	-47.6		08	2.8
15	21	28,665	-45.2		08	4.2
10	13	31,393	-42.3		11	5.6
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* PITTSBURGH, PA. 976 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	359	15.9	14.7	16	.7
1000	30	155				
950	30	593	17.0	14.3	21	1.4
900	30	1,055	15.1	11.6	25	2.2
850	30	1,537	12.4	7.5	26	3.4
800	30	2,045	10.3	2.7	26	4.6
750	30	2,580	7.5	-.8	27	5.1
700	30	3,145	4.2	-5.5	27	5.8
650	29	3,746	1.2	-10.6	27	6.0
600	29	4,386	-1.9	-14.4	27	6.7
550	29	5,074	-5.7	-19.6	27	8.1
500	29	5,815	-10.1	-27.7	27	9.9
450	29	6,618	-15.7	-31.9	26	10.5
400	29	7,496	-21.7	-36.1	26	11.1
350	29	8,469	-28.8	-43.0	26	13.2
300	29	9,551	-37.2	-49.9	27	14.9
250	29	10,785	-46.8		27	16.9
200	29	12,235	-55.3		27	19.1
175	29	13,079	-59.3		27	18.1
150	28	14,033	-63.1		27	15.8
125	28	15,146	-66.3		27	13.0
100	28	16,495	-65.8		27	9.8
80	27	17,864	-62.7		27	4.6
70	26	18,692	-60.9		28	2.8
60	26	19,655	-59.1		30	1.2
50	26	20,805	-56.5		04	1.1
40	23	22,218	-55.0		07	1.1
30	22	24,071	-51.3		05	1.6
25	21	25,258	-50.2		06	2.3
20	21	26,725	-47.4		07	2.3
15	18	28,645	-45.3		10	2.8
10	16	31,374	-42.3		10	1.2
7	11	33,800	-38.8		30	1.1
5	8	36,137	-34.9			

* PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	39	28.5	23.6	10	1.4
1000	30	79	27.1	20.8	10	1.6
950	30	532	23.6	18.2	11	3.3
900	30	1,003	20.3	15.2	11	4.7
850	30	1,495	17.3	11.3	10	4.9
800	30	2,011	15.0	7.9	10	4.8
750	30	2,556	12.4	3.6	10	4.5
700	30	3,132	9.1	.0	10	4.6
650	30	3,743	5.8	-3.8	10	4.5
600	30	4,394	2.1	-7.6	10	4.7
550	30	5,092	-1.5	-12.7	09	3.8
500	30	5,846	-5.7	-17.8	09	3.7
450	3	6,665	-10.2	-23.6	09	3.8
400	30	7,564	-15.6	-29.8	08	3.6
350	30	8,561	-22.4	-37.0	09	4.3
300	30	9,672	-30.8	-44.9	09	4.6
250	30	10,938	-41.4		06	4.6
200	30	12,411	-54.0		04	6.8
175	30	13,255	-60.9		03	7.2
150	30	14,196	-68.5		04	7.5
125	30	15,272	-75.0		06	4.4
100	30	16,552	-77.0		08	3.4
80	30	17,851	-71.5		08	7.7
70	30	18,648	-67.3		08	7.1
60	30	19,585	-64.4		09	4.4
50	30	20,708	-61.4		07	1.9
40	30	22,100	-59.0		06	2.0
30	30	23,919	-55.5		10	2.4
25	30	25,090	-52.3		13	1.5
20	25	26,534	-50.3		09	3.3
15	22	28,432	-47.2		10	9.5
10	19	31,138	-43.6		09	16.5
7	13	33,573	-38.4			
5						

PORTLAND, MAINE 1018 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	20	13.6	11.0	29	.8
1000	30	167	15.7	11.2	29	1.4
950	30	603	15.1	8.6	28	2.4
900	30	1,060	13.1	6.9	26	2.6
850	30	1,539	10.4	3.3	28	4.5
800	30	2,042	8.5	-2.2	27	6.2
750	30	2,574	6.2	-5.2	27	7.8
700	30	3,137	3.3	-9.7	27	8.7
650	30	3,735	.6	-13.9	28	10.3
600	30	4,374	-2.6	-19.4	27	11.7
550	30	5,059	-6.5	-23.5	27	12.5
500	30	5,798	-11.1	-28.2	27	14.1
450	30	6,599	-16.2	-31.7	27	16.2
400	30	7,475	-22.4	-37.2	27	17.2
350	30	8,445	-29.4	-43.2	27	18.5
300	30	9,524	-37.9	-50.2	27	20.2
250	30	10,756	-47.1		27	22.3
200	30	12,204	-56.0		27	22.9
175	30	13,047	-58.9		27	23.9
150	30	14,008	-61.6		27	21.7
125	30	15,132	-63.7		28	18.3
100	30	16,500	-63.2		28	13.6
80	30	17,882	-60.3		28	7.4
70	30	18,717	-59.2		29	5.9
60	29	19,688	-57.3		29	4.3
50	29	20,847	-55.1		31	2.6
40	29	22,280	-52.9		29	1.4
30	29	24,148	-50.1		05	.8
25	29	25,344	-48.6		04	.9
20	27	26,821	-46.7		09	1.4
15	26	28,734	-44.9		05	1.0
10	20	31,481	-41.3			
7						
5						
4						

* QUILLAYUTE, WASH. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	58	9.3	6.8	06	1.2
1000	29	134			07	1.1
950	29	563	10.8	4.1	09	1.2
900	29	1,012	8.6	-.1	20	.7
850	29	1,482	6.1	-3.3	25	2.1
800	29	1,977	4.4	-7.0	27	3.2
750	29	2,500	1.6	-9.1	28	4.7
700	29	3,054	-1.0	-13.5	28	5.7
650	29	3,642	-4.0	-15.7	28	6.6
600	29	4,269	-7.5	-19.0	28	8.0
550	29	4,942	-11.5	-22.5	28	9.8
500	29	5,666	-16.3	-27.8	28	11.3
450	29	6,451	-21.7	-33.0	28	12.5
400	29	7,307	-28.1	-38.2	28	12.9
350	29	8,254	-35.4	-43.4	28	13.6
300	29	9,307	-43.1	-45.5	28	14.1
250	29	10,516	-49.9		29	16.8
200	29	11,964	-53.2		29	18.4
175	29	12,820	-55.1		29	18.6
150	29	13,800	-57.1		29	18.0
125	28	14,944	-58.7		29	14.3
100	28	16,346	-58.3		29	10.6
80	27	17,750	-57.8		29	7.1
70	27	18,594	-57.1		30	5.4
60	27	19,571	-56.4		30	3.7
50	27	20,730	-56.1		30	2.7
40	27	22,152	-55.3		35	2.5
30	26	23,993	-54.2		36	2.7
25	24	25,164	-53.3		35	1.7
20	24	26,606	-51.8		31	2.1
15	23	28,484	-49.6		30	3.3
10	19	31,166	-45.7		27	6.1
7	11	33,499	-42.6			
5						
4						

RAPID CITY, S. DAK. 904 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	966	8.6	3.1	32	1.5
1000	30	120				
950	30	552				
900	30	1,003			32	1.7
850	30	1,481	12.3	-1.1	30	4.5
800	30	1,987	9.5	-4.0	29	5.8
750	30	2,519	6.0	-7.0	29	5.6
700	30	3,081	2.6	-10.3	28	6.0
650	30	3,676	-1.5	-12.3	27	6.6
600	30	4,309	-5.7	-16.1	27	9.1
550	30	4,985	-10.2	-21.0	27	10.5
500	30	5,713	-15.2	-27.2	27	12.0
450	30	6,501	-20.3	-33.5	26	13.2
400	30	7,363	-26.6	-39.1	26	15.1
350	30	8,316	-34.0	-43.4	26	16.9
300	30	9,374	-42.2	-50.7	26	18.9
250	30	10,587	-49.7		26	21.1
200	30	12,033	-53.8		26	22.0
175	30	12,887	-56.0		26	20.0
150	30	13,863	-58.4		26	18.4
125	30	15,003	-60.6		26	15.6
100	30	16,390	-60.7		27	10.7
80	29	17,779	-59.4		26	6.4
70	29	18,616	-58.9		26	4.6
60	28	19,582	-57.9		26	3.9
50	28	20,737	-56.3		26	2.5
40	28	22,157	-55.2		27	2.9
30	28	24,006	-52.1		26	2.8
25	28	25,191	-50.6		28	3.2
20	28	26,651	-49.3		28	2.6
15	24	28,550	-47.3		26	4.1
10	16	31,252	-43.3		24	5.3
7						
5						
4						

ST CLOUD, MINN. 978 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	316	11.0	9.0	16	1.2
1000	30	125				
950	30	556	13.1	7.9	22	2.2
900	30	1,011	12.1	4.4	25	4.4
850	30	1,488	9.8	-.4	27	5.4
800	30	1,990	7.4	-3.0	27	6.9
750	30	2,519	4.6	-6.4	26	8.4
700	30	3,077	1.1	-10.3	26	9.8
650	30	3,670	-2.1	-15.0	26	11.7
600	30	4,302	-6.0	-19.1	26	12.7
550	30	4,978	-10.4	-23.4	26	13.9
500	30	5,705	-15.0	-29.1	26	15.8
450	30	6,494	-20.2	-34.0	26	17.0
400	30	7,357	-25.8	-40.0	25	18.5
350	30	8,313	-33.2	-44.3	26	20.1
300	30	9,376	-41.2	-51.5	26	22.4
250	30	10,593	-48.9		26	25.1
200	30	12,041	-54.0		26	24.7
175	30	12,894	-56.1		26	23.3
150	30	13,870	-58.0		26	19.6
125	30	15,013	-59.9		26	17.6
100	30	16,403	-60.4		26	11.3
80	30	17,801	-58.2		26	7.9
70	30	18,643	-57.6		26	5.7
60	30	19,618	-56.8		26	3.9
50	30	20,777	-55.6		26	3.4
40	30	22,203	-54.2		27	3.1
30	28	24,059	-51.9		28	2.7
25	26	25,244	-49.6		27	3.7
20	25	26,708	-48.1		27	3.3
15	21	28,608	-46.4		26	3.9
10	16	31,322	-43.7			
7						
5						
4						

* ST PAUL IS., ALASKA 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	5.1	4.4	21	.7
1000	30	81			20	1.1
950	30	500	3.5	2.3	22	2.5
900	30	937	1.3	.0	22	3.0
850	30	1,395	-.9	-4.8	22	2.6
800	30	1,878	-3.0	-8.3	22	2.8
750	30	2,387	-5.4	-14.1	22	3.0
700	30	2,926	-8.3	-16.3	22	3.5
650	30	3,498	-11.3	-20.5	23	4.6
600	30	4,109	-14.6	-24.6	24	5.6
550	30	4,763	-18.8	-29.3	24	6.2
500	30	5,466	-23.7	-33.4	24	6.8
450	30	6,228	-29.1	-37.9	24	7.0
400	30	7,060	-34.8	-42.4	24	7.2
350	30	7,983	-41.0	-40.9	24	7.1
300	30	9,013	-47.3		24	8.6
250	30	10,210	-50.0		25	12.9
200	30	11,675	-48.8		25	13.6
175	30	12,552	-48.9		25	12.7
150	30	13,564	-49.3		25	11.9
125	30	14,760	-49.4		25	10.9
100	30	16,220	-50.2		25	8.8
80	30	17,677	-50.4		26	7.4
70	30	18,548	-50.4		25	7.5
60	30	19,554	-50.5		25	5.9
50	30	20,743	-50.6		24	5.4
40	30	22,198	-50.4		24	5.3
30	30	24,078	-49.6		24	4.2
25	29	25,275	-48.9		24	4.0
20	27	26,748	-48.2		25	3.7
15	26	28,652	-47.0		26	3.8
10	23	31,356	-45.0		27	2.2
7	19	33,749	-42.6		30	3.3
5	11	36,050	-40.0			
4	5	37,550	-40.4			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALEM, ILL. — 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	174	16.8	15.3	13	1.1
1000	30	142				
950	30	583	18.7	14.2	23	2.6
900	30	1,047	16.7	11.0	25	4.0
850	30	1,532	14.0	5.4	26	4.7
800	30	2,042	11.7	1.5	26	5.5
750	30	2,580	9.0	-2.7	25	6.3
700	30	3,148	5.7	-7.0	25	6.6
650	30	3,751	2.5	-11.5	25	7.1
600	30	4,394	-.9	-16.4	25	8.1
550	30	5,084	-4.8	-20.3	25	8.8
500	30	5,827	-9.4	-27.6	25	9.7
450	30	6,633	-14.8	-31.7	25	10.0
400	30	7,513	-21.3	-37.1	26	11.1
350	30	8,487	-28.8	-44.3	26	12.6
300	30	9,569	-36.8	-52.0	26	15.3
250	30	10,806	-46.1		26	18.1
200	30	12,261	-54.9		27	19.7
175	30	13,107	-59.0		26	19.3
150	30	14,063	-63.5		26	17.5
125	30	15,174	-67.1		26	14.0
100	30	16,519	-67.3		26	9.2
80	30	17,876	-63.4		26	4.4
70	30	18,701	-61.2		25	1.7
60	30	19,663	-59.3		15	.4
50	30	20,812	-57.0		09	1.6
40	30	22,233	-54.7		09	2.5
30	30	24,087	-51.5		08	3.4
25	30	25,276	-49.8		08	4.0
20	30	26,744	-47.8		09	4.0
15	28	28,655	-45.9		09	4.8
10	25	31,381	-42.4		09	4.2
7	18	33,796	-39.6			

SALEM, OREG. — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	9.9	7.7	18	.9
1000	30	136	12.3	7.2	06	.3
950	30	567	12.1	4.9	05	.4
900	30	1,019	10.3	1.5	22	.6
850	30	1,494	8.5	-2.9	27	1.6
800	29	1,993	6.5	-6.3	27	2.8
750	29	2,520	4.1	-9.2	28	4.2
700	29	3,078	1.6	-12.7	29	5.7
650	29	3,672	-1.6	-16.2	29	6.9
600	29	4,305	-5.2	-20.5	29	8.5
550	29	4,983	-9.4	-25.6	28	9.5
500	29	5,712	-14.5	-29.9	28	11.4
450	29	6,502	-20.3	-34.9	28	12.9
400	29	7,363	-26.8	-39.9	28	13.3
350	29	8,315	-34.0	-45.1	28	13.7
300	29	9,374	-41.5	-53.1	28	15.9
250	29	10,594	-47.7		28	18.3
200	29	12,052	-52.2		29	20.0
175	29	12,911	-54.9		29	19.5
150	29	13,889	-57.9		29	19.5
125	28	15,041	-60.8		29	16.7
100	28	16,427	-60.8		29	12.3
80	28	17,819	-59.8		29	6.9
70	28	18,656	-58.6		30	5.1
60	28	19,627	-57.8		31	3.1
50	28	20,780	-56.9		34	2.0
40	27	22,197	-55.6		36	2.0
30	25	24,053	-53.3		01	1.2
25	23	25,237	-51.8		35	1.4
20	20	26,687	-49.9		27	2.6
15	19	28,568	-48.0		26	5.0
10	12	31,294	-43.2		26	5.2
7						

SALT LAKE CITY, UTAH — 872 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	1,288	10.6	1.2	15	2.4
1000	29	125				
950	29	563				
900	29	1,019				
850	29	1,499	13.6	-1.7	16	2.3
800	29	2,008	11.7	-4.5	19	3.2
750	29	2,545	8.0	-7.2	23	2.9
700	29	3,109	3.8	-10.4	26	4.1
650	29	3,707	-.2	-14.0	27	6.3
600	29	4,343	-4.2	-18.9	27	8.4
550	29	5,023	-8.6	-23.2	27	9.7
500	29	5,756	-13.0	-29.0	27	11.6
450	29	6,551	-18.4	-34.7	27	13.9
400	29	7,420	-24.4	-39.2	27	15.6
350	29	8,382	-31.6	-45.1	27	16.5
300	29	9,451	-39.7	-51.9	27	18.8
250	29	10,676	-47.7		28	20.3
200	28	12,130	-53.7		27	21.6
175	27	12,985	-56.6		27	20.8
150	27	13,955	-60.2		27	18.2
125	27	15,086	-62.7		27	14.8
100	27	16,458	-63.2		27	9.3
80	27	17,835	-61.6		27	5.6
70	27	18,666	-60.1		28	3.1
60	26	19,628	-58.9		24	.7
50	25	20,781	-56.7		34	.1
40	24	22,200	-54.9		05	.2
30	22	24,053	-51.6		15	.4
25	22	25,240	-50.4		13	.5
20	22	26,701	-49.0		07	1.1
15	20	28,606	-46.7		09	2.0
10	8	31,372	-42.8			
7						

SAN DIEGO, CALIF. — 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	124	18.2	15.4	02	.8
1000	30	90				
950	30	528	19.6	11.6	34	.5
900	30	998	20.7	3.8	33	.9
850	30	1,492	20.4	-2.0	29	1.5
800	30	2,012	17.7	-4.8	26	2.0
750	30	2,560	14.3	-7.8	24	2.9
700	30	3,138	10.5	-11.0	24	3.6
650	30	3,750	6.7	-13.4	25	4.0
600	30	4,402	2.2	-16.2	25	4.6
550	30	5,098	-2.6	-20.8	25	4.6
500	30	5,846	-7.6	-28.0	26	4.9
450	30	6,658	-13.0	-33.7	27	5.3
400	30	7,544	-19.8	-39.0	27	5.7
350	30	8,523	-27.6	-45.2	27	7.4
300	30	9,609	-36.3	-51.9	27	8.9
250	30	10,850	-45.3		27	13.2
200	30	12,309	-54.1		27	16.8
175	30	13,157	-59.0		27	16.5
150	30	14,111	-64.8		26	14.8
125	30	15,209	-69.9		27	12.1
100	30	16,530	-71.5		28	6.5
80	30	17,859	-67.4		34	1.6
70	30	18,671	-64.1		08	1.8
60	30	19,622	-61.1		09	3.2
50	30	20,763	-58.1		09	4.8
40	30	22,175	-56.3		08	7.6
30	29	24,013	-53.0		09	9.8
25	27	25,196	-51.1		09	10.4
20	27	26,654	-49.0		09	11.2
15	27	28,554	-46.4		09	11.5
10	25	31,266	-43.1		09	11.3
7	14	33,700	-40.1		09	8.8

SAN JUAN, P. R. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	26.5	21.1	17	1.5
1000	30	127	25.5	20.3	12	2.3
950	30	577	22.6	17.6	11	4.7
900	30	1,047	19.8	13.1	11	5.6
850	30	1,538	17.3	7.6	11	5.3
800	30	2,053	14.9	1.5	11	5.3
750	30	2,597	11.9	-3.4	11	4.7
700	30	3,170	8.1	-5.4	10	4.1
650	30	3,779	4.9	-9.1	09	3.7
600	30	4,427	1.3	-14.8	08	3.4
550	30	5,122	-2.9	-19.1	07	3.2
500	30	5,871	-7.4	-25.0	08	2.9
450	29	6,684	-12.3	-30.0	08	2.8
400	29	7,574	-18.2	-36.1	06	2.5
350	29	8,561	-25.3	-42.4	04	.9
300	29	9,657	-34.1	-49.8	06	1.5
250	29	10,906	-44.4		05	1.7
200	29	12,363	-56.1		01	1.8
175	29	13,200	-62.5		02	1.9
150	29	14,135	-69.3		04	2.6
125	29	15,210	-74.0		05	2.7
100	28	16,509	-74.2		07	4.8
80	27	17,821	-70.3		08	7.0
70	27	18,622	-66.5		08	8.5
60	26	19,563	-63.7		08	11.1
50	26	20,690	-61.0		09	12.9
40	23	22,089	-57.7		09	14.7
30	22	23,924	-53.6		09	16.3
25	21	25,102	-51.8		09	18.1
20	20	26,561	-48.3		09	18.8
15	16	28,461	-45.4		09	21.7
10	10	31,215	-39.1			
7						

SAN NICOLAS, CALIF. — 990 MB

INSUFFICIENT OBSERVATIONS

* SAULT STE MARIE, MICH. — 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	221	10.6	9.8	09	1.1
1000	30	139				
950	30	570	12.6	8.6	22	2.9
900	30	1,023	10.9	4.7	24	4.3
850	30	1,498	8.4	1.9	25	5.4
800	30	1,998	6.2	-2.5	26	7.2
750	30	2,525	3.7	-6.8	26	8.7
700	30	3,083	.7	-10.9	26	9.3
650	29	3,674	-2.2	-14.5	26	10.9
600	29	4,306	-5.9	-17.9	26	12.3
550	29	4,982	-9.8	-23.5	26	13.7
500	29	5,712	-14.1	-28.2	25	16.0
450	29	6,504	-19.3	-33.6	26	18.9
400	29	7,369	-25.4	-39.9	25	21.0
350	29	8,328	-32.3	-45.4	25	22.6
300	29	9,394	-40.5	-52.6	26	25.4
250	29	10,615	-48.7		26	27.8
200	29	12,059	-55.1		26	26.6
175	29	12,910	-56.5		27	24.5
150	29	13,883	-58.6		27	20.9
125	29	15,024	-60.3		27	18.5
100	29	16,415	-59.9		27	12.6
80	29	17,814	-58.2		27	8.5
70	29	18,656	-57.3		27	7.4
60	29	19,633	-56.7		27	5.4
50	29	20,793	-55.3		28	3.9
40	29	22,221	-53.7		28	3.4
30	29	24,083	-50.9		28	3.3
25	28	25,271	-49.7		27	3.2
20	28	26,738	-47.9		28	2.9
15	25	28,646	-45.2		26	1.3
10	23	31,373	-41.7		23	1.7
7	19	33,830	-38.2		21	2.0
5	9	36,181	-33.9			

* SHEMYA, ALASKA — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	19	38	7.5	5.5	27	2.5
1000	19	92			28	3.4
950	19	513	4.8	3.2	28	4.9
900	19	952	2.7	-.2	28	5.0
850	19	1,414	1.1	-4.0	28	4.8
800	19	1,900	-1.2	-7.2	27	5.1
750	19	2,412	-3.9	-11.2	28	5.3
700	19	2,954	-6.6	-16.0	28	6.3
650	19	3,530	-9.7	-21.2	28	6.5
600	19	4,144	-13.0	-26.0	28	7.4
550	19	4,802	-17.3	-29.3	29	9.4
500	19	5,510	-21.9	-35.0	29	11.4
450	19	6,278	-26.9	-38.7	29	13.9
400	19	7,117	-32.6	-42.3	29	16.7
350	19	8,048	-38.9	-43.2	28	18.5
300	19	9,088	-45.5		28	25.0
250	19	10,293	-49.0		28	32.7
200	18	11,755	-49.8		29	31.7
175	17	12,620	-50.5		29	26.7
150	17	13,622	-52.3		29	23.7
125	17	14,800	-53.2		29	21.2
100	17	16,237	-53.3		29	15.0
80	16	17,665	-52.9		28	11.9
70	16	18,527	-52.6		28	9.7
60	16	19,523	-52.6		28	8.3
50	15	20,703	-52.2		28	6.6
40	15	22,149	-51.5		28	6.0
30	14	24,022	-49.9		28	4.4
25	14	25,218	-48.8		28	4.5
20	14	26,691	-47.0		28	3.6
15	13	28,602	-45.8		24	1.8
10	12	31,314	-44.4		29	3.4
7	10	33,698	-42.5			
5						

* SHREVEPORT, LA. — 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	20.4	18.8	10	.9
1000	30	127	20.5	19.2	13	1.0
950	30	573	20.7	17.8	16	3.7
900	30	1,040	18.5	14.8	15	4.2
850	30	1,529	15.8	10.5	16	3.3
800	30	2,042	13.0	6.3	15	2.5
750	30	2,583	10.1	2.0	16	2.4
700	30	3,154	7.0	-3.3	17	2.3
650	30	3,760	3.4	-6.7	18	2.2
600	30	4,405	-.2	-11.8	19	2.7
550	30	5,097	-3.9	-16.8	20	2.0
500	30	5,844	-8.3	-22.0	22	2.7
450	30	6,653	-13.8	-27.3	23	2.9
400	30	7,538	-20.0	-33.3	24	5.3
350	30	8,517	-26.9	-39.7	24	6.7
300	30	9,609	-34.7	-47.4	25	9.6
250	30	10,857	-44.0		26	13.8
200	30	12,321	-54.4		26	16.4
175	30	13,165	-60.0		27	16.8
150	30	14,114	-65.9		27	14.9
125	30	15,206	-71.1		27	10.4
100	29	16,521	-72.3		26	4.1
80	29	17,849	-67.4		10	1.4
70	27	18,659	-64.7		09	2.9
60	27	19,608	-61.2		10	4.6
50	27	20,748	-58.5		09	6.3
40	27	22,160	-56.1		09	8.0
30	27	24,003	-52.8		08	10.3
25	27	25,186	-50.3		09	11.6
20	26	26,656	-48.2		09	12.6
15	20	28,578	-45.1		09	13.3
10	17	31,314	-41.6		09	12.4
7	9	33,767	-37.0			
5						

SPOKANE, WASH. — 932 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	720	8.6	3.3	16	1.5
1000	30	132				
950	30	562				
900	30	1,012	10.6	3.1	20	2.3
850	30	1,486	8.1	-.3	23	3.2
800	30	1,984	5.1	-2.7	24	3.5
750	30	2,508	2.2	-6.7	26	5.1
700	30	3,061	-1.1	-9.5	26	6.3
650	29	3,650	-4.3	-14.3	26	6.7
600	29	4,277	-8.0	-17.7	26	8.1
550	29	4,948	-11.9	-24.1	27	9.5
500	29	5,671	-16.7	-27.6	27	11.1
450	29	6,455	-21.4	-32.4	28	13.4
400	29	7,314	-27.3	-38.1	29	14.8
350	29	8,265	-34.6	-42.4	29	16.1
300	29	9,321	-42.4	-49.2	29	17.7
250	29	10,532	-49.7		29	18.9
200	29	11,981	-52.5		29	22.0
175	29	12,843	-53.4		29	19.7
150	29	13,830	-55.6		29	16.5
125	29	14,988	-57.2		28	13.9
100	29	16,397	-57.7		29	10.3
80	29	17,807	-57.0		29	6.6
70	28	18,653	-56.3		29	4.9
60	27	19,631	-56.0		29	3.0
50	26	20,795	-55.1		32	2.8
40	26	22,224	-54.3		34	2.0
30	26	24,072	-53.3		31	2.4
25	26	25,250	-51.9		29	2.7
20	25	26,699	-50.1		27	4.4
15	20	28,584	-48.1		26	7.0
10	12	31,238	-45.5			
7						
5						

* SWAN ISLAND, W. I. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	28	10	26.6	23.4	11	4.6
1000	28	103	26.6	23.7	12	4.4
950	28	556	23.1	21.2	12	7.3
900	28	1,027	20.3	16.7	12	7.8
850	28	1,519	17.7	11.7	12	7.1
800	28	2,037	15.1	8.0	12	7.0
750	28	2,582	12.5	3.8	12	6.6
700	28	3,158	9.2	-.6	12	5.5
650	27	3,768	5.5	-4.3	12	5.5
600	27	4,418	1.5	-8.5	12	5.5
550	27	5,114	-2.4	-12.6	12	5.1
500	27	5,865	-6.9	-18.0	12	4.2
450	27	6,681	-11.6	-24.7	11	4.2
400	27	7,574	-17.3	-28.6	09	2.7
350	27	8,564	-24.3	-35.3	10	2.3
300	27	9,665	-33.0	-44.2	07	1.3
250	27	10,921	-43.1		04	2.3
200	27	12,384	-55.1		05	3.4
175	27	13,225	-61.7		03	4.3
150	27	14,164	-68.5		04	7.1
125	26	15,237	-74.3		05	7.0
100	26	16,532	-74.2		07	7.5
80	26	17,843	-71.0		08	8.6
70	26	18,640	-67.5		09	9.4
60	26	19,575	-64.8		09	10.2
50	25	20,693	-62.1		08	12.4
40	25	22,085	-58.6		09	14.1
30	24	23,914	-54.3		10	15.0
25	22	25,089	-51.9		09	14.9
20	21	26,544	-49.0		09	16.3
15	16	28,457	-45.1		09	22.8
10	13	31,179	-40.9			
7	5	33,632	-36.1			

TAMPA, FLA. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	[redacted]	23.1	21.8	09	2.0
1000	30	132	23.8	21.5	09	2.9
950	30	582	21.9	18.0	10	3.0
900	30	1,050	19.2	14.5	11	2.0
850	30	1,540	16.5	11.1	12	1.4
800	29	2,057	13.8	6.6	10	1.6
750	29	2,599	10.9	3.1	08	1.6
700	29	3,172	8.2	-4.6	05	1.8
650	29	3,781	5.3	-7.9	05	1.2
600	29	4,431	1.7	-12.9	04	1.0
550	29	5,127	-2.4	-17.3	02	.9
500	29	5,877	-6.8	-23.1	36	1.1
450	29	6,691	-12.1	-28.5	31	1.4
400	28	7,582	-18.1	-33.5	33	2.7
350	28	8,569	-25.0	-39.9	32	3.0
300	28	9,668	-33.1	-47.0	33	3.5
250	28	10,923	-43.3		33	5.0
200	28	12,389	-54.7		34	7.5
175	28	13,231	-60.8		35	7.9
150	28	14,174	-67.6		36	8.4
125	28	15,257	-72.9		01	6.2
100	28	16,561	-73.6		05	4.6
80	27	17,880	-68.7		07	4.9
70	27	18,687	-65.4		08	6.3
60	26	19,630	-63.0		08	10.0
50	26	20,763	-59.1		09	13.2
40	26	22,171	-56.4		09	13.4
30	25	24,009	-53.5		09	14.4
25	25	25,188	-51.3		09	15.0
20	24	26,648	-48.8		08	16.8
15	22	28,557	-45.3		09	18.3
10	18	31,284	-40.8		09	16.2
7						

TOPEKA, KANS. — 984 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	268	16.4	12.6	19	1.5
1000	30	128				
950	30	567	17.9	12.1	20	4.5
900	30	1,030	16.8	8.9	22	6.1
850	30	1,516	14.6	4.4	23	5.4
800	30	2,027	12.0	.9	24	4.9
750	30	2,565	9.2	-4.6	25	5.7
700	30	3,133	5.8	-7.9	25	7.6
650	30	3,736	2.3	-10.1	25	9.7
600	30	4,378	-1.6	-14.6	25	10.2
550	30	5,066	-5.8	-19.9	25	10.9
500	30	5,807	-10.3	-25.7	25	12.7
450	30	6,610	-15.9	-31.0	25	14.8
400	30	7,486	-22.1	-37.4	25	15.8
350	30	8,457	-29.3	-42.9	25	17.2
300	30	9,537	-37.7	-49.4	26	18.6
250	30	10,769	-46.8		26	20.3
200	30	12,221	-55.3		26	22.5
175	30	13,066	-58.7		26	21.9
150	30	14,026	-62.3		26	19.2
125	30	15,143	-65.6		26	16.0
100	30	16,498	-65.4		25	10.5
80	30	17,862	-62.9		25	5.2
70	30	18,690	-60.7		25	3.8
60	30	19,655	-58.2		24	1.5
50	30	20,809	-56.4		14	.7
40	30	22,232	-54.4		10	1.9
30	26	24,088	-51.4		10	2.1
25	23	25,279	-49.5		09	3.1
20	22	26,751	-47.3		09	3.3
15	20	28,673	-45.3		08	4.3
10	12	31,417	-42.3			
7						

+ TRUK, CAROLINE IS. — 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	2	28.2	24.3	12	1.2
1000	30	93	27.4	21.7	13	1.2
950	30	546	24.0	19.5	13	2.4
900	30	1,018	20.9	15.1	13	3.2
850	30	1,511	18.0	11.8	12	3.3
800	30	2,029	15.5	8.7	12	3.7
750	30	2,575	12.8	4.6	11	3.8
700	30	3,152	9.7	.5	10	3.7
650	30	3,764	6.3	-3.8	11	4.3
600	30	4,416	2.4	-6.9	10	3.9
550	30	5,115	-1.2	-12.2	09	3.9
500	30	5,869	-5.2	-16.0	08	3.6
450	30	6,690	-9.7	-22.4	08	3.4
400	30	7,590	-15.4	-28.8	09	4.3
350	30	8,588	-22.2	-35.5	09	4.7
300	30	9,700	-30.5	-44.0	08	4.7
250	30	10,968	-41.1	-50.5	06	5.2
200	30	12,443	-53.7		05	8.2
175	30	13,288	-60.8		05	8.9
150	30	14,229	-68.5		06	8.6
125	30	15,302	-75.6		08	7.7
100	29	16,583	-76.2		08	7.0
80	29	17,884	-70.9		09	8.5
70	29	18,683	-67.1		09	8.1
60	29	19,621	-64.3		08	5.9
50	28	20,744	-61.0		08	3.6
40	27	22,140	-58.7		09	2.8
30	25	23,967	-54.8		07	2.4
25	23	25,141	-52.2		08	4.1
20	21	26,594	-49.1		10	6.0
15	18	28,497	-46.1		10	10.6
10	15	31,217	-42.0			
7						

* TUCSON, ARIZ. — 922 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	789	20.3	12.8	15	3.3
1000	29	79				
950	29	528				
900	29	998	23.2	10.7	15	2.9
850	29	1,495	21.0	7.4	20	2.0
800	29	2,017	17.4	4.6	23	2.4
750	29	2,565	13.3	1.0	23	2.6
700	29	3,141	9.3	-3.5	24	3.0
650	29	3,751	5.3	-8.3	25	3.4
600	29	4,400	.7	-11.2	24	4.1
550	29	5,092	-4.1	-16.0	25	4.9
500	29	5,837	-8.9	-22.5	27	4.9
450	29	6,646	-13.8	-29.0	27	5.7
400	29	7,530	-20.4	-35.4	27	6.7
350	29	8,507	-27.6	-41.7	27	7.5
300	29	9,594	-36.1	-47.8	27	10.6
250	28	10,838	-44.7		27	13.6
200	27	12,307	-53.8		27	14.8
175	27	13,154	-59.0		27	15.3
150	27	14,108	-65.1		27	13.9
125	26	15,208	-70.7		27	12.3
100	26	16,523	-71.9		28	5.5
80	26	17,850	-67.4		03	.9
70	26	18,661	-64.7		09	2.5
60	26	19,610	-61.6		09	4.2
50	26	20,747	-59.0		09	6.2
40	26	22,155	-56.6		08	8.6
30	24	23,992	-53.7		09	10.2
25	22	25,169	-51.9		09	11.0
20	22	26,623	-49.3		09	12.7
15	20	28,515	-46.6		09	11.0
10	18	31,227	-43.4		08	11.7
7	10	33,645	-39.4		10	8.4

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* VANDENBERG AFB, CALIF. 1000 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	100	12.7	11.1	33	.2
1000	30	102			33	1.0
950	30	538	18.5	7.0	01	2.9
900	30	1,004	20.8	1.7	01	2.4
850	30	1,495	18.6	-1.1	36	1.5
800	30	2,012	15.6	-4.8	30	.8
750	30	2,556	12.5	-8.7	26	1.8
700	30	3,131	9.5	-11.0	26	3.7
650	30	3,742	5.8	-14.6	26	5.3
600	30	4,392	1.6	-17.9	26	5.5
550	30	5,087	-2.7	-23.1	27	5.6
500	30	5,835	-7.6	-28.6	27	6.1
450	30	6,646	-13.7	-33.6	27	6.9
400	30	7,529	-20.4	-39.1	27	8.1
350	30	8,505	-28.0	-44.6	27	9.7
300	30	9,591	-36.5	-51.7	28	11.2
250	30	10,829	-46.0		28	11.9
200	29	12,281	-54.6		27	14.1
175	29	13,128	-58.9		27	14.7
150	29	14,084	-63.6		27	14.0
125	29	15,190	-68.4		27	11.2
100	29	16,522	-69.7		29	7.3
80	29	17,861	-66.8		35	2.1
70	29	18,674	-63.9		05	1.3
60	29	19,627	-60.9		09	2.0
50	29	20,768	-58.1		08	2.5
40	29	22,182	-55.8		08	3.2
30	28	24,023	-53.4		09	7.1
25	26	25,202	-51.6		09	7.1
20	24	26,657	-49.4		10	8.2
15	19	28,531	-46.8		09	7.1
10	18	31,254	-44.0		09	7.3
7	17	33,665	-41.3		10	6.5
5	11	35,964	-38.3			

VICTORIA, TEXAS 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	33	22.7	21.6	04	2.8
1000	30	104	23.3	22.3	07	2.1
950	30	553	21.5	19.1	11	4.6
900	30	1,022	19.4	15.5	12	4.4
850	30	1,513	16.7	11.1	13	3.8
800	30	2,028	14.2	7.7	12	3.0
750	30	2,571	11.5	4.1	11	2.8
700	30	3,145	8.2	-.7	10	2.6
650	30	3,754	4.8	-4.0	11	1.9
600	30	4,403	1.3	-10.8	12	1.5
550	30	5,099	-2.7	-15.8	14	1.6
500	30	5,849	-6.9	-19.8	12	1.5
450	30	6,664	-11.8	-26.7	19	1.3
400	30	7,556	-17.5	-30.8	24	2.3
350	30	8,546	-24.2	-38.4	26	3.6
300	30	9,649	-32.2	-46.4	27	7.1
250	30	10,910	-42.0	-51.7	27	10.0
200	29	12,383	-53.7		27	12.1
175	29	13,229	-59.9		27	11.9
150	29	14,176	-67.0		27	10.0
125	28	15,262	-73.1		28	6.4
100	25	16,554	-74.9		32	1.9
80	21	17,860	-70.4		09	3.6
70	20	18,665	-65.3		10	5.3
60	20	19,610	-62.3		10	6.3
50	20	20,744	-59.6		10	8.1
40	22	22,147	-57.1		09	10.6
30	28	24,023	-53.4		09	14.0
25	28	25,163	-51.7		09	15.1
20	24	26,621	-48.5		09	15.2
15	22	28,532	-44.9		09	16.0
10	18	31,274	-41.9			

* WAKE IS., PACIFIC AREA 1012 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	5	26.9	23.7	12	3.6
1000	30	106	26.3	22.8	11	4.3
950	30	558	22.8	20.4	12	5.3
900	30	1,029	19.7	17.2	13	4.8
850	30	1,520	16.6	13.4	14	4.6
800	30	2,036	14.1	11.1	13	3.9
750	30	2,579	11.4	6.0	13	3.3
700	30	3,153	8.3	.0	12	3.0
650	30	3,764	5.1	-4.3	10	2.3
600	29	4,413	1.5	-8.0	11	2.5
550	29	5,110	-2.1	-13.5	09	3.1
500	29	5,862	-6.5	-17.8	09	3.6
450	29	6,677	-11.6	-23.2	09	3.4
400	29	7,570	-17.5	-29.6	08	3.2
350	29	8,560	-24.4	-36.3	06	3.6
300	29	9,661	-32.9	-43.5	03	3.1
250	29	10,917	-43.0		01	2.6
200	29	12,382	-55.0		34	3.6
175	29	13,221	-61.8		35	4.1
150	28	14,160	-68.6		02	7.2
125	25	15,236	-73.9		04	9.0
100	18	16,531	-74.7		06	9.2
80	18	17,847	-71.2		08	9.6
70	18	18,642	-68.7		09	10.7
60	18	19,575	-65.4		09	11.9
50	15	20,689	-62.8		09	13.5
40	13	22,073	-59.7		10	14.2
30	10	23,896	-55.7		09	16.4
25	10	25,063	-53.5		09	16.9
20	8	26,513	-49.6			
15	7	28,412	-46.6			
10	5	31,138	-43.3			

* ALLEGRS IS., ... 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	*	21.0	18.3	36	1.1
1000	30	161	20.7	17.4	07	1.5
950	30	604	18.2	15.1	11	1.1
900	30	1,066	15.8	11.8	10	.3
850	30	1,551	13.5	8.0	35	.4
800	30	2,060	11.3	4.7	31	1.4
750	30	2,596	8.8	.6	30	2.0
700	30	3,166	5.7	-4.0	29	2.3
650	30	3,770	2.9	-8.6	28	3.3
600	30	4,414	-.5	-14.2	26	3.6
550	30	5,105	-4.5	-18.1	26	3.7
500	30	5,849	-8.9	-22.8	25	4.1
450	30	6,657	-14.0	-28.5	26	5.6
400	30	7,541	-20.1	-34.2	26	7.0
350	30	8,519	-27.2	-40.9	26	7.6
300	29	9,607	-35.7	-48.0	26	8.1
250	29	10,850	-45.1		26	10.3
200	29	12,309	-54.6		26	10.7
175	29	13,163	-59.5		27	10.7
150	29	14,116	-64.5		27	10.1
125	28	15,221	-67.8		28	8.2
100	28	16,561	-67.7		27	4.8
80	28	17,914	-64.3		32	2.0
70	28	18,736	-62.3		35	1.9
60	28	19,694	-59.9		05	1.9
50	27	20,841	-56.7		07	2.9
40	27	22,264	-54.3		07	4.0
30	27	24,126	-50.5		08	4.7
25	25	25,317	-49.0		08	5.2
20	23	26,790	-46.5		08	5.2
15	20	28,708	-44.5		09	5.5
10	16	31,455	-41.6		10	5.2

WASHINGTON ... INT., D.C. 1009 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	85	16.4	15.8	07	.1
1000	30	145	17.3	15.5	19	.2
950	30	605	17.4	13.4	24	.7
900	30	1,066	15.3	11.7	25	1.7
850	30	1,550	13.1	8.9	28	2.2
800	30	2,059	11.2	3.4	26	3.0
750	30	2,596	8.6	-.2	27	4.0
700	30	3,164	5.5	-5.0	26	4.7
650	30	3,766	2.2	-9.1	26	5.1
600	30	4,410	-.9	-14.5	26	5.3
550	30	5,100	-4.4	-20.9	26	5.3
500	30	5,844	-9.2	-25.2	27	5.6
450	30	6,651	-14.6	-30.5	26	7.1
400	30	7,532	-20.6	-36.7	26	8.4
350	30	8,510	-27.5	-44.5	27	9.6
300	30	9,597	-36.2	-52.0	27	10.8
250	30	10,838	-45.5		27	12.4
200	30	12,294	-54.9		27	13.5
175	30	13,139	-59.4		27	13.3
150	30	14,094	-64.0		27	12.3
125	30	15,200	-67.9		27	10.6
100	29	16,541	-67.0		27	6.9
80	29	17,898	-63.9		29	3.5
70	28	18,721	-61.7		29	1.6
60	28	19,685	-59.4		02	.9
50	28	20,833	-56.7		05	2.1
40	28	22,256	-54.5		07	2.5
30	27	24,116	-50.8		08	3.5
25	26	25,306	-49.6		08	3.7
20	25	26,777	-47.2		08	3.7
15	20	28,688	-45.6		10	3.4
10	11	31,401	-43.3			

WAYCROSS, GA. 1011 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	44	20.7	19.9	03	.9
1000	30	135	21.5	20.2	08	1.8
950	30	583	21.3	17.3	07	3.9
900	30	1,050	18.7	13.4	07	3.6
850	30	1,540	15.8	9.9	06	2.6
800	30	2,053	13.4	4.4	05	2.3
750	30	2,594	10.7	-1.7	02	1.8
700	30	3,166	7.9	-5.5	35	1.8
650	30	3,774	4.7	-11.7	33	2.3
600	30	4,422	1.0	-16.7	32	2.7
550	30	5,118	-3.2	-20.9	31	3.3
500	30	5,864	-7.6	-25.6	30	3.5
450	30	6,676	-12.6	-31.7	29	3.7
400	30	7,565	-18.5	-37.3	29	4.4
350	30	8,550	-25.4	-43.5	29	5.0
300	30	9,648	-33.8	-51.0	30	6.6
250	30	10,901	-43.4		30	8.7
200	30	12,366	-54.4		31	10.0
175	30	13,210	-60.3		31	9.5
150	30	14,158	-66.1		31	7.5
125	30	15,249	-71.2		32	4.7
100	29	16,564	-71.6		36	1.8
80	29	17,894	-67.9		06	2.9
70	29	18,703	-64.9		07	4.9
60	29	19,651	-61.8		08	7.6
50	29	20,789	-58.4		08	9.6
40	29	22,202	-55.5		09	10.7
30	29	24,052	-52.4		09	11.8
25	28	25,237	-50.5		09	12.8
20	26	26,699	-48.6		09	13.8
15	22	28,603	-45.8		08	13.8
10	15	31,345	-41.2		08	14.4
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WINNEMUCCA, NEV. 871 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	1,312	5.4	-6.9	18	.3
1000	30	162				
950	30	590				
900	30	1,038				
850	30	1,511	12.2	-3.0	03	.6
800	30	2,018	10.4	-4.9	26	1.7
750	30	2,551	6.8	-7.7	25	3.5
700	30	3,114	2.8	-10.6	25	5.3
650	30	3,710	-.6	-14.5	25	7.8
600	30	4,345	-4.3	-18.9	26	9.3
550	30	5,025	-8.3	-23.6	26	10.9
500	30	5,759	-13.0	-28.1	27	11.5
450	30	6,553	-18.5	-32.6	28	12.3
400	30	7,421	-24.9	-38.9	28	13.2
350	30	8,381	-31.9	-44.6	28	16.2
300	30	9,450	-39.5	-51.3	28	18.7
250	30	10,677	-47.5		29	19.6
200	30	12,129	-53.8		29	20.7
175	30	12,984	-56.9		28	19.2
150	30	13,951	-60.9		28	17.3
125	30	15,078	-63.3		28	14.5
100	29	16,441	-64.1		29	9.4
80	29	17,813	-62.3		29	4.6
70	29	18,642	-60.2		29	2.6
60	29	19,607	-58.6		26	1.1
50	24	20,757	-57.2		24	1.1
40	22	22,175	-55.2		18	.5
30	22	24,032	-52.0		21	.5
25	24	25,216	-50.8		24	1.2
20	22	26,674	-48.9		24	.8
15	16	28,556	-47.1		24	1.2
10	10	31,296	-44.3			

WINSLOW, ARIZ. 852 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	1,487	13.4	2.1	19	1.7
1000	30	111				
950	30	595				
900	30	1,019				
850	30	1,504			17	1.2
800	30	2,019	15.9	.5	22	3.3
750	30	2,564	12.6	-2.6	23	4.0
700	30	3,138	8.6	-6.6	25	4.6
650	30	3,747	4.5	-8.6	26	5.1
600	30	4,394	.2	-13.5	27	6.1
550	30	5,085	-4.7	-18.2	28	6.9
500	30	5,828	-9.6	-24.6	28	8.0
450	30	6,633	-15.0	-31.3	28	9.6
400	30	7,513	-21.5	-37.7	28	12.0
350	30	8,486	-28.9	-43.4	27	13.2
300	29	9,570	-36.9	-48.9	28	14.3
250	29	10,808	-45.8		27	15.4
200	28	12,266	-54.4		27	18.2
175	28	13,114	-58.6		27	18.8
150	28	14,072	-63.4		27	17.0
125	27	15,184	-68.0		27	14.6
100	26	16,517	-69.6		28	9.8
80	24	17,859	-65.7		28	3.2
70	24	18,676	-63.0		19	.5
60	24	19,632	-60.3		09	1.4
50	23	20,777	-57.9		09	2.8
40	22	22,190	-56.0		09	5.9
30	21	24,036	-52.7		09	7.6
25	19	25,223	-51.3		09	8.5
20	18	26,676	-49.9		09	8.0
15	16	28,566	-47.2		09	7.7
10	12	31,266	-44.2			

YAKUTAT, ALASKA 1010 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	12	4.4	3.1	09	1.6
1000	30	93			11	2.0
950	30	517	7.3	2.0	11	3.1
900	30	960	4.5	-.7	13	4.9
850	30	1,424	1.6	-2.9	13	4.1
800	30	1,911	-.7	-6.0	15	3.7
750	30	2,425	-3.1	-10.2	18	3.5
700	30	2,968	-6.0	-12.8	22	4.1
650	30	3,545	-9.7	-16.2	22	5.0
600	30	4,158	-13.4	-20.5	24	5.4
550	30	4,815	-17.4	-24.9	25	6.3
500	30	5,523	-22.2	-29.5	26	7.7
450	30	6,290	-26.9	-33.7	27	8.8
400	30	7,130	-32.7	-39.2	27	11.0
350	30	8,060	-39.5	-39.9	27	14.0
300	30	9,096	-46.6		27	16.8
250	30	10,290	-51.9		28	18.0
200	29	11,731	-51.3		28	16.7
175	29	12,600	-50.9		28	14.2
150	29	13,603	-51.1		28	13.6
125	28	14,779	-51.6		27	11.6
100	28	16,227	-51.6		27	9.3
80	27	17,676	-51.7		27	7.9
70	27	18,543	-51.4		27	7.3
60	25	19,550	-51.5		27	5.7
50	24	20,733	-51.7		27	5.4
40	23	22,181	-51.7		27	4.6
30	23	24,080	-51.5		30	4.3
25	23	25,243	-51.7		31	3.9
20	22	26,689	-51.1		32	4.9
15	17	28,568	-50.1		33	4.6
10	11	31,259	-47.5			

YAP, CAROLINE IS. 1008 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	28	14	28.3	24.3	19	.5
1000	28	86	26.9	21.5	19	.6
950	28	539	23.7	18.8	17	1.3
900	28	1,010	20.7	15.3	16	1.5
850	28	1,503	17.6	11.6	14	1.5
800	28	2,020	15.1	8.1	13	1.7
750	28	2,565	12.3	4.2	12	2.1
700	28	3,141	9.2	-.3	11	2.1
650	28	3,752	6.0	-3.7	09	2.6
600	28	4,404	2.4	-8.4	09	2.9
550	28	5,102	-1.4	-12.2	09	3.5
500	28	5,856	-5.7	-16.9	08	4.3
450	28	6,685	-10.5	-22.9	08	4.6
400	28	7,573	-15.9	-29.5	07	4.1
350	28	8,569	-22.6	-36.5	08	5.1
300	28	9,679	-31.0	-45.3	08	5.1
250	28	10,944	-41.6		08	6.3
200	27	12,418	-54.1		08	8.7
175	27	13,261	-61.0		07	9.9
150	27	14,201	-68.6		07	11.3
125	27	15,275	-75.4		08	11.4
100	27	16,555	-78.1		08	12.2
80	27	17,848	-72.0		09	10.9
70	27	18,643	-68.5		08	9.9
60	27	19,575	-65.1		08	8.5
50	26	20,698	-61.8		08	6.7
40	26	22,086	-59.6		09	6.5
30	26	23,903	-55.1		09	7.9
25	25	25,075	-52.9		09	7.8
20	22	26,524	-49.6		09	9.1
15	19	28,417	-46.9		10	15.1
10	18	31,124	-42.2		09	23.0
8	33,589	-38.5				

YUCCA FLAT, NEV. 880 MB

Standard pressure surface (mb.)	No. of observations	Dynamic height	Temperature	† Dew Point	Direction	Speed (Knots)
SURFACE	30	1,198	11.9	-6.7	33	.4
1000	30	112				
950	30	551				
900	30	1,009				
850	30	1,494	18.3	-2.8	34	1.0
800	30	2,010	15.3	-4.8	22	1.5
750	30	2,553	11.7	-7.2	23	3.5
700	30	3,125	7.9	-10.5	23	4.4
650	30	3,732	4.3	-14.0	25	6.0
600	30	4,379	.2	-17.2	25	8.0
550	30	5,071	-4.3	-21.9	26	8.5
500	30	5,815	-9.3	-26.3	26	9.5
450	30	6,621	-14.6	-32.5	26	11.4
400	30	7,501	-21.5	-38.3	27	12.9
350	30	8,474	-28.9	-44.4	27	14.8
300	30	9,555	-37.4	-50.8	27	17.3
250	30	10,790	-46.3		27	18.2
200	30	12,243	-54.9		27	20.1
175	29	13,094	-58.5		27	20.3
150	29	14,033	-62.9		27	17.7
125	29	15,186	-66.5		27	15.7
100	29	16,513	-66.7		28	9.3
80	29	17,867	-64.5		27	4.1
70	29	18,689	-61.3		28	1.5
60	29	19,650	-59.2		06	.4
50	26	20,799	-57.0		09	1.6
40	23	22,217	-55.0		10	2.6
30	23	24,068	-51.7		09	4.8
25	22	25,258	-50.6		10	5.3
20	21	26,716	-49.0		10	6.8
15	16	28,614	-46.3		08	6.7
10	7	31,295	-43.9			

Note: All observations scheduled at 1200, G.c.t. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun. SEPTEMBER 1971

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Sept.									
1	0.67	0.74	0.84	1.00	----	----	----	----	----
2	----	(.53)	(.67)	(.94)	(1.06)	----	----	----	----
3	.55	(.59)	.87	1.06	1.27	----	----	----	----
4	----	.97	1.11	1.26	1.42	1.27	1.14	1.03	0.93
5	1.02	1.11	1.20	1.32	1.42	----	1.15	1.05	----
6	.97	1.06	1.16	1.28	1.36	1.25	1.10	.99	.87
7	.80	.88	.99	1.13	1.30	----	----	----	----
8	.63	.77	.90	1.07	1.28	1.10	.99	.90	.82
9	.78	.88	1.00	1.14	1.34	1.14	1.03	.96	.87
10	.96	1.05	1.14	1.24	1.34	1.09	.94	.82	.71
11	.80	.90	1.01	1.17	1.34	1.15	1.00	.87	.78
12	----	.91	1.03	1.17	1.31	----	(.89)	----	----
13	.76	.87	.97	1.13	1.28	1.09	.90	.79	.69
14	.76	.88	1.01	1.17	1.35	1.16	1.00	.90	----
15	.75	.86	.98	1.15	1.35	1.20	1.18	1.03	.91
16	.99	1.07	1.18	1.31	1.42	1.26	1.13	1.01	.92
17	.69	.76	.85	----	----	----	----	----	----
18	----	----	----	----	----	----	----	----	----
19	----	----	----	----	1.38	1.25	1.14	1.02	.94
20	.91	.99	(.99)	1.22	1.43	1.24	1.09	.96	.85
21	.74	.86	H(.95)	H(1.16)	1.31	----	----	----	----
22	----	----	1.06	----	----	----	----	----	----
23	----	----	----	----	----	----	----	----	----
24	.80	.89	1.05	(1.16)	----	1.19	1.05	.93	.83
25	.84	.95	1.05	1.21	1.39	1.17	1.03	.92	.81
26	.97	1.07	1.18	1.31	1.42	1.28	1.11	(.93)	----
27	.93	1.01	1.12	1.23	1.39	1.01	1.08	.96	.86
28	.88	.94	1.09	----	----	----	----	----	----
29	----	----	----	----	----	----	----	----	----
30	.87	.94	1.01	1.18	----	----	----	----	----
Averages	0.78	0.93	1.03	1.23	1.29	1.18	1.06	1.08	0.84

TUCSON, ARIZ.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Sept.									
1	----	----	----	----	1.03	----	----	----	----
2	----	----	----	----	1.21	----	----	----	----
3	0.53	0.62	0.78	0.99	1.20	1.06	0.89	0.76	0.64
4	.56	.68	.82	.98	1.25	1.02	.86	.74	.63
5	.69	.84	.97	1.12	1.23	1.12	.98	.86	.77
6	.72	.83	.94	1.10	1.27	1.02	.86	.74	.65
7	.69	.77	----	----	----	----	----	----	----
8	----	----	.91	1.05	1.24	1.09	.90	.76	.68
9	.68	.78	.90	1.04	1.25	1.02	.87	.75	.67
10	.70	.79	.92	1.07	----	----	----	----	----
11	.65	.75	.87	1.05	1.27	.98	.85	.71	.61
12	.70	.79	.92	1.09	1.27	1.04	.91	.78	.67
13	.71	.80	.92	1.07	1.26	1.01	.82	.72	.61
14	.59	.68	.81	1.00	1.18	1.02	.84	.71	.62
15	.58	.69	.82	.99	1.21	1.02	.90	.75	.67
16	.64	.75	.87	1.07	1.26	1.06	.87	.75	.68
17	----	.62	.75	.92	----	.98	.83	.71	.59
19	.64	.74	.87	1.04	1.22	1.03	.91	.82	.71
20	.76	.86	.96	1.17	1.31	1.18	1.03	.93	.85
21	.78	.87	.99	1.12	1.31	1.15	.98	.84	.71
22	.69	.75	.84	1.01	1.15	.98	.86	.71	.57
23	.62	.72	.85	1.03	1.20	1.03	.80	.65	.54
24	.76	.86	.96	1.13	1.33	1.10	.99	.85	.71
25	.87	.94	1.04	1.19	1.33	1.19	1.07	.99	.88
26	.90	.99	1.09	1.22	1.36	1.20	1.04	.93	.86
27	.88	.98	1.08	1.18	1.36	1.19	1.06	.95	.85
28	.88	.98	1.07	1.20	1.32	1.16	----	----	----
Averages	0.71	0.80	0.91	1.08	1.25	1.07	0.91	0.79	0.69

OMAHA, NEBR.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 1.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Sept.									
1	----	----	----	----	----	----	----	----	HM0.37
2	----	----	----	----	HM1.02	HM0.91	HM0.74	HS0.59	HS .48
3	HS0.84	HS0.92	HS1.04	S1.18	----	----	----	----	----
6	.86	.95	1.06	1.21	1.35	HS1.17	HS1.09	HS .93	HS .86
7	HS .72	HS .88	HS .96	HS1.12	HS1.29	HS1.12	HS .95	HS .83	HS .73
9	----	----	----	----	----	----	.98	.85	.78
10	----	.92	1.04	1.20	1.35	----	.90	.80	----
11	.88	.98	1.09	1.22	1.35	1.22	1.06	.94	----
12	----	----	----	----	HS1.20	----	HM .85	HM .68	----
13	.93	1.03	1.11	1.24	1.33	HS1.16	HS .84	HS .87	----
14	D .71	D .82	D .96	D 1.12	----	----	----	----	----
19	HS .79	HS .88	HS1.02	HS1.17	----	----	----	----	----
20	----	----	HS .98	1.19	----	----	----	----	----
23	HS .85	HS .99	HS1.11	HS1.25	HS1.28	1.20	1.03	.90	HS .79
24	HS .84	HS .98	HS1.08	HS1.23	----	----	----	----	----
26	----	----	----	----	----	----	HM .84	HM .64	----
28	----	----	----	----	----	----	HS .83	.72	.62
Averages	0.82	0.94	1.04	1.19	1.27	1.13	0.93	0.80	0.66

MADISON, WIS.

Date	Sun's zenith distance A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Sept.									
6	----	----	----	----	----	S 1.05	S 0.86	S 0.74	----
7	S 0.74	S 0.81	S 0.93	S 1.10	S 1.26	S 1.10	----	----	----
10	S .75	S .86	S .98	S 1.12	S 1.30	----	----	----	----
12	----	----	----	----	----	S 1.12	----	----	S 0.78
14	M .61	M .78	M .93	M 1.03	S 1.16	----	----	----	----
23	----	----	----	----	----	1.18	.96	----	----
24	S .88	S .94	S 1.01	S 1.17	S 1.25	S 1.09	S .85	----	----
Averages	0.75	0.85	0.96	1.11	1.24	1.11	0.89	0.74	0.78

( ) Clouds Present
* Values corresponding to true solar noon
BD Blowing Dust
BN Blowing Sand
D Dust
DI Intense Dust
DM Moderate Dust
DS Slight Dust
F Fog
GF Ground Fog
H Haze
HI Intense Haze
HM Moderate Haze
HS Slight
I Intense Haze-indeterminable
K Smoke
KI Intense Smoke
KM Moderate Smoke
KS Slight Smoke
M Moderate Haze-indeterminable
N Sand
S Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

SEPTEMBER 1971

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	491	519	589	647	634	632	516	591	603	608	592	562	570	570	592	606	212	157	560	585	545	372	84	503	549	553	543	531	316	443		509
AMES IOWA	296	534	517	126	565	577	561	418	446	533	548	536	559	498	513	284	487	83	140	477	423	246	508	506	61	274	233	303	151	383		393
ANNETTE ALASKA	167	241	121	185	289	249	284	402	104	119	64	57	321	271	113	370	340	149	352	283	362	214	139	221	331	307	205	310	321	---		238
APALACHICOLA FLORIDA	535	549	544	---	680	559	518	174	402	562	328	266	546	565	288	418	392	536	530	533	440	508	499	537	509	473	464	488	508	486		463
ARGONNE NAT. LAB.	362	381	245	242	262	149	452	490	452	448	335	277	462	475	262	338	304	116	52	317	452	418	242	451	54	244	313	304	359	376		328
ASTORIA OREGON	210	316	441	531	396	460	566	489	489	---	---	---	---	542	---	524	533	516	486	486	503	498	---	---	238	296	---	---	263	328		433
ATLANTA GEORGIA	408	472	519	371	464	428	---	430	496	451	419	518	473	541	433	123	122	230	420	430	421	225	120	406	120	189	357	384	441	415		373
BARROW ALASKA	248	221	127	92	133	168	127	146	151	93	213	184	153	84	77	89	36	69	125	92	88	89	---	159	88	81	113	59	81	114		121
BETHEL ALASKA	403	243	160	308	299	308	326	306	329	207	221	358	379	331	267	118	154	85	76	115	114	138	135	172	96	257	35	25	124	96		206
BISMARCK N.DAK.	562	583	525	67	353	577	362	376	593	557	550	526	---	461	442	301	112	331	---	153	228	---	488	504	406	277	66	258	292	62		370
BLUE HILL MASS.	589	578	442	464	455	116	402	356	373	530	294	117	184	138	256	453	150	167	461	117	263	470	407	500	490	233	235	211	337	368		339
BOISE IDAHO	510	499	---	---	---	---	---	596	565	564	566	579	564	585	557	545	549	552	478	482	522	510	514	463	347	302	484	239	203	104		475
BROOKINGS SOUTH DAKO	498	488	474	228	164	482	461	120	311	414	508	481	436	483	425	442	244	418	412	428	91	113	296	430	49	117	159	291	269	195		328
BROWNSVILLE TEXAS	606	542	---	601	350	645	540	609	591	543	314	374	119	---	191	475	103	---	139	283	327	429	438	232	252	545	277	219	---	516		395
BURLINGTON VERMONT	605	575	420	335	336	304	468	411	426	527	334	93	105	161	408	433	139	275	337	157	169	507	366	395	459	480	309	182	291	433		348
CAPE HATTERAS N.C.	525	410	376	594	565	389	374	193	171	534	482	424	454	522	520	510	463	400	392	465	295	306	487	242	507	496	471	496	66	6		405
CARIBOU MAINE	491	477	331	210	241	451	240	334	362	416	423	33	92	70	294	284	202	142	392	180	315	371	313	275	323	406	399	379	98	373		297
CHARLESTON S.C.	452	449	423	466	482	509	417	375	451	191	294	368	502	512	456	408	324	343	470	288	400	349	343	412	442	454	427	482	413	291		406
CHINA LAKE CALIF.	573	573	564	576	549	249	563	548	517	514	523	513	446	519	511	509	507	535	551	517	496	520	521	505	505	506	503	498	435	502		512
CLEVELAND OHIO	295	303	289	294	414	392	337	500	395	463	274	290	31	468	299	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
COLUMBIA MISSOURI	456	383	372	487	461	566	574	464	357	469	559	552	553	529	248	85	210	36	75	525	534	426	340	318	174	425	479	458	409	431		398
DAVIS CALIFORNIA	611	578	631	609	590	624	622	602	601	590	594	582	570	556	550	544	545	558	538	525	536	502	498	498	349	435	518	477	184	513		538
DE BILT HOLLAND	558	544	562	520	527	365	506	502	499	505	491	497	489	488	479	461	475	428	521	493	476	501	491	487	493	492	495	474	205	455		483
EL PASO TEXAS	586	525	598	570	611	583	574	482	555	517	548	587	580	566	557	547	405	140	359	560	561	539	93	446	543	543	541	539	370	419		500
ELY NEVADA	721	677	719	718	704	506	699	700	691	671	387	643	552	666	659*	576	586	587	582	447	563	564	557	552	531	533	427	546	483	150		580
EPPLEY NEWPORT R.I.	569	544	396	462	451	127	323	420	410	479	211	417	178	364	324	451	300	235	446	185	232	297	451	467	467	212	277	278	360	307		355
FAIRBANKS ALASKA	140	68	89	160	231	339	276	227	---	310	329	316	330	319	291	288	112	285	219	---	197	254	237	130	101	142	145	180	40	40		207
FLAMING GORGE UTAH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	441	774	512	204	453	578	43	207	550	555	533	526	358	346	544	48	91	---
FORT WORTH TEXAS	539	438	547	565	506	541	541	523	476	203	455	525	518	506	501	381	394	245	127	539	431	49	82	207	247	414	377	379	355	387		399
FRESNO CALIFORNIA	602	604	594	587	474	310	585	554	546	543	558	532	528	519	512	514	534	523	525	525	516	499	501	494	368	515	513	508	496	478		519
GENEVA NEW YORK	504	316	362	387	346	355	288	422	314	422	169	86	106	228	384	149	---	---	---	---	396	414	169	406	286	50	104	333	260	371		293
GLASGOW MONTANA	551	520	179	153	525	490	495	512	447	485	400	498	179	408	349	238	261	417	212	395	432	455	439	341	287	160	343	410	340	297		373
GLOUCESTER POINT VA	492	504	516	578	518	568	556	428	545	484	388	202	477	368	528	508	485	377	400	442	134	128	259	339	475	203	432	478	275	26		404
GRAND JUNCTION COLO.	617	568	36	643	649	627	372	622	624	615	604	592	597	597	611	605	174	561	586	331	497	582	586	589	572	564	519	571	214	553		531
GREAT FALLS MONTANA	504	350	370	578	566	304	571	595	362	533	439	437	363	482	327	200	249	470	253	180	504	481	462	290	121	298	358	408	305	99		381
GREENSBORO N.C.	415	479	290	352	367	464	462	440	473	293	431	237	---	533	532	366	225	145	336	385	247	56	192	387	207	257	394	434	417	236		347
INDIANAPOLIS INDIANA	456	342	230	394	474	149	340	520	437	374	230	271	388	514	514	---	---	---	394	189	250	485	---	412	426	62	207	419	401	387	385		349
ITHACA NEW YORK	527	411	445	385	347	443	321	445	409	471	345	90	173	224	486	286	161	272	78	112	307	503	140	487	368	65	82	130	166	393		305
LAKE CHARLES LA.	254	230	435	381	527	433	398	292	99	383	240	500	556	486	127	370	552	285	308	226	256	440	345	422	485	385	448	439	409	463		374
LAKELAND FLORIDA	456	363	470	403	475	357	418	126	57	309	289	249	408	486	500	516	502	501	457	507	422	488	475	466	454	491	467	467	482	503		419
LANDER WYOMING	586	577	338	565	574	548	96	569	549	532	518	525	538	529	525	132	236	538	478	187	212	503	496	485	446	379	388	469	449	219		437
LARAMIE WYOMING	604	555	605	425	592	602	227	308	593	573	577	575	575	553	470	160	179	407	410	288	220	474	515	508	518	473	457	500	418	367		444
LAS VEGAS NEVADA	619	597	606	609	586	530	561	578	564	535	552	548	519	490	541	545	547	568	575	551	546	541	536	536	528	524	---	---	---	---		556
LEXINGTON KENTUCKY	495	153	215	395	422	285	273	374	485	461	129	238	283	495	423	73	194	107	177	110	377	419	263	389	368	191	349	408	373	400		307
LITTLE ROCK ARKANSAS	291	313	442	478	473	494	564	551	458	396	459	535	540	526	504	339	374	434	85	545	538	100	353	296	204	447	298	348	386	381		405
LOS ANGELES CALIF.	618	586	548	548	594	385	585	571	571	584	573	557	540	542	513	125	271	516	573	467	332	463	527	524	440	486	452	460	503	446		492
LOS ANGELES CALIF.	568	492	61	551	578	333	537	519	529	535	542	526	504	497	469	170	127	471	527	500	295	456	509	498	425	352	481	415	469	324		456
MADISON WISCONSIN	467	505	44	454	461	453	530	457	372	520	494	488	457	476	495	410	466	179	37	---	378	366	388	475	113	148	299	316	303	397		388
MANHATTAN KANSAS	487	553	502	200	577	573	558	492	554	500	566	536	548	520	439	245	151	49	404	508	489	167	505	257	203	445	455	430	415	347		423
MATANUSKA ALASKA	87	265	148	306	221	123	194	298	242	395	310	251	185	---	130	232	285	328	40	227	113	160	189	272	299	300	243	207	81	81		210
MC FARLAND WISCONSIN	334	408	179	573	571	482	563	556	537	538	542	542	526	532	530	505	528	535	514	494	500	487	468	440	230	208	346	130	119	257		452
MIAMI FLORIDA	132	278	419	389	440	187	---	---	---	---	---	---	---	---	448	461	473	464	518	544	518	414	473	444	465	504	474	427	344	483		427
MIDLAND TEXAS	596	597	559	413	587	607	606	563	528	548	569	570	590	587	550	563	229	101	167	588	566	224	89	176	302	532	527	494	467	246		458
MT. MITCHELL TENNESSEE	276	204	37	476	480	412	420	464	507	453	322	468	518	533	458	240	271	360	283	88	479	404	244	438	366	185	375	421	330	401		375
NEW YORK CENTRAL PRK	559	491	372	494	501	356	365	317	453	296	111	175	116	175	472	412	94	149	105	408	422	375	104	540	484	151	82	63	357	279		299

SOLAR RADIATION TOTALS - Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

SEPTEMBER 1971

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
NORTH OMAHA NEBRASKA	429	546	523	251	551	580	565	318	526	561	565	529	552	511	403	131	422	90	521	510	359	54	525	491	126	299	335	438	242	298		408
OAK RIDGE TENNESSEE	295	280	435	450	511	451	332	442	510	509	238	334	370	508	486	105	70	278	391	153	380	362	185	453	300	115	412	410	330	400		350
OKLAHOMA CITY OKLA.	538	502	---	474	505	454	515	519	480	501	518	555	532	531	476	433	44	50	115	521	412	298	149	44	370	426	443	284	438	428		399
PAGE ARIZONA	569	561	538	591	540	526	597	604	620	639	---	---	---	---	---	---	535	---	---	---	---	---	---	---	---	---	---	---	---	---		---
PALMER AAES ALASKA	81	215	146	247	91	103	162	263	300	219	267	243	188	268	118	268	214	286	37	190	110	130	176	142	264	260	198	187	63	67		183
PHOENIX ARIZONA	538	513	530	570	567	554	495	529	530	536	539	539	512	485	511	518	473	473	545	534	509	490	497	505	506	511	501	502	99	200		494
PORTLAND MAINE	548	541	423	413	362	61	254	333	327	468	333	64	72	94	338	395	126	263	401	95	277	440	397	456	363	381	421	198	249	392		316
PROSSER WASHINGTON	186	272	538	530	494	456	499	529	446	476	503	471	497	482	473	415	485	447	403	431	445	440	388	376	310	371	363	83	355	342		417
RAPID CITY S.DAK.	533	540	412	62	258	533	269	224	520	500	491	494	479	272	192	380	294	378	300	204	239	445	452	450	438	361	349	402	358	315		371
RENO NEVADA	510	447	528	510	533	535	518	505	488	482	480	472	460	465	466	461	481	497	464	460	455	452	441	433	405	410	428	433	251	193		455
RICHLAND 25 NW WASH.	149	236	527	575	548	446	555	553	483	530	553	532	551	542	529	448	517	486	451	450	500	485	456	406	281	392	331	121	403	418		448
RIVERSIDE CALIFORNIA	646	484	575	624	581	516	608	593	589	584	598	609	594	587	539	419	192	583	628	578	471	558	586	575	489	513	497	529	504	410		542
RUSTON LOUISIANA	354	352	456	512	439	552	514	464	361	313	327	530	555	545	357	234	527	523	86	197	169	283	413	195	479	399	436	449	420	481		398
SAINT CLOUD MINN.	524	564	474	269	226	174	479	97	39	449	505	482	497	464	424	346	358	489	434	412	378	76	438	439	76	65	111	165	277	207		335
SALT LAKE CITY	602	579	516	579	601	574	456	584	559	449	475	564	553	572	569	554	563	561	523	304	525	174	504	515	343	388	345	463	334	30		479
SAN ANTONIO TEXAS	533	480	569	505	595	605	552	587	487	85	157	287	462	535	412	484	489	418	186	573	152	238	236	379	429	428	275	465	307	392		410
SANTA MARIA CALIF.	611	590	603	569	476	493	580	555	520	549	566	558	532	532	537	364	344	374	518	527	399	519	399	517	480	525	517	512	503	512		509
SAULT STE MARIE MICH	381	335	462	360	290	236	483	204	472	193	134	396	---	353	---	448	206	371	97	183	380	---	---	392	317	408	142	82	379	186		303
SEATTLE TACOMA WASH.	138	380	385	494	72	361	524	260	475	343	477	449	510	498	397	488	491	460	424	472	---	453	405	211	205	306	145	110	353	255		364
SEATTLE WASH. UNIV.	128	272	264	394	92	336	443	205	327	314	402	393	442	435	380	424	415	388	362	409	403	394	346	169	171	264	182	142	311	216		314
SPOKANE WASHINGTON	137	127	333	535	526	233	528	521	428	485	501	497	489	503	495	489	475	438	399	457	454	415	433	338	294	211	178	244	278	360		393
STERLING VIRGINIA	79	346*	480	540	456	475	532	465	495	526	268	---	---	390	555	397	391	303	179	320	---	---	123	---	506*	98	198	369	413	206		364
SWAN ISLAND W.I.	483	427*	536	516	488*	303	493	573	463	463	546*	561	584	575*	560	541	496	505	527*	304	105	229	336*	236*	502*	456	428	487*	482	353		452
TAMPA FLORIDA	416	327	559	500	428	326	467	57	18	388	281	185	407	506	---	530	550	403	505	416	428	494	453	455	469	499	478	476	485	526		415
WAKE ISLAND PACIFIC	632	630	633	36	49	34	172	132	93	393	199	168	79	220	639	627	621	656	614	517	644	613	619	593	615	619	532	612	621	504		437

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.

U Indicates Urban sites.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day [illegible] at Palmer, Alaska

[illegible] SEPTEMBER 1971

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	12	92	23	115	22	2	18	98	50	165	98	89	70	109	-10	-108	61	94	-21	83	89	35	87	-27	72	58	23	7	8	8		46

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	NO DATA - MACHINE MALFUNCTION																															

These data are from an E - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. Data instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

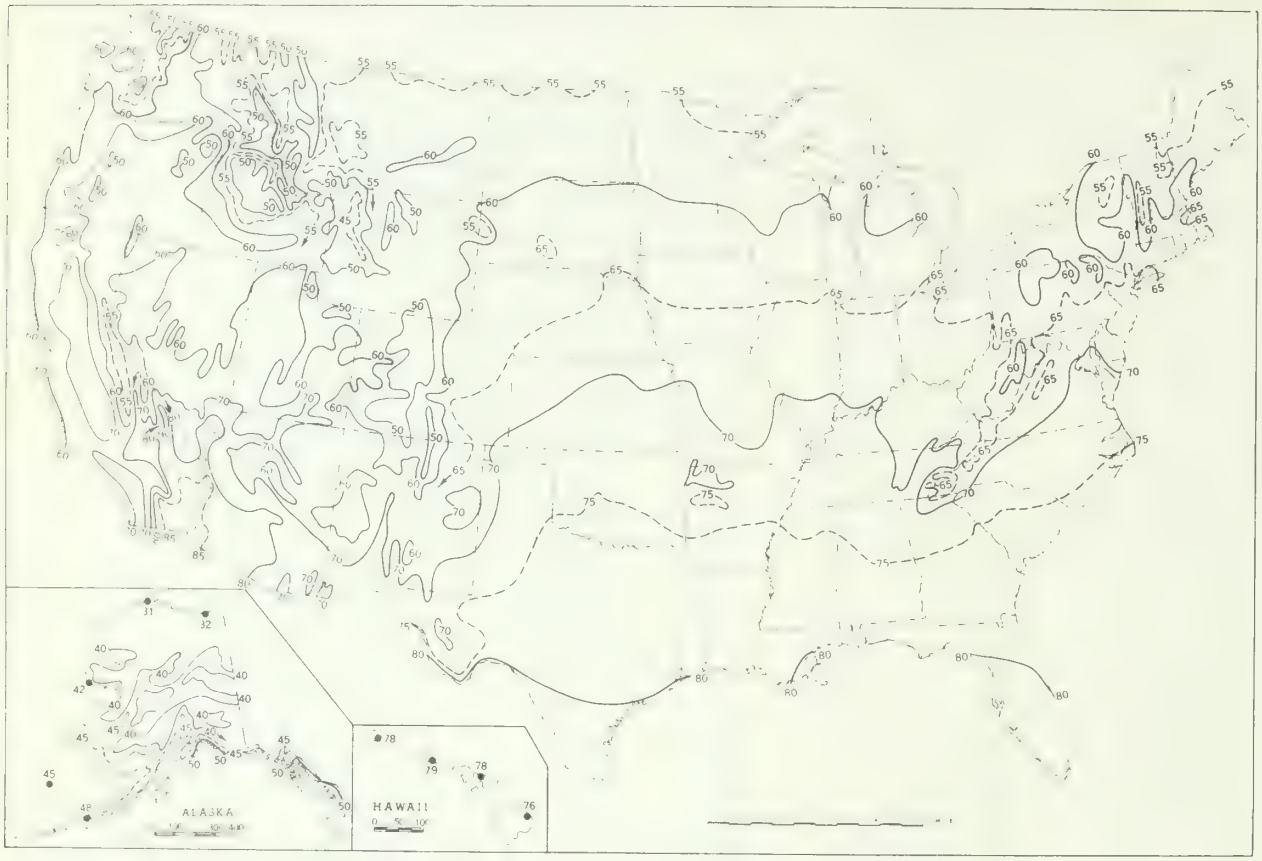
Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean Obs.
[illegible]	[illegible]																															
[illegible]	[illegible]																															
[illegible]	00292	00361	00298	00346	00350	00285	00286	04282	00286	00292	00290	02291	00292	00349	03353	00355	-	05328	00351	05345	05356	00339	00298	00298	00284	00290	-	[illegible]	[illegible]	[illegible]		311
[illegible]	00321	00312	00320	-	-	-	00297	00317	00301	00306	-	-	00304	00320	00336	05399	-	-	-	01347	[illegible]	[illegible]	[illegible]	[illegible]	-	-	[illegible]	[illegible]	[illegible]	[illegible]		15
[illegible]		[illegible]	[illegible]	[illegible]																												
[illegible]	-	-	-	-	-	-	-	00332	05375	00365	00360	-	-	-	00357	00349	-	00410	04314	-	04513	-	05503	-	-	-	-	03410	-	-		330
[illegible]	00342	00328	00426	00331	02321	00340	00306	00312	04308	00312	05322	04312	00313	00319	00352	00365	00365	05340	-	00350	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		329
[illegible]	00270	00272	00272	00268	00278	00271	00269	00276	00272	00269	00272	00273	00268	00276	00274	00273	00270	00276	00276	05270	00271	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		273
[illegible]	00290	-	00289	-	-	-	-	00281	-	00289	-	-	00282	-	00279	-	00284	-	-	00278	-	00282	-	00280	-	-	[illegible]	[illegible]	[illegible]	[illegible]		282
[illegible]	04300	04320	04306	00318	00311	00313	00318	00310	00304	00294	04310	00323	00318	00303	00306	-	00297	00308	30311	-	00295	00292	-	[illegible]	[illegible]	01318	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	00317		00311	00311	00312	00311	00306	-	-	-	-	-	-	-	-	00299	00279	00301	[illegible]	00289	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		3.6

[illegible]

[illegible] Standard temp.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), September.



B. Temperature Departure from 30 - Year Mean (°F 1931-60), September 1971

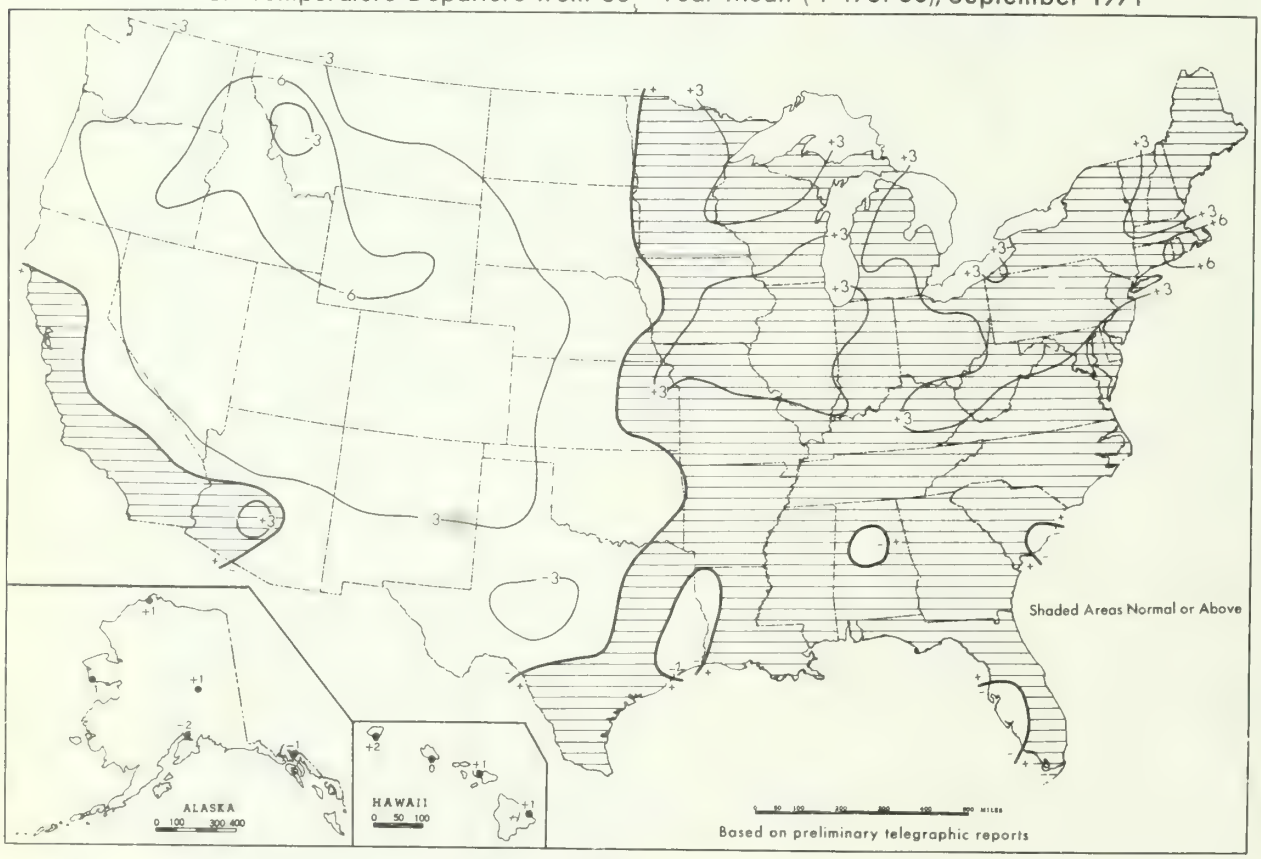


Chart II. Total Precipitation (Inches), September 1971.

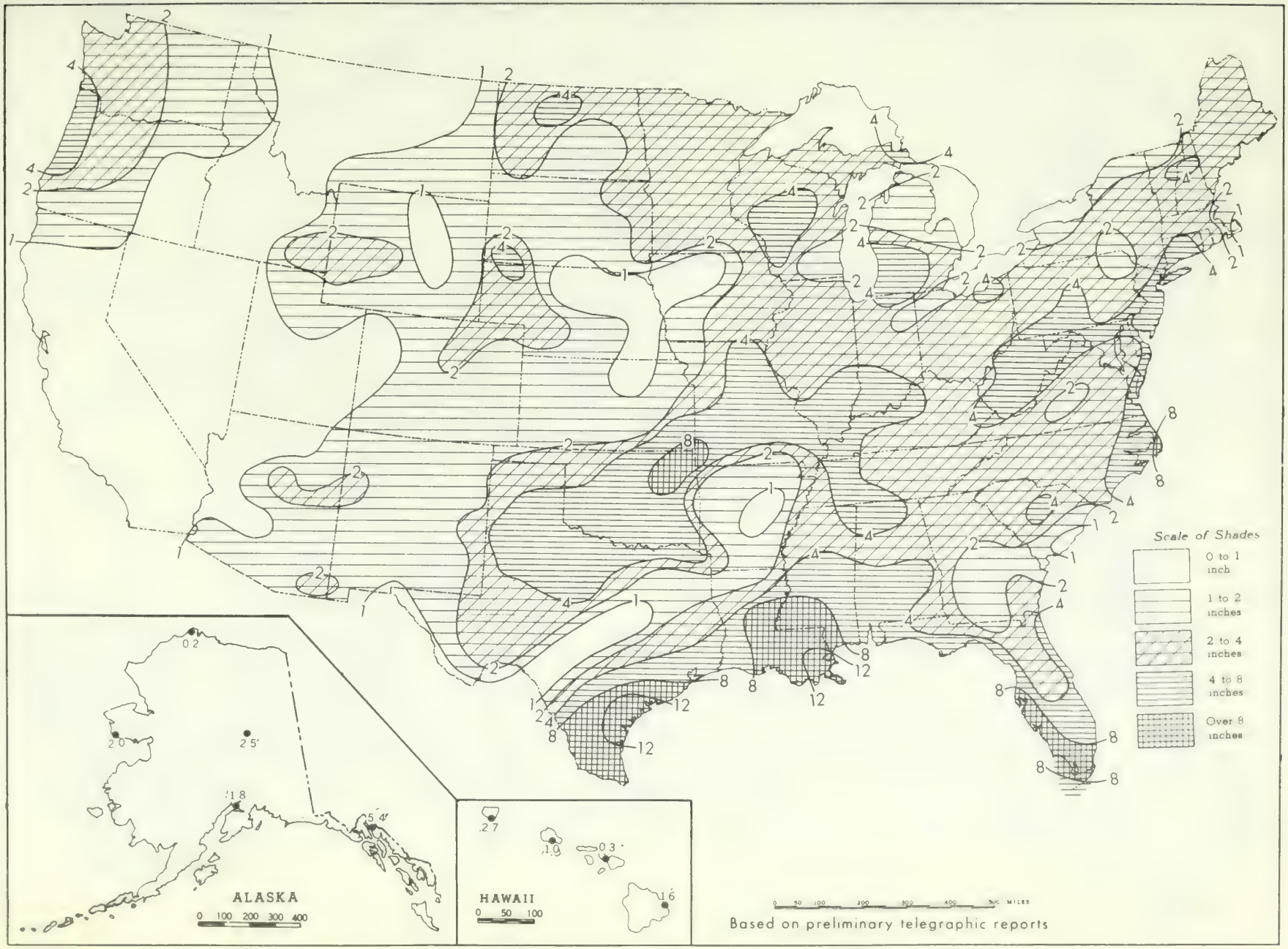


Chart III. Percentage of Normal Precipitation, September 1971.

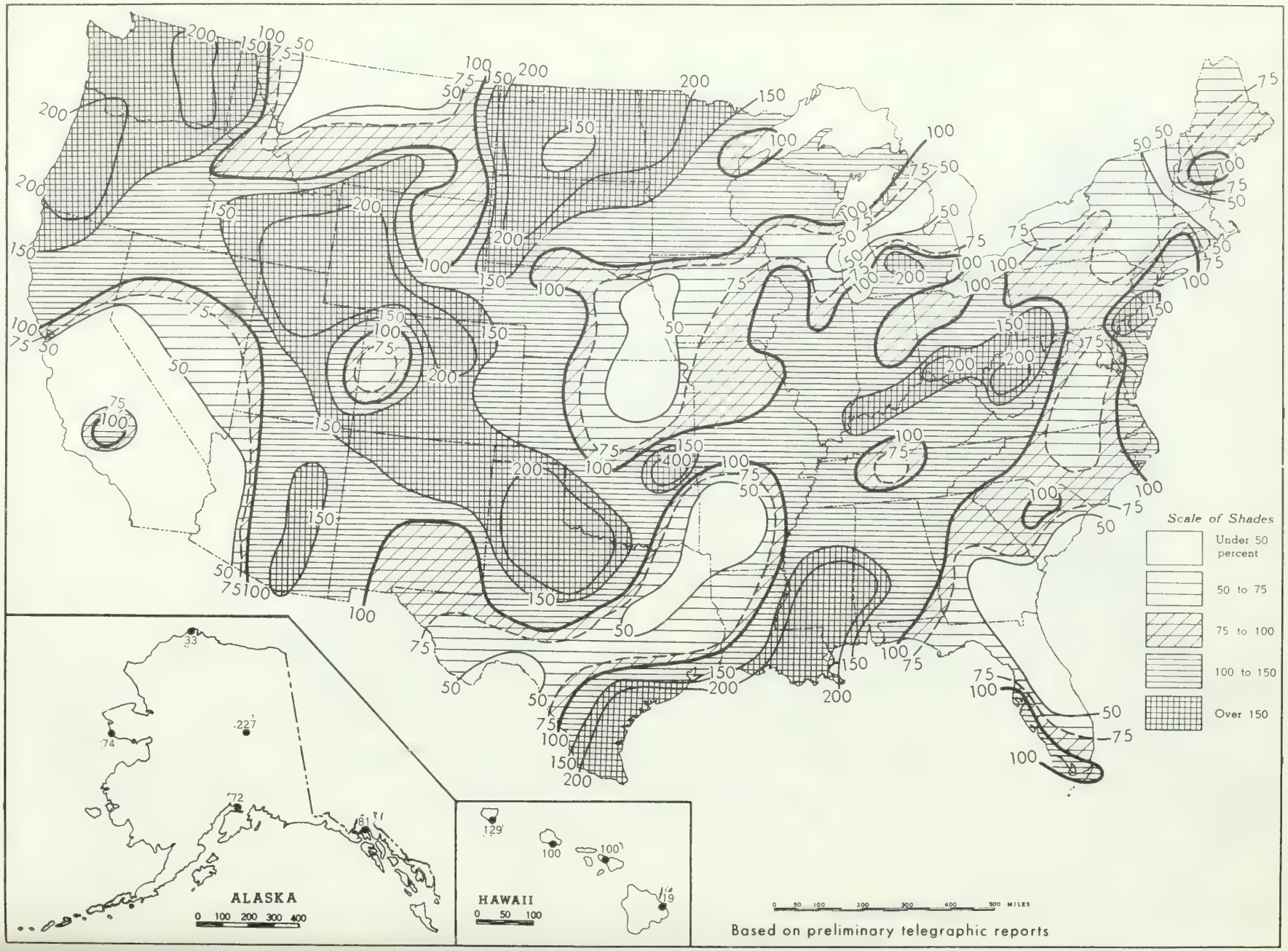
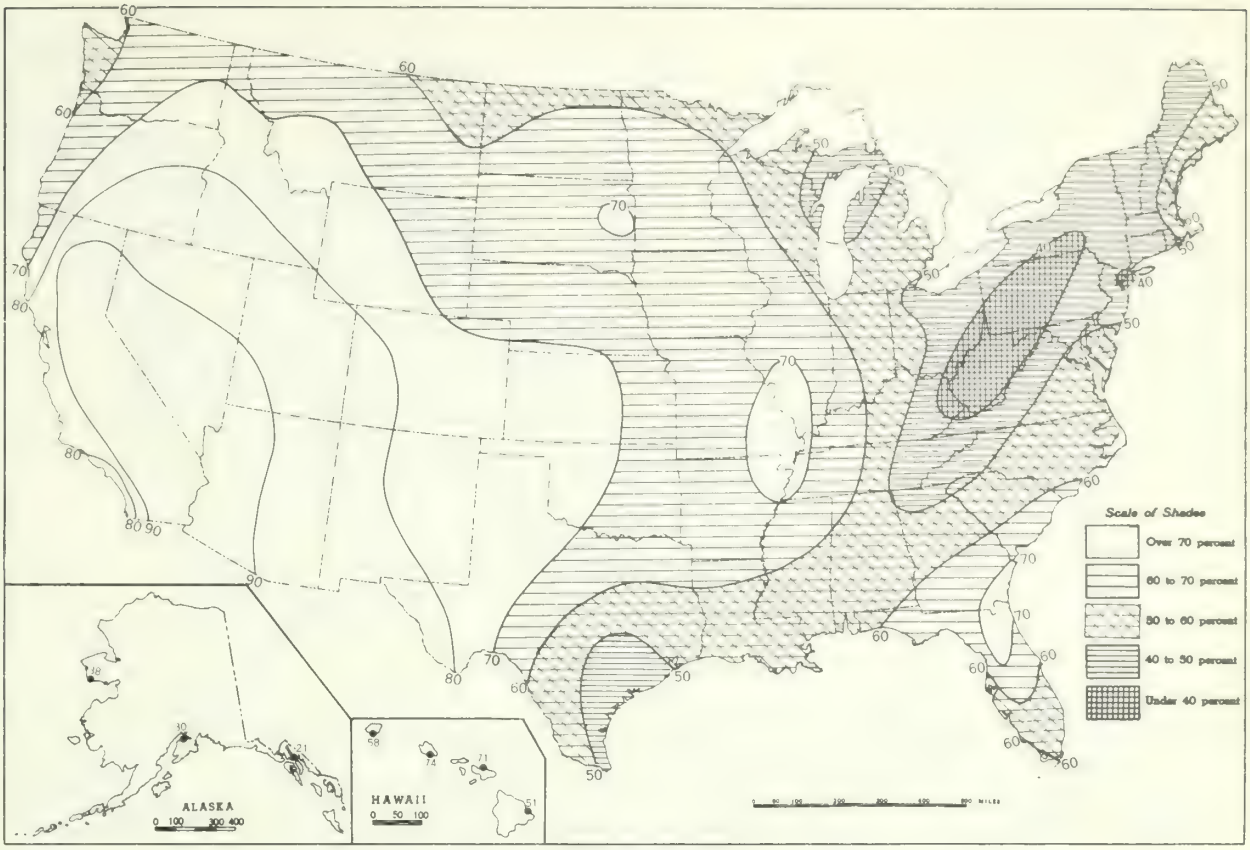
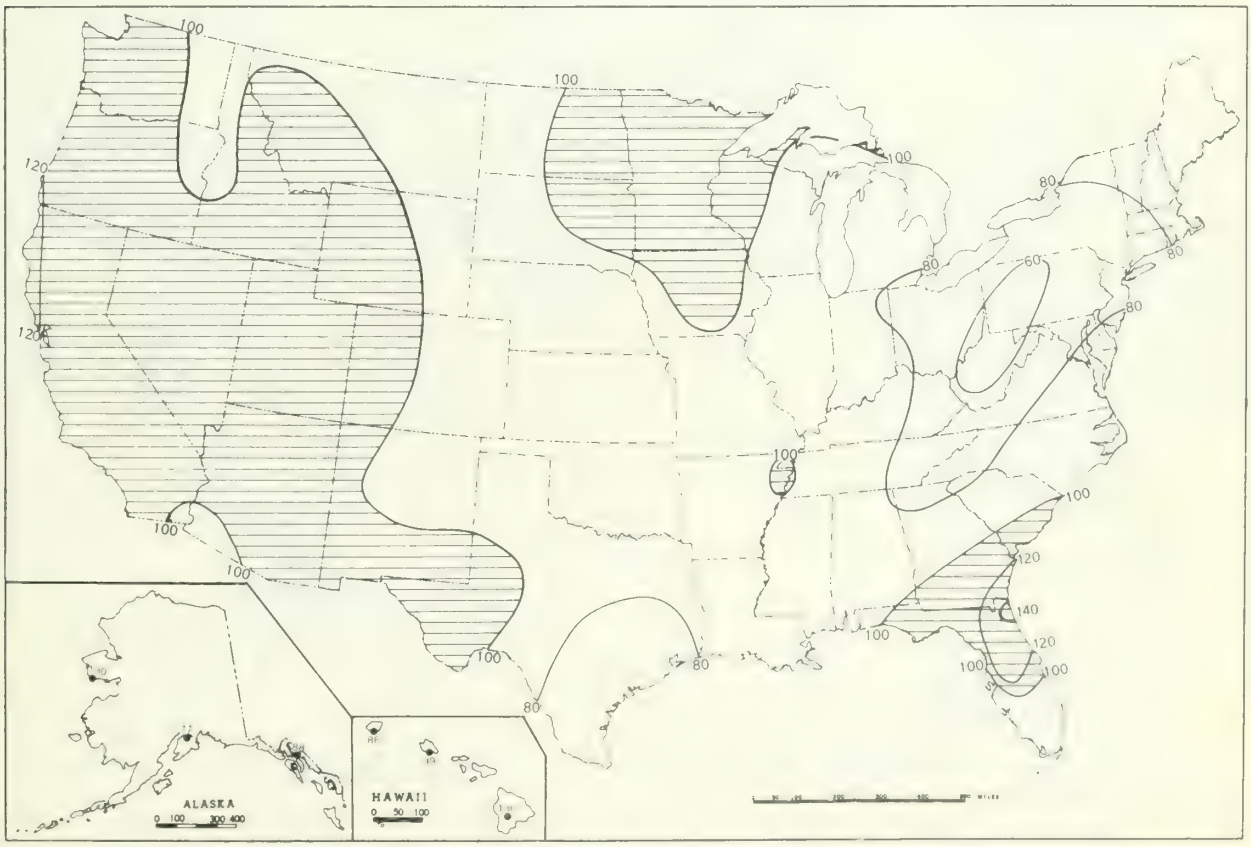


Chart VI. A. Percentage of Possible Sunshine, September 1971.

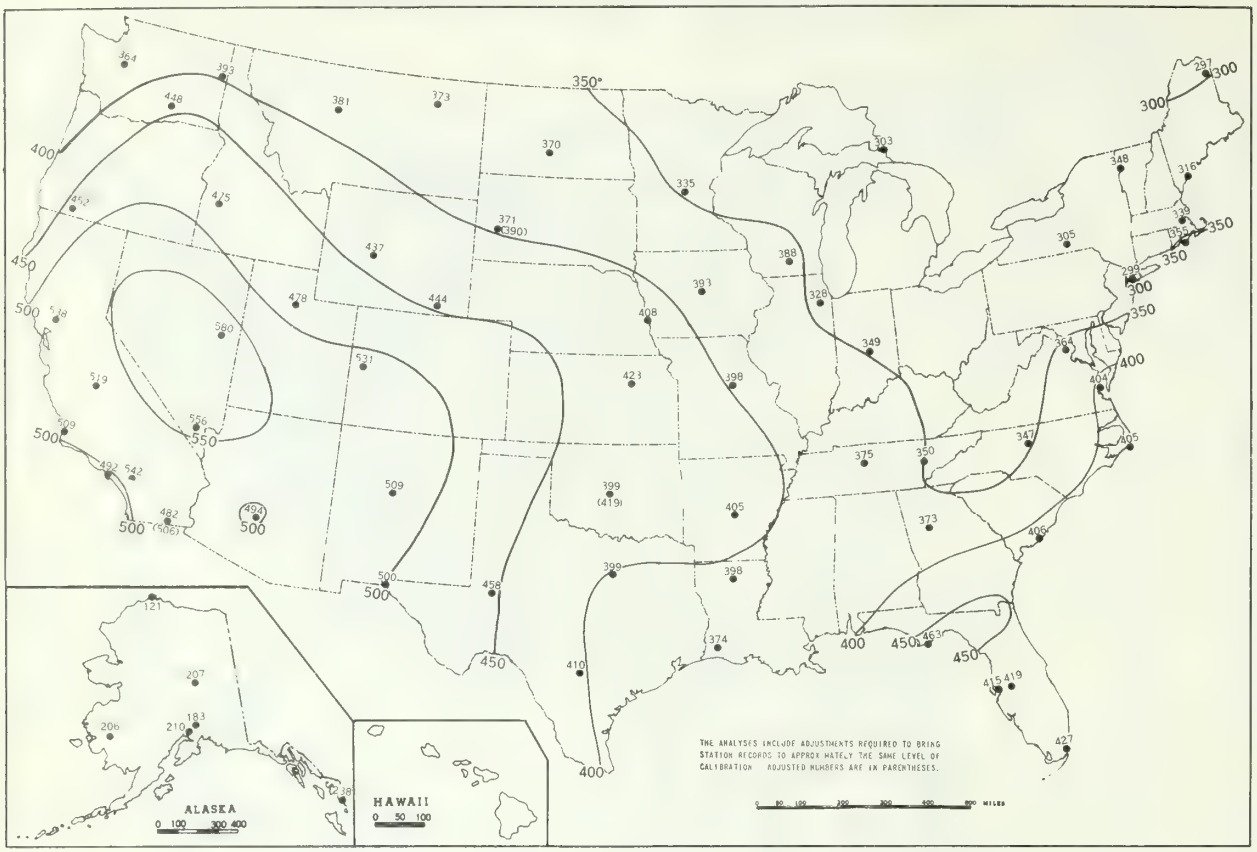


B. Percentage of Mean Monthly Sunshine, September 1971.

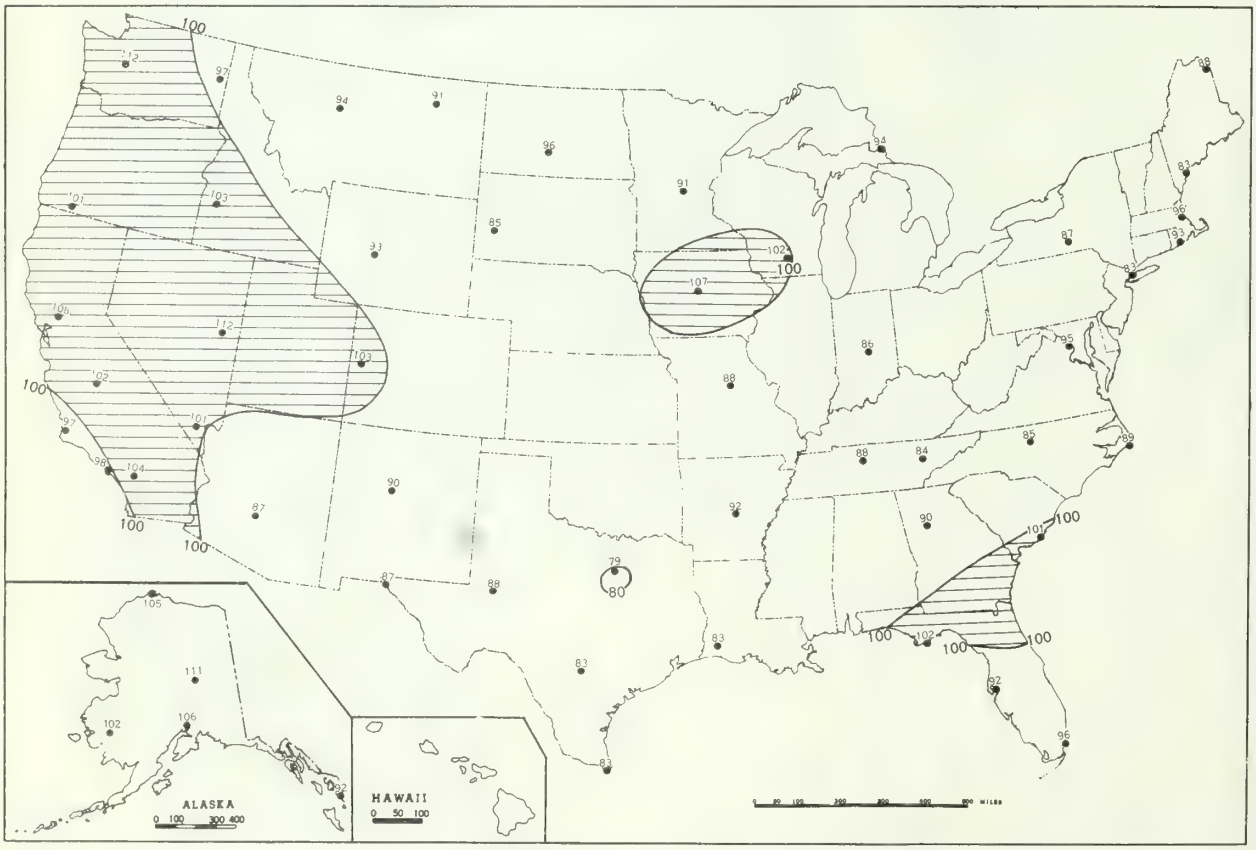


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, September 1971

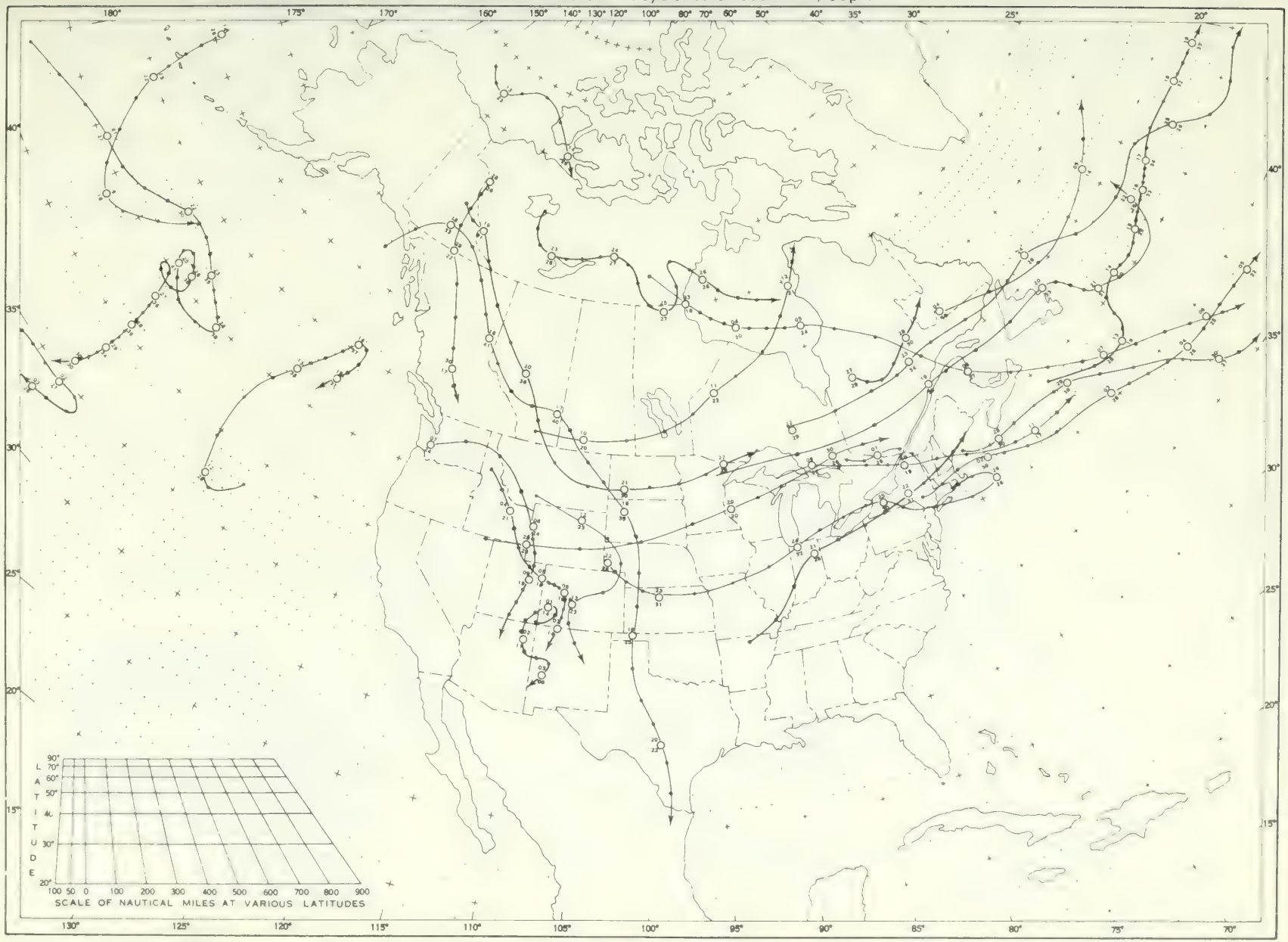


B. Percentage of Mean Daily Solar Radiation, September 1971.



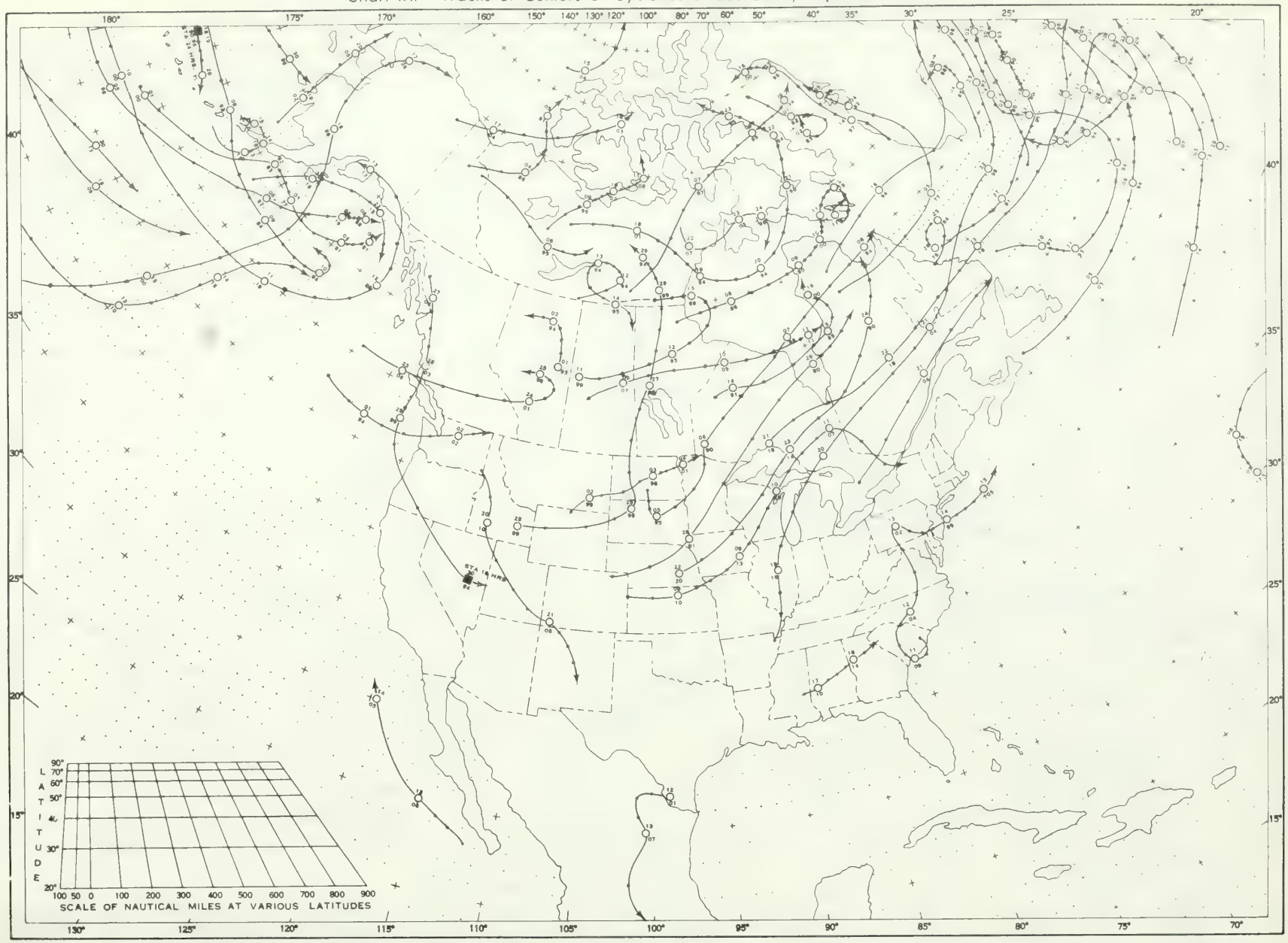
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII. Tracks of Centers of Anticyclones at Sea Level, September 1971.



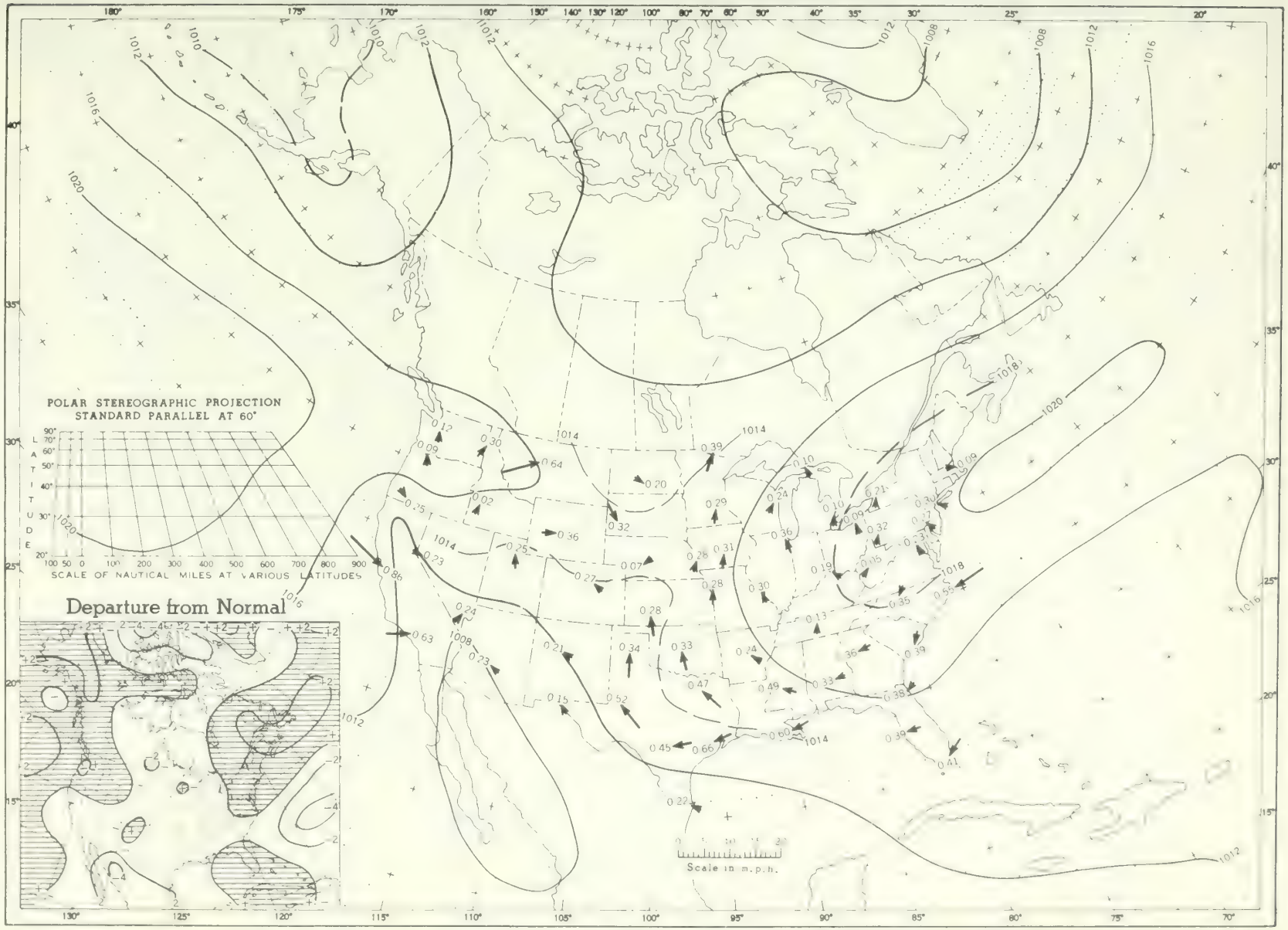
Circle indicates position of center at 7:00 a.m. e.s.t. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX. Tracks of Centers of Cyclones at Sea Level, September 1971.



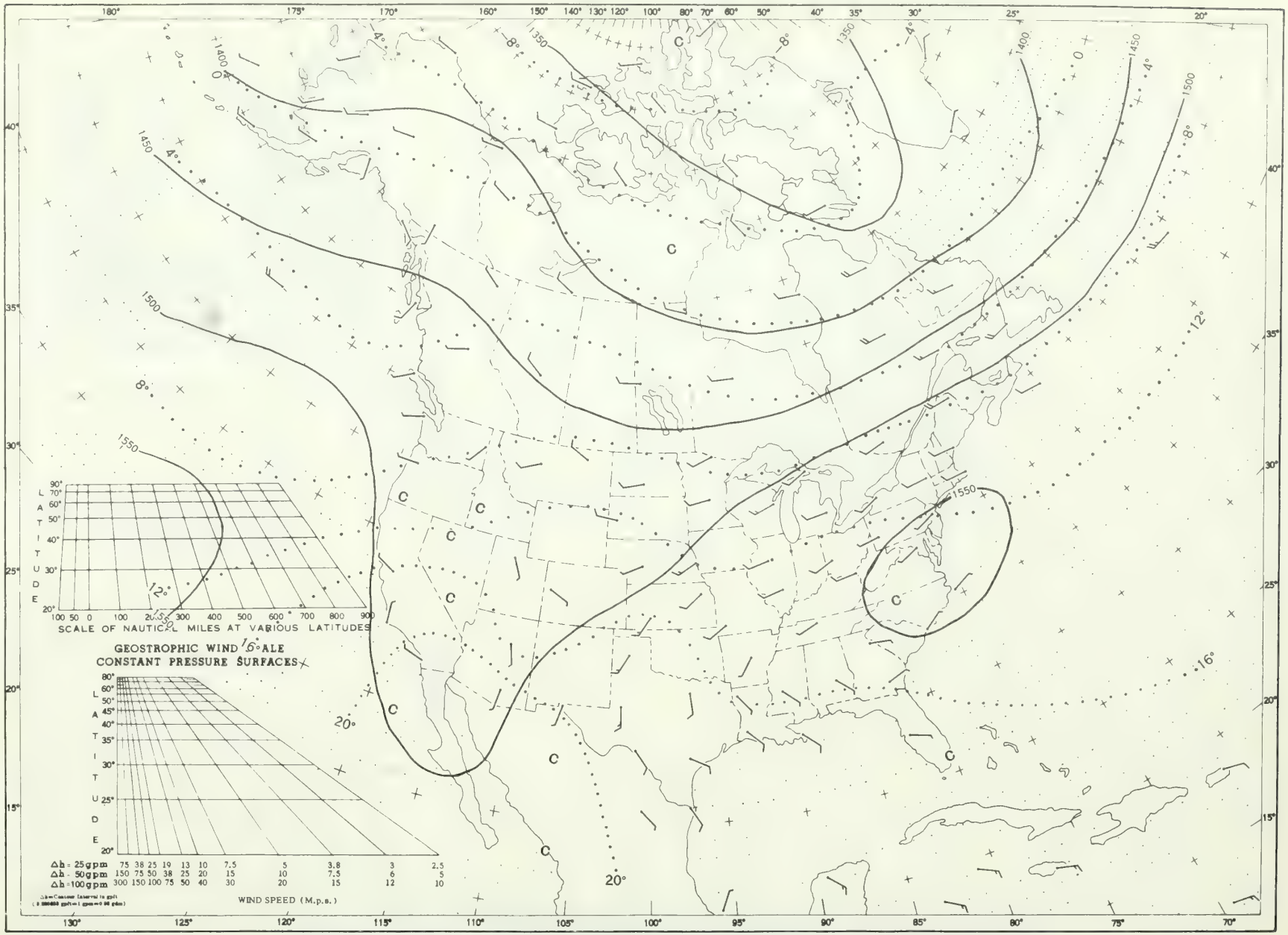
Circle indicates position of center at 7:00 a.m. e.s.t. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X. Average Sea Level Pressure (mb) and Resultant Surface Wind, September 1971. Inset: Departure of Average Pressure (mb) from Normal, September 1971.



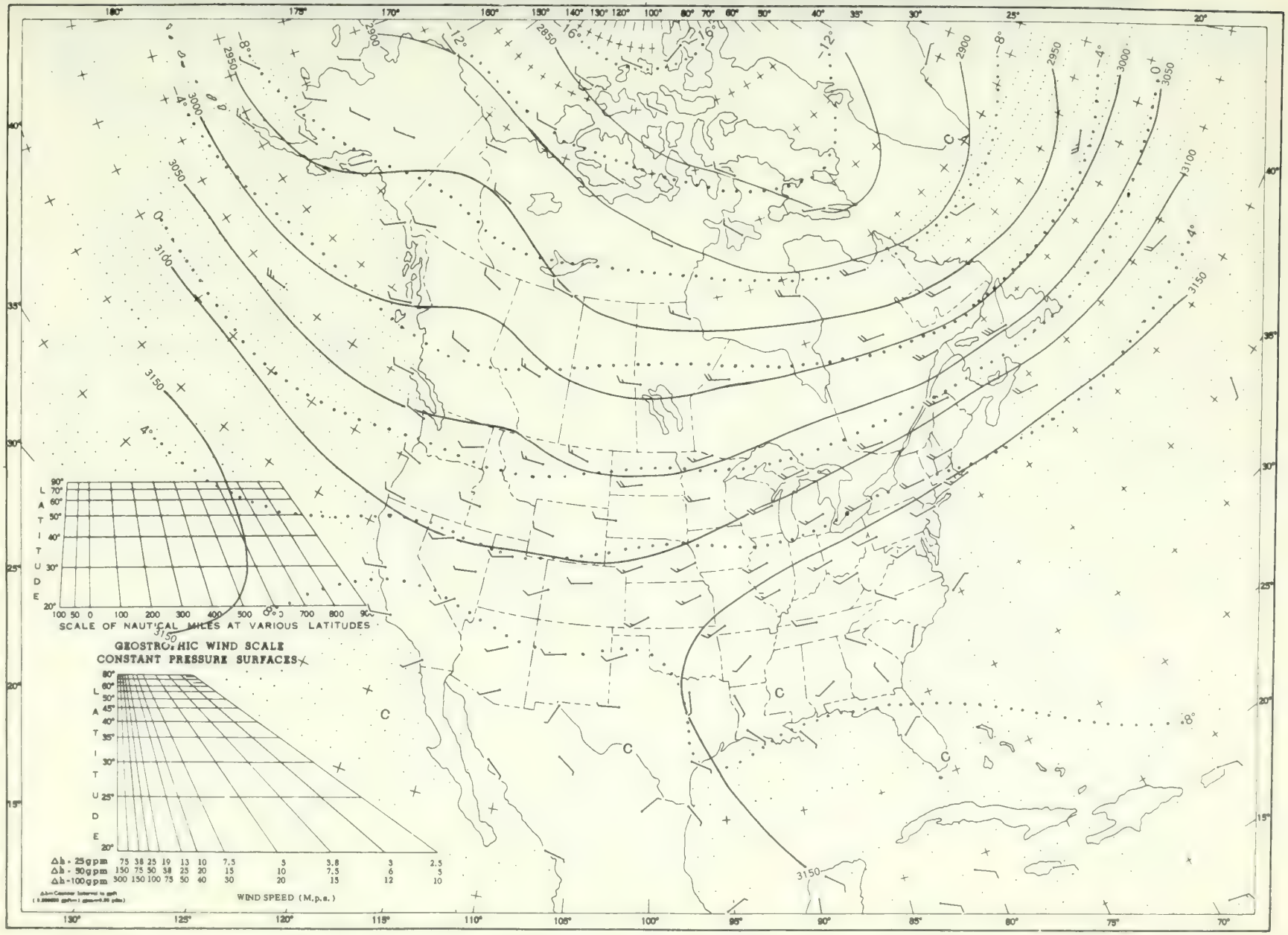
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed ÷ average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb Surface, 1200 G.m.t., September 1971. Average Height and Temperature, and Resultant Winds.



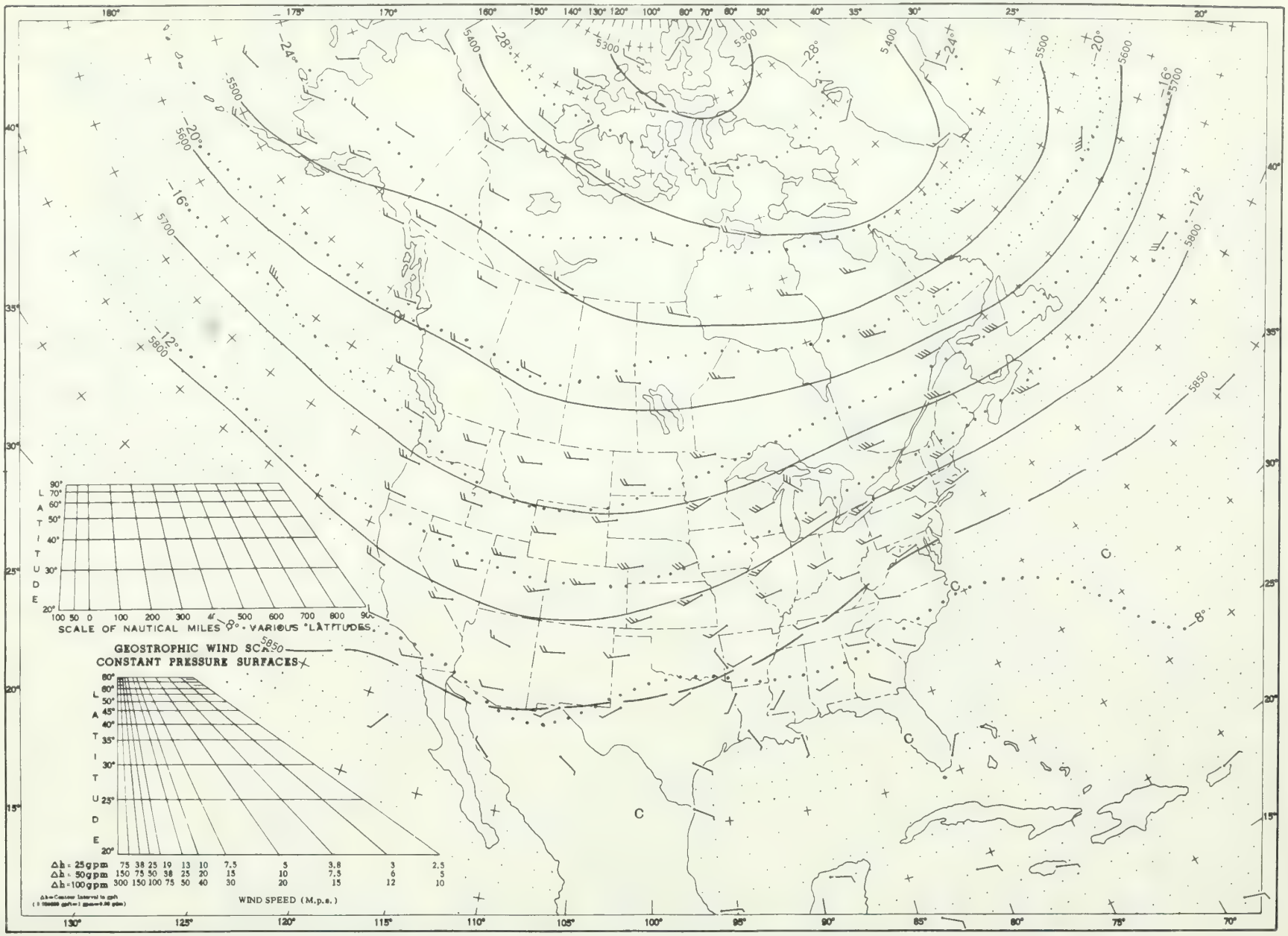
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb. Surface, 1200 G.m.t., September 1971. Average Height and Temperature, and Resultant Winds.



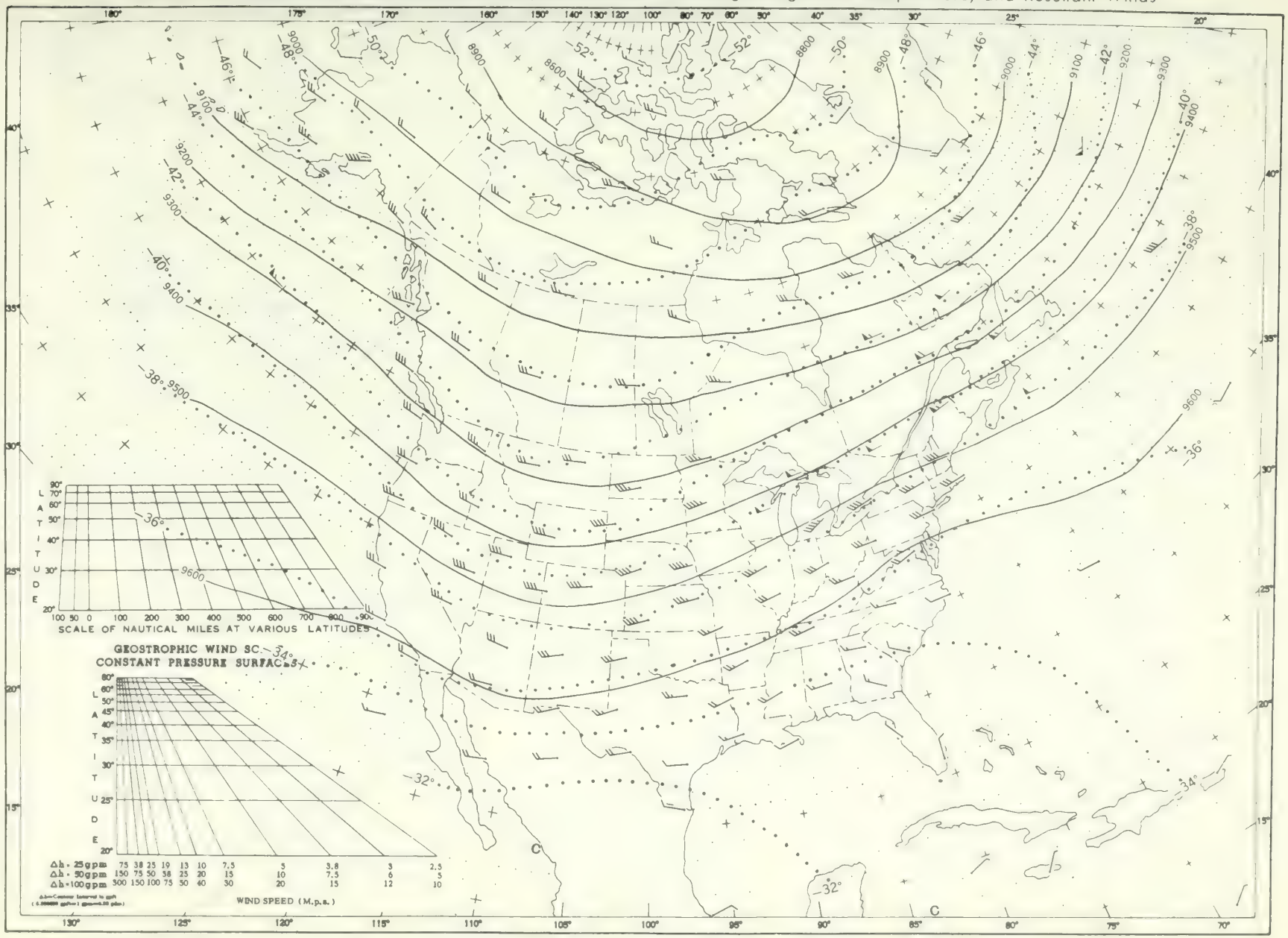
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 G.m.t., September 1971 Average Height and Temperature, and Resultant Winds



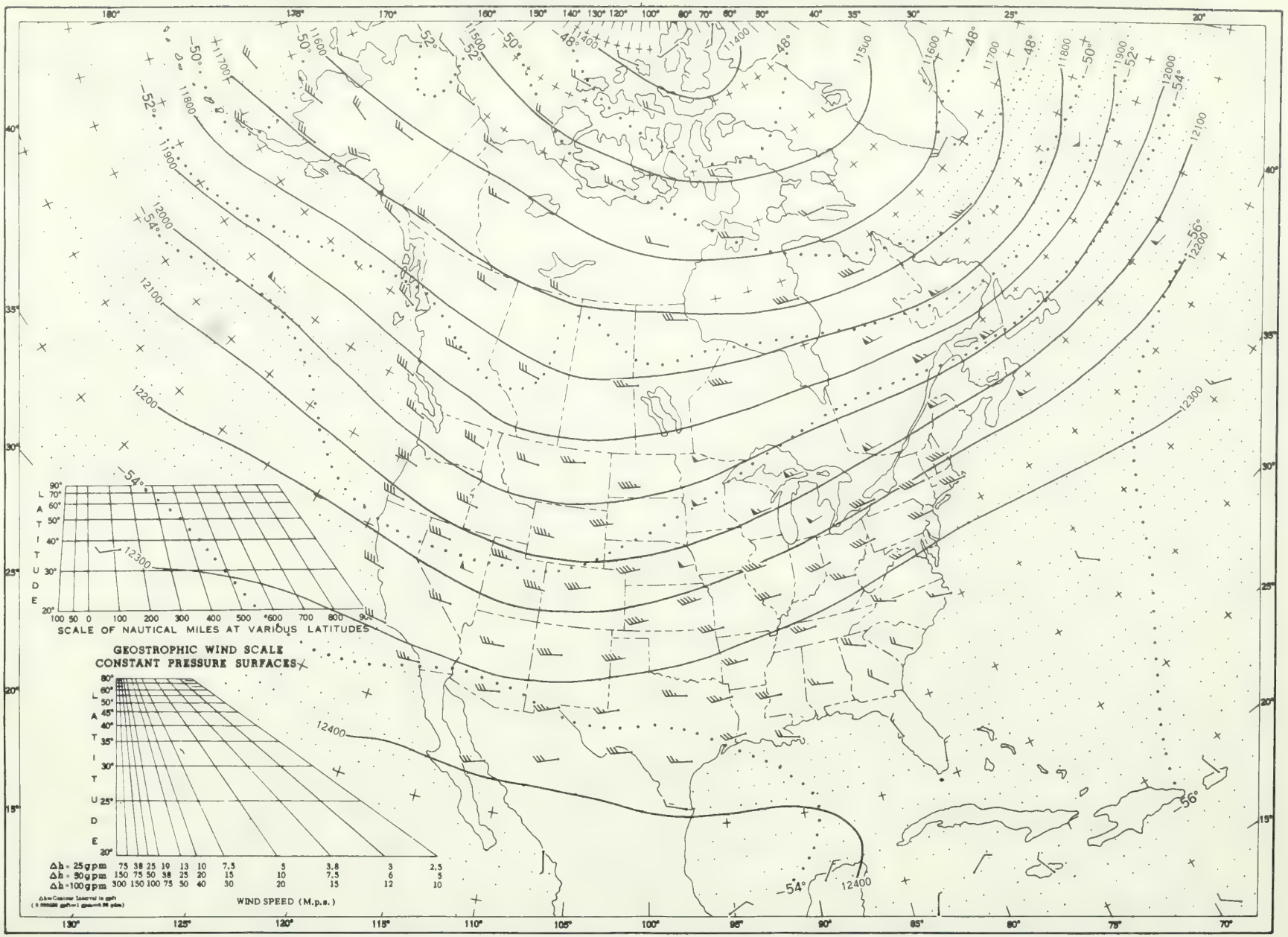
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 G.m.t., September 1971. Average Height and Temperature, and Resultant Winds



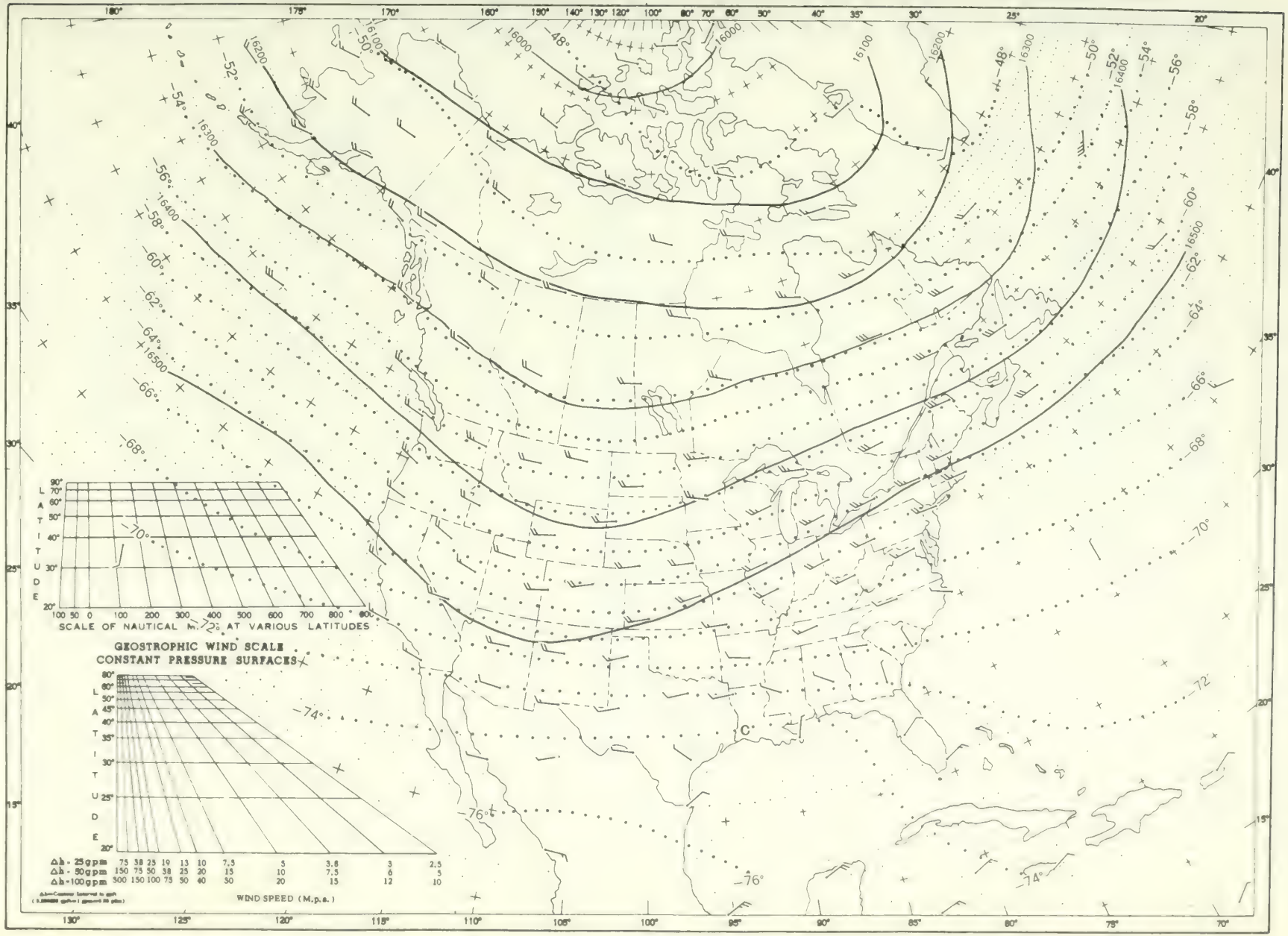
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV. 200-mb. Surface, 1200 G.m.t., September 1971. Average Height and Temperature, and Resultant Winds.



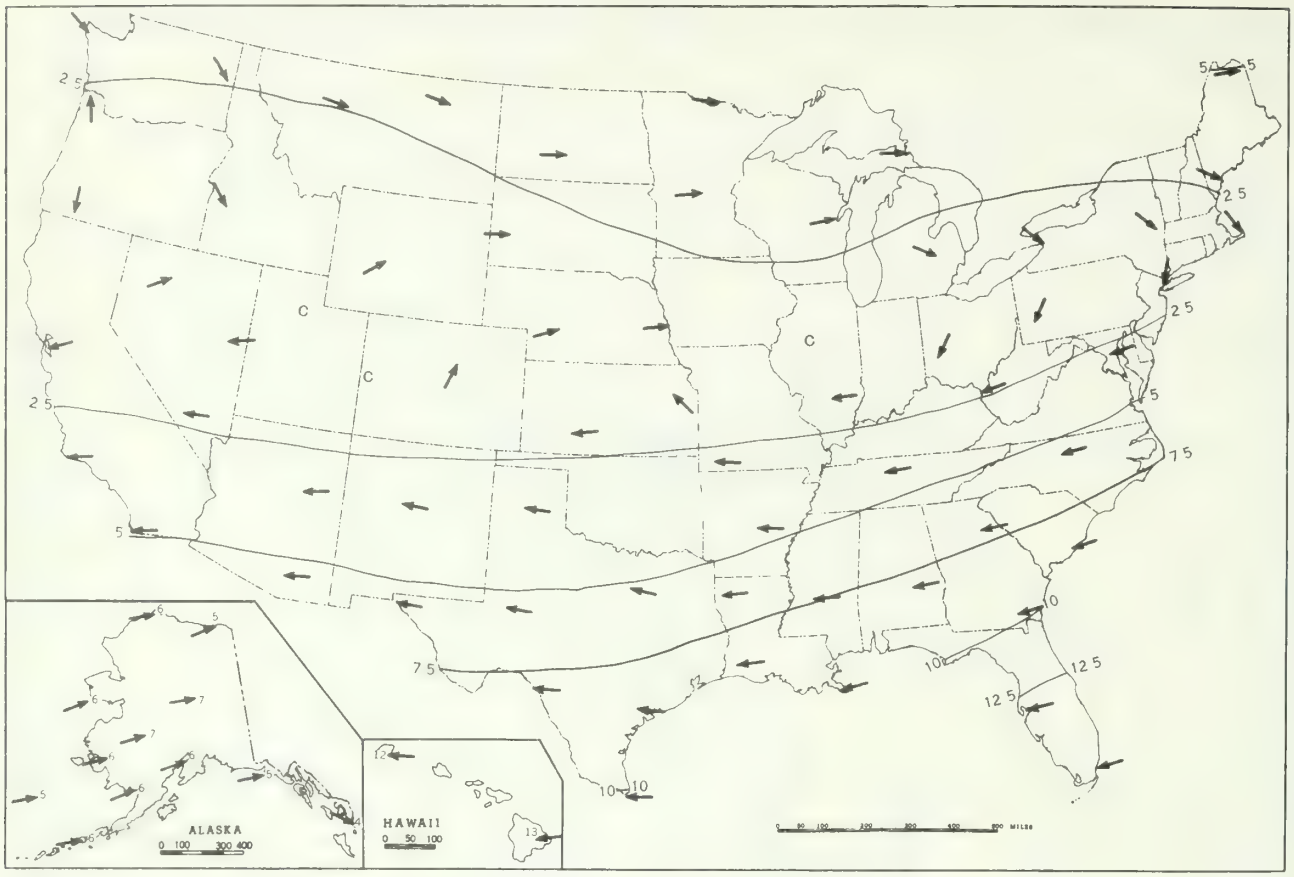
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 G.m.t. September 1971. Average Height and Temperature, and Resultant Winds.

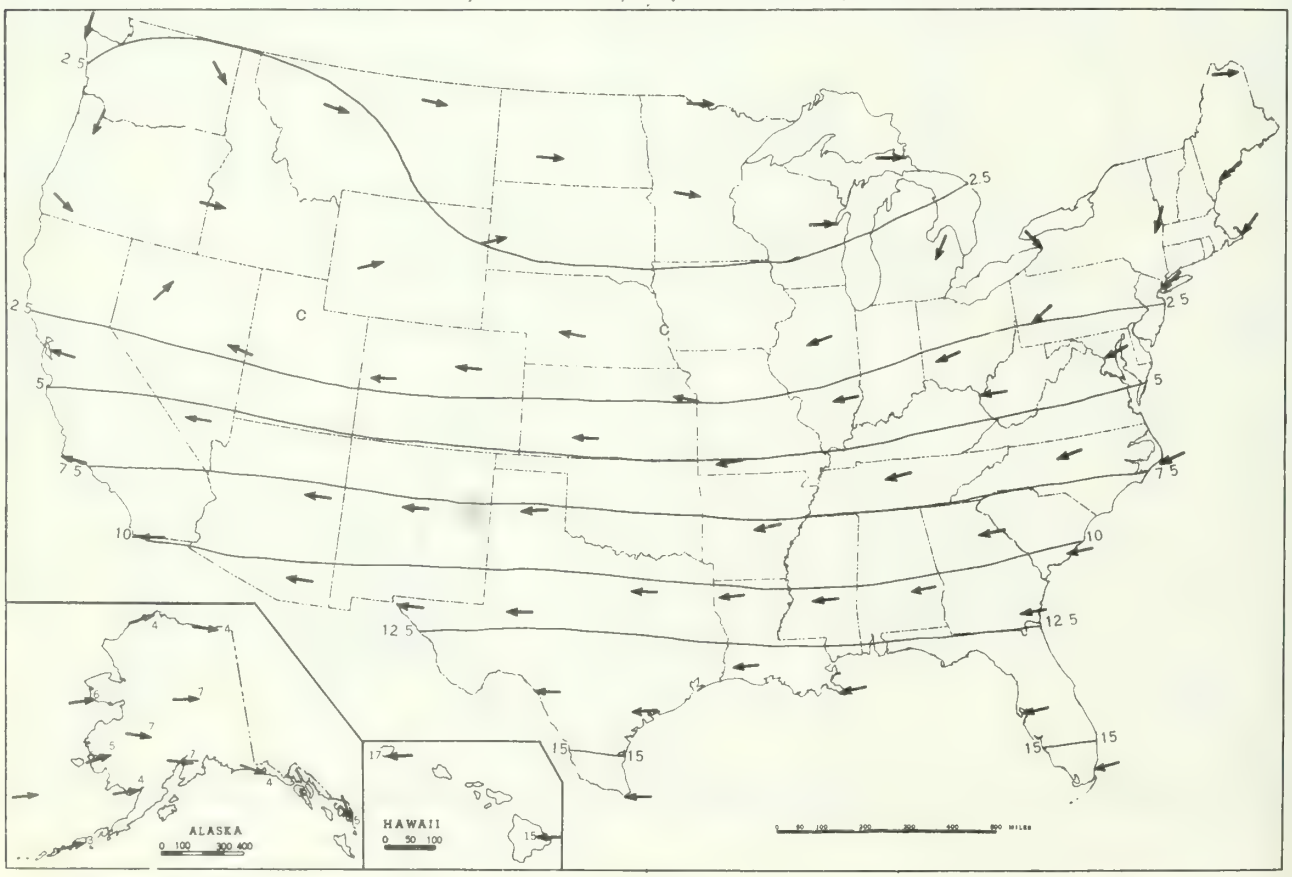


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., September 1971. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., September 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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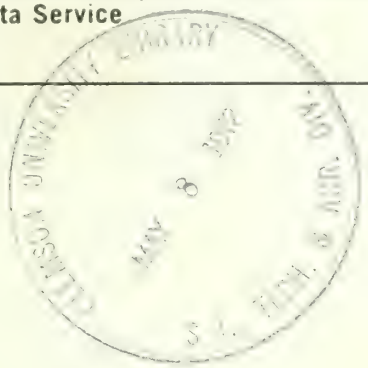


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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service



TOBER
1971
June 22
No. 10
ill, N.C.
1972

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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 10

R. E. Felch, Research Climatologist
Environmental Data Service
Washington, D. C.

OCTOBER 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. For the second consecutive month, below-normal temperatures prevailed from the Pacific Ocean to the western edge of the Great Plains and above-normal temperatures predominated over the eastern half of the Nation.
2. Heavy rains occurred over the northern Great Plains and over portions of the eastern Seaboard.
3. Recordbreaking snowfall occurred in spots in the Great Basin and the Rocky Mountains.

TEMPERATURE--For the second consecutive month, temperatures averaged below normal over the western half of the Nation and above normal over the eastern portion. Temperature departures over the western half were generally 3° below normal, with a few high elevation stations reporting departures of -6°. The eastern half of the Nation was generally 4° above normal, with temperatures across the Corn Belt averaging 6° to 7° above normal.

After starting the month on a cool note, the western one-third of the Nation enjoyed warm days and cool nights, with temperatures averaging 3° to 6° above normal during the first 10 days of the month. The remainder of the Nation, except for the New England area and parts of the Southeast, experienced below normal temperatures.

By mid-month, the pattern which was to persist the remainder of the month was firmly established, with the western portion of the Nation below normal in temperature, and the eastern half above normal. The line separating the two temperature regions moved slowly southeastward until by the last week of October the dividing line ran from the North Dakota-Minnesota border southward into southwestern Texas. At mid-month, temperature departures were generally small, averaging 2° to 3° above normal over the eastern two-thirds of the Nation.

With the cool air to the Northwest, several surges of cold air worked their way southward. McComb, Mississippi, reported 39° on the 11th, and Tallahassee reported 42° on the 12th.

Around October 20, a large low pressure system moved from northeastern Colorado to Manitoba, bringing cold air whistling southward west of the system. Temperatures were in the seventies and eighties to the east of that same system over the central Great Plains. The remainder of the Nation east of the low pressure system averaged 3° to 6° above normal.

During the last week of the month, the eastern half of the Nation averaged 6° to 15° above normal in a final flurry at Indian Summer. Meanwhile, the western half of the U.S. averaged 6° to 18° below normal, accompanied by high winds and snow over the Rockies. A sharp temperature contrast existed across a cold front which was present along the Nebraska-Kansas border on the 28th. That afternoon, Lincoln, Nebraska, in the cold air, reported 44° while Topeka, Kansas, recorded 81°. Temperatures plunged to -15° at Big Piney, Wyoming, on the 30th.

The extended Indian Summer over the eastern half of the Nation resulted in many new records being set at a number of locations. On October 30, record highs were reported at Rochester, New York (80°), Buffalo, N. Y. (73°), Lexington, Ky. (83°), Bristol, Tenn. (79°), Madison, Wisc. (78°), and Lansing, Mich. (tied 77°) to name a few. In Philadelphia this was the second warmest October in 101 years of record, surpassed only by 1947. This was the warmest October ever at the Nation's Capital with an average temperature of 64.7°.

Flagstaff, Ariz., set fourteen records during October. It was the coldest October in 73 years of record with an average of 38.6°. A -2° reading on October 30 was the coldest ever in October.

PRECIPITATION--Most of the Nation received above normal precipitation during the month, except for the area west of the Rockies, and an area extending from Michigan to the Gulf between the Mississippi and the eastern mountains.

The month began with rains from meandering Hurricane Ginger soaking portions of the Eastern Seaboard, and a system over the northern Great Plains blanketing portions of the Rockies with wet snow. The western snows were followed by a week of no precipitation over the western one-third of the Nation. However, generous rains fell over most of the Eastern Seaboard. Heavy showers fell from the Lower Rio Grande Valley and moved northeastward to the Middle Atlantic coast on the 4th and 5th. In the 24 hours ending at midnight of the 5th, Cotulla, Tex., received 6.09 inches of rain.

At midmonth heavy snows again belted parts of the West, while torrential tropical rains fell in the Florida Keys. A low pressure system southwest of the Florida coast drenched southern Florida. Over 8.50 inches of rain fell at International Airport, Key West, in the 48-hour period ending the morning of the 13th. On the 15th and 16th snow fell in western Montana and spread over a wide area. The storm, centered over the Great Basin, dumped 20 inches of snow at Austin, Nevada, on the 16th and on the 17th and 18th, 11 inches fell at Flagstaff, Ariz. This was the heaviest October snowstorm in more than half a century at Flagstaff, Ariz.

Heavy snows were again a topic of conversation as the month came to a close. By the 29th, 17 inches of snow had accumulated at Lander, Wyo., with 10- to 12-inch accumulations at several reporting stations. Rawlins, Wyo., reported an accumulation of 21 inches. On the 31st, a record 24-hour snow of 8.50 inches set a new record at Salt Lake. This also gave Salt Lake its snowiest October on record, with almost 17 inches (16.6) for the month.

Meanwhile, over the eastern half of the Nation, early morning fog was a common occurrence. Soaking rains fell over the Atlantic Coastal States from southern New England to Georgia, in a continuing pattern of weekend rains, on the afternoon of the 25th.

The central portion of the Corn Belt, and on over through the Rockies, received above normal rainfall, helping to replenish depleted soil moisture in some areas. The area between the Mississippi River and the western mountains received below normal rainfall, with most of southern Alabama and Mississippi re-

ceiving less than 0.75 inches of rain during the entire month. Jackson, Miss., received a total of 0.09 inches of rain, or about one-twentieth of the normal.

Portions of the Eastern Seaboard received large amounts of rainfall. Most of Virginia and the Carolinas received over twice the normal rainfall for October. Rainfall amounts exceeding 10 inches were reported at several locations.

Totals over the northern Great Plains ranged from 200 percent to more than 400 percent of normal. Williston, N. Dak., received 3.56 inches, the largest October total in the 92-year record. It was the second wettest October in 97 years at Bismarck, N. Dak., where 3.74 inches of rain fell. And Minneapolis, Minn., with 5.68 inches, was the wettest in 60 years. Lander, Wyo., established a new October snowfall record with a total of 39.9 inches. Flagstaff, Ariz., received 24.7 inches of snow. This is the most snow that fell in October in the past 73 years.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	3 Stations	93	6	Geneva	31	12	Waterloo	6.49	4 Stations	.00
Alaska	Beaver Falls	63	2	Arctic Village	-32	22	Little Port Walter	24.79	Dot Lake	.30
Arizona	Willow Beach	104	11	Flagstaff WSO	- 2	30	Hawley Lake	11.62	[illegible]	.00
Arkansas	2 Stations	99	3+	Huntsville	32	10	Big Fork	9.74	Blytheville	.08
California	2 Stations	107	12+	White Mountain 2	-13	29	Lake Arrowhead	3.81	22 Stations	.00
Colorado	4 Stations	88	14+	Fraser	-12	31	Wolf Creek Pass 1 E	8.32	Parker 3 E	T
Connecticut	Hartford WSO	86	2	Coventry	27	8	Groton	5.49	Cream Hill	2.47
Delaware	Bridgeville 1 NW	84	2	2 Stations	37	8	Middletown 1 WSW	7.60	Dover	5.35
Florida	Titusville 3 NW	98	6	De Funiak Springs	[illegible]	11	Bithlo	11.54	Pensacola WSO	T
Georgia	6 Stations	95	3+	Tallapoosa 2 N	30	11	Metter	9.81	Columbus WSO	.26
Hawaii	Kahului WSO 398, Maui	92	13	Mauna Loa Slope Obs, Hawaii	31	17	Honomu Mauka 138, Hawaii	10.82	8 Stations	.00
Idaho	Orofino	92	6+	Dixie	-13	30+	Henry	3.73	Atlanta	.20
Illinois	3 Stations	93	1	3 Stations	29	12	Rushville	4.05	Kankakee 3 SW	.39
Indiana	Spurgeon 2 N	93	1	Culver Experiment Farm	29	12	Tell City Power Plant	3.46	Rensselaer	.76
Iowa	Boone	91	1	6 Stations	23	31	Pocahontas	6.68	Muscatine	.84
Kansas	Fredonia 1 E	95	1	2 Stations	20	31	Thayer	7.92	Elkader	.58
Kentucky	4 Stations	92	1	Falmouth 5 WNW	36	12	Tilford	4.80	Somerset 2 S	.44
Louisiana	4 Stations	93	4+	Ashland 2 S	36	11	Grand Coteau	6.10	Pearl River Lock No. 1	.06
Maine	East Hiram	86	3	Houlton FAA AP	17	31	Saco	4.37	Brassua Dam	1.79
Maryland	Baltimore City WSO	86	3	Oakland 1 SE	30	8	Princess Anne	10.80	McHenry 2 NW	1.78
Massachusetts	Chester 2	90	2	Birch Hill Dam	22	13	Borden Brook Reservoir	4.67	Woods Hole	1.41
Michigan	2 Stations	90	2+	Bergland Dam	24	12	Rock	5.22	Hesperia 1 E	.36
Minnesota	Winona	87	1	Wannaska 8 SE	13	29	Kettle Falls	9.60	Caledonia	1.36
Mississippi	Lexington 2 NNW	95	4	2 Stations	34	11	Carrollton 1 SSW	4.84	Pleasant Hill	.00
Missouri	Boonville 2 NW	94	2	2 Stations	27	31+	Hazlegreen 2 W	5.81	Zalma 4 E	.14
Montana	Roy 24 NE Mobridge	89	6	West Yellowstone	-20	29	Miles City FAA Airport	6.31	2 Stations	.08
Nebraska	Beaver City	93	8	Harrisburg 10 NW	8	31	Sprague	6.06	Harrisburg 10 NW	.32
Nevada	Sunrise Manr Las Vegas	100	12	Ruth	- 5	30	Austin	2.23	3 Stations	.00
New Hampshire	Manchester	88	3	Mount Washington	15	13	Mount Washington	5.71	Milan 7 NNW	1.63
New Jersey	2 Stations	82	29+	Newton	32	19	Cape May 1 NW	7.13	Newark WSO	2.96
New Mexico	2 Stations	89	16+	Sandia Crest	3	30	Reserve Ranger Station	5.85	2 Stations	.24
New York	Hemlock	87	2	2 Stations	25	13	NY Westerleigh Stat Is	4.98	Mount Morris 2 W	1.17
North Carolina	2 Stations	90	31+	2 Stations	27	11+	Belhaven	17.17	Murphy	1.41
North Dakota	Ambon	78	7	Linton	6	31	2 Stations	5.95	Flasher	1.96
Ohio	Lima Sewage Plant	94	3	Millport 2 NW	25	12	Hiram	3.51	Middlebourne	.80
Oklahoma	Freedom	92	12	Kenton	22	31	Wilburton 9 ENE	12.28	Kenton	1.09
Oregon	2 Stations	92	5	Fremont	- 9	29	Tillamook 13 ENE	9.74	Buena Vista Station	.16
Pennsylvania	2 Stations	87	2+	2 Stations	25	13+	Chadds Ford	5.91	McKeesport	.76
Puerto Rico	San Sebastian, P.R.	95	7	Adjuntas Substation, P.R.	57	31+	Mona Island, P.R.	22.90	Ensenada, P.R.	2.72
Rhode Island	Providence WSO	83	2	North Scituate 4 W	31	8	Kingston	4.65	Block Island WSO	2.44
South Carolina	Ridgeland	93	1	2 Stations	34	11	McClellanville	14.32	Calhoun Falls	2.09
South Dakota	2 Stations	85	11+	Deerfield 4 NW	1	30	Watertown FAA Airport	8.10	Midland	1.09
Tennessee	Union City	92	1	Mountain City No. 2	29	8	Gatlinburg 2 SW	6.46	Memphis WSO	.06
Texas	2 Stations	96	1	2 Stations	28	31+	Mid City	15.00	Monahans	.16
Utah	Saint George	91	13+	Antimony	-13	30	Alta	6.81	Eskdale	.08
Vermont	Vernon	86	3	Mount Mansfield	23	13	Mount Mansfield	3.69	Huntington Center	1.04
Virginia	2 Stations	88	6+	Floyd 2 NE	27	8	Charlotte Court House	14.13	McDowell	1.38
Washington	Dallesport FAA Airport	90	5	Anatone	0	29	Clearwater	13.34	Wapato	.13
West Virginia	Huntington Sew Treat Pl	87	1	Seneca State Forest	24	8	Harpers Ferry Nat Park	6.27	Moundsville	.59
Wisconsin	2 Stations	90	1	Drummond 6 W	18	12	Foxboro	8.25	Janesville	.83
Wyoming	Boysen Dam	89	10	Crandall Creek	-20	31	Bondurant 3 NW	D 6.52	Laramie FAA Airport	.08

+ And also on an earlier date or dates.

Note: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb.	Mb.	F.	F	F	F.	F.		F.				F.	%	In	In.	In.			In.	In.	M.p.h.		M p h							
ALABAMA																																
BIRMINGHAM	620	994.9	1017.3	78	57	67.2	1.5	88	1	39	11	0	0	60	80	1.21	- 1.74	0.73	6	1	0.0	0	1.8	4	20	W	23	12	7	12	5.5	58
HUNTSVILLE	624	994.2	1017.4	77	56	66.3	3.1	87	4+	39	11	0	0	59	80	0.77	- 1.95	0.62	5	2	0.0	0	1.3	11	20	35	10+	13	6	12	5.2	
MOBILE	211	1008.8	1016.8	84	62	72.9	3.0	91	4+	45	11	4	0	63	76	0.03	- 3.00	0.03	2	0	0.0	0	2.6	2	18	34	10	13	9	9	4.9	
MONTGOMERY	183	1009.8	1017.0	81	59	70.2	3.6	91	2+	41	11	6	0	60	76	0.29	- 1.99	0.22	4	0	0.0	0	1.7	2	20	NW	10	13	8	10	5.2	54
ALASKA																										8						
ANCHORAGE	114	1000.3	1005.2	38	27	32.3	- 3.5	48	8	2	25	0	19	27	81	2.16	0.29	0.60	18	0	11.9	8	1.9	1	21	17	9+	6	3	22	7.6	27
ANNETTE	110	1008.5	1012.6	49	39	43.9	- 2.8	56	7	25	27	0	4	39	85	14.04	- 2.84	3.24	23	0	T	T	3.4	14	40	14	28	2	4	25	8.5	
BARROW	31	1005.8	1006.4	20	8	14.2	- 2.4	30	28+	- 9	26	0	31			0.36	- 0.14	0.14	9	0	5.0	4	4.7	12	28	11	26+	1	7	23	8.4	
BARTER ISLAND	39			18	5	11.5	- 5.7	29	6+	-19	21	0	31			1.19	0.35	0.53	14	0	20.0	15			33	26	29	3	5	23	8.1	
BETHEL	125	1001.0	1006.6	35	26	30.8	- 0.6	43	16	14	24	0	25	28	90	2.21	0.67	0.61	19	0	8.0	2	3.6	24	32	18	26	3	1	27	8.9	
BETTLES	644	981.7	1006.9	21	7	14.1		38	10	-18	24+	0	31	9	77	1.60		0.39	16	0	22.6	19	4.2	35	17	2	26+	1	6	24	8.7	
BIG DELTA	1268			30	18	24.1		51	10+	- 7	20	0	28			0.89		0.16	14	0	14.0	10			29	19	8	1	4	26	8.7	
COLD BAY	96	1007.1	1010.7	43	34	38.7	- 1.4	56	14	27	24+	0	11	33	82	3.28	- 1.31	1.01	15	0	T	T	8.4	29	48	26	30	0	1	30	9.3	
FAIRBANKS	436	989.2	1006.5	32	23	27.9	1.7	56	8	9	23	0	27	18	66	1.35	0.50	0.35	21	0	20.4	4	1.0	27	23	27	8	1	1	29	9.2	
GULKANA	1572			32	16	24.3		50	7	-17	24	0	24			1.75		0.45	9	0	19.3				30	15	8	3	5	23	8.1	
HOMER	67	1001.7	1005.0	43	30	36.8		53	7	12	25	0	20	31	78	4.23	0.72	1.09	14	0	1.7	2	1.5	35	25	14	27+	5	6	20	7.5	
JUNEAU	12	1009.1	1009.8	44	33	38.5	- 3.1	55	8	12	27+	0	12	35	89	5.80	- 2.53	0.62	25	0	6.9	5	7.2	10	35	12	28	3	0	28	9.0	24
KING SALMON	49	1003.1	1005.1	41	28	34.3	- 1.4	52	15	12	25	0	23	27	74	2.72	0.57	0.59	18	0	7.9	4	1.7	27	45	13	14	4	7	20	7.7	
KOTZEBUE	10	1003.7	1004.2	27	16	21.7	- 3.0	37	15	5	13	0	31	18	83	0.76	0.17	0.19	16	0	18.0	8	8.5	9	46	10	21	3	3	25	8.2	
MC GRATH	344	993.2	1006.0	33	23	27.8	1.0	45	1	7	24	0	27	26	90	2.75	1.43	0.96	16	0	32.1	11	0.9	30	20	1	7	2	3	26	8.9	
NOME	13	1002.4	1003.2	34	22	28.0	- 1.7	39	15+	6	13	0	27	23	78	2.28	0.57	0.44	19	0	10.9	4	1.7	17	40	15	21	6	3	22	7.8	27
ST. PAUL ISLAND	22	1009.1	1009.8	42	34	37.8	0.6	45	15+	26	23	0	14	34	87	2.11	- 1.04	0.51	29	0	4.3	2	8.8	26	46	19	25	0	7	24	8.6	
SHEMYA	122	1009.8	1013.6	44	38	40.8	1.1	47	11+	30	5	0	3	34	75	3.13	0.37	1.45	15	0	0.1	T	10.1	24	71	20	12	2	9	20	7.7	
SUMMIT	2401	918.4	1007.7	27	14	20.3		41	10+	- 4	29	0	31	17	84	1.42		0.37	16	0	35.5	11	5.1	5	26	22	8	4	1	26	8.3	
TALKEETNA	345			35	20	27.7	- 5.4	47	11+	-15	25	0	24			2.65	- 0.20	1.09	15	0	25.1	12			15	6	27					
UNALAKLEET	15			33	24	28.7		42	15	13	4	0	26			1.57		0.43	19	0	9.5	6			38	10	14					
YAKUTAT	28	1005.4	1006.6	46	32	39.0	- 2.9	53	8+	11	26	0	14	34	85	20.41	0.82	2.96	27	0	26.9	9	4.9	12	40	13	28	3	4	24	8.4	
ARIZONA																																
FLAGSTAFF	7006	787.3	1017.3	53	25	38.6	- 8.4	70	13+	- 2	30	0	26	25	63	4.37	2.85	2.19	8	3	24.7	11	2.2	18	26	21	28+	17	5	9	3.9	
PHOENIX	1117	973.9	1012.4	82	57	69.3	- 1.4	95	13	34	30	12	0	42	41	0.27	- 0.19	0.21	3	1	0.0	0	2.5	13	39Y	S	24	19	7	5	2.9	81
TUCSON	2584	924.8	1012.3	76	52	64.2	- 5.8	89	14+	26	30	0	1	44	52	1.18	0.54	0.97	7	3	0.0	0	3.9	15	35	S	24	19	5	7	3.3	76
WINSLOW	4895	851.7	1015.6	68	40	53.9	- 3.5	84	14+	22	30	0	5	33	50	0.97	0.31	0.74	5	0	T	0	4.2	20	38	21	28	17	8	6	3.5	
YUMA	194	1004.7	1012.1	81	57	69.0	- 5.5	98	10	35	30	11	0	42	42	T	- 0.38	T	0	1	0.0	0	2.4	35	28	NE	5	26	2	3	1.7	88
ARKANSAS																																
FORT SMITH	447	1000.0	1016.4	79	54	66.8	3.0	91	2	38	11+	2	0	55	74	3.74	0.29	1.56	11	3	0.0	0	0.2	17	37	W	26	9	9	13	5.9	61
LITTLE ROCK	257	1006.8	1016.3	82	57	69.3	6.2	92	3	45	11	3	0	57	72	2.55	- 0.33	1.54	5	1	0.0	0	1.8	23	31	W	27	16	6	9	4.7	72
CALIFORNIA																																
BAKERSFIELD	475	997.6	1015.2	77	51	64.1	- 2.7	96	7	29	30	10	2	41	47	0.09	- 0.23	0.09	1	0	0.0	0	1.6	1	24	30	15	22	6	3	2.1	
BISHOP	4108	873.4		72	33	52.5	- 4.9	92	10	17	30	4	15			0.01	- 0.42	0.01	1		0.0	0						18	9	4	2.8	
BLUE CANYON	5280			58	40	48.9	- 4.9	81	12	17	28	0	12			1.25	- 2.16	0.64	5		7.6	5			22	6	27	18	5	8	3.7	
EUREKA U	43			56	45	50.6	- 3.8	66	5	32	29	0	1			0.92	- 2.27	0.42	9		0.0	0			32	S	19	9	9	13	6.0	56
FRESNO	328	1003.7	1015.4	78	44	60.9	- 3.7	96	7	29	30+	10	2	40	53	0.03	- 0.40	0.03	1	0	0.0	0	0.8	31	19	NW	28	23	5	3	2.3	88
LONG BEACH	25	1012.9	1014.2	81	55	68.2	1.7	105	6	40	29	8	0	50	59	0.57	0.40	0.41	3	2	0.0	0	2.3	26	24	34	28	19	8	4	3.1	
LOS ANGELES	97	1009.8	1013.6	75	55	65.0	0.1	101	6+	43	30	5	0	48	61	0.28	- 0.11	0.21	2	1	0.0	0	2.6	26	37Y	N	28	18	9	4	3.2	
LOS ANGELES U	270			78	57	67.4	0.0	102	6	41	30	7	0			0.04	- 0.37	0.04	1		0.0	0			25	N	28	22	6	3	2.5	
MT SHASTA R	3544	893.7	1018.7	60	35	47.6	- 4.3	85	5	21	29	0	14	33	62	1.41	- 1.03	0.60	6		7.1	2	2.6	33								
OAKLAND	6	1016.6	1016.7	66	49	57.6	- 3.5	84	12	42	30	0	0	46	69	0.07	- 0.71	0.04	3	0	0.0	0	3.9	30	30	29	15	22	7	2	2.4	
RED BLUFF	342	1003.1	1015.8	76	48	61.8	- 3.8	100	8	33	31	9	0	36	45	0.08	- 1.29	0.06	3	0	T	0	5.2	34	47	S	19	14	12	5	3.8	86
SACRAMENTO	17	1014.6	1015.5	76	46	61.2	- 2.3	96	8	36	30+	8	0	42	56	0.13	- 0.64	0.07	2	0	0.0	0	1.4	29	32	NW	28	20	6	5	2.9	86
SANDBERG R	4517	862.5		64	45	54.5	- 4.2	89	13	21	29	0	7			0.05	- 0.44	0.05	1		0.5	0			31	35	28	22	3	6	2.7	
SAN DIEGO	13	1012.9	1013.9	74	57	65.7	- 0.4	101	6	43	30	3	0	48	58	1.66	1.17	0.78	3	3	0.0	0	3.3	29	26	NW	5	20	5	6	3.2	78
SAN FRANCISCO	8	1016.3	1016.8	67	47	57.0	- 3.5	90	12	39	30	1	0	44	70	0.03	- 0.71	0.02	2	0	0.0	0	7.9	29	35	36	28	23	6	2	2.5	
SAN FRANCISCO U	52			65	51	57.8	- 3.6	89	12	46	28	0	0			0.11	- 0.78	0.09	3		0.0	0			28	W	15					84
SANTA MARIA	236			70	41	55.7	- 4.7	96	6+	26	29	3	4			0.24	- 0.36	0.13	3		0.0	0						23	3	5	2.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90° F. or above	Temperature: No. of days: Min. 32° F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CALIFORNIA																																
STOCKTON	22	1015.2	1016.2	76	48	62.0	- 2.0	94	8	34	30	8	0	40	50	0.28	- 0.35	0.28	2	0	0.0	0	3.6	30	36	34	28	21	7	3	2.6	
COLORADO																																
ALAMOSA	7536	769.1		60	24	42.2	- 2.2	74	14+	6	31	0	30			0.71	0.11	0.30	7		T	T						18	10	3	3.4	
COLORADO SPRINGS	6145	810.7	1014.8	63	36	49.3	- 1.0	79	14+	11	30	0	8	26	46	0.23	- 0.46	0.16	4	0	2.9	3	2.1	6	35	30	30+	18	9	4	3.3	
DENVER	5283	835.8	1013.8	65	34	49.4	- 2.0	83	10	13	30	0	13	31	55	0.44	- 0.57	0.20	4	1	3.1	2	0.8	21	33	SW	1	17	8	6	3.7	77
GRAND JUNCTION	4843	851.7	1014.3	65	40	52.3	- 2.7	80	11+	23	31+	0	4	34	56	1.13	0.39	0.65	8	2	0.5	T	1.5	15	32	SW	28	14	9	8	4.5	69
PUEBLO	4684	854.7	1013.7	70	35	52.8	- 2.0	85	14+	18	20	0	9	29	46	0.20	- 0.79	0.20	2	0	1.9	2	1.0	24	40	SW	17+	18	9	4	3.5	85
CONNECTICUT																																
BRIDGEPORT	7	1020.0	1020.7	68	53	60.2	4.8	74	14+	40	8	0	0	53	79	3.24	- 0.14	2.12	6	0	0.0	0	2.3	4	35	24	11	7	10	14	6.3	
HARTFORD	169	1013.5	1020.1	69	47	58.3	5.3	86	2	36	8	0	0	50	78	4.46	1.28	2.92	7	1	0.0	0	0.6	32	25	W	6	8	9	14	6.4	44
DELAWARE																																
WILMINGTON	74	1016.6	1019.5	71	55	62.9	6.3	80	3	41	8	0	0	56	82	6.41	3.50	3.74	9	1	0.0	0	3.0	5	21	26	11+	8	4	19	6.9	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	290	1007.1	1019.0	70	52	61.4		83	3	37	8	0	0	56	86	9.19		3.39	9	2	0.0	0	1.8	4	20	8	24	6	7	18	7.2	
WASHINGTON NATIONAL	10	1016.6	1019.0	72	58	64.7	5.7	83	3	46	8	0	0	57	78	6.12	3.05	2.31	12	1	0.0	0	3.0	5	25	NW	7	7	5	19	6.9	34
FLORIDA																																
APALACHICOLA U	13			82	67	74.6	3.4	89	4+	54	11	0	0			3.58	1.14	3.21	5	0	0.0	0			22	S	9	14	13	4	4.2	90
DAYTONA BEACH	31	1014.2	1015.5	84	68	76.1	2.7	91	1	57	11	1	0	68	79	9.53	3.92	2.58	17	7	0.0	0	2.4	5	31	12	9	8	13	10	5.7	
FORT MYERS	15	1014.2	1014.7	86	72	78.9	2.8	92	5	64	28+	7	0	70	79	6.49	2.40	1.63	14	10	0.0	0	2.5	8	22	21	10	8	14	9	5.9	
JACKSONVILLE	26	1014.9	1016.0	83	64	73.3	2.3	92	3+	46	12	4	0	67	84	6.46	1.30	2.22	14	6	0.0	0	2.4	2	27	W	10	9	7	15	5.9	50
KEY WEST	4	1013.2	1013.9	85	77	81.1	2.1	88	17+	71	30	0	0	72	75	11.12	5.30	8.47	15	10	0.0	0	5.6	11	31	S	12	4	17	10	5.8	75
LAKELAND U	214			85	69	77.2	2.7	92	3+	60	11	5	0			5.75	2.82	2.26	17		0.0	0						10	15	6	5.0	63
MIAMI	7	1014.2	1014.3	84	74	78.9	1.1	89	10	68	27	0	0	72	81	7.48	- 0.73	2.11	17	6	0.0	0	3.7	8	20	11	29	6	10	15	6.5	
ORLANDO	108	1010.8	1015.3	88	70	79.0	5.0	94	3	62	11	10	0	69	76	3.06	- 0.90	0.95	12	6	0.0	0	2.2	3	20	27	10+	8	11	12	5.8	
PENSACOLA	112	1012.2	1016.3	83	64	73.5	3.1	90	4+	43	11	2	0	62	72	T	- 2.98	T	0	0	0.0	0	3.2	2	21	36	10	11	10	10	4.8	
TALLAHASSEE	55	1013.5	1015.9	84	59	71.5	1.9	93	3+	42	12	6	0	62	76	3.46	1.03	2.58	5	1	0.0	0	2.8	3	17	4	19	12	8	11	5.2	
TAMPA	19	1014.6	1014.8	87	68	77.5	2.8	93	5	59	11	6	0	68	77	4.70	1.92	2.20	10	7	0.0	0	2.4	6	18	6	18+	6	16	9	5.7	49
WEST PALM BEACH	15	1013.9	1014.4	87	71	79.0	0.8	93	10+	62	27	8	0	71	79	5.13	- 2.83	1.50	18	9	0.0	0	2.3	10	23	26	24	4	12	15	6.9	
GEORGIA																																
ATHENS	802	988.5	1017.1	77	58	67.1	4.1	90	1	41	11	1	0	59	79	2.95	0.09	1.17	11	2	0.0	0	2.8	2	20	4	20	9	6	16	6.2	
ATLANTA	1010	980.4	1016.7	76	58	66.8	4.4	88	1	39	11	0	0	58	77	0.31	- 2.13	0.15	6	1	0.0	0	3.3	4	22	NW	10	10	7	14	6.1	54
AUGUSTA	136	1011.2	1016.5	80	58	68.9	3.7	89	5	42	11	0	0	61	83	3.48	1.47	1.42	11	1	0.0	0	2.0	1	17	28	10	8	6	17	6.6	
COLUMBUS	385	1002.7		80	61	70.2	4.8	91	1	45	11	3	0	61	77	0.26	- 1.51	0.24	3	0	0.0	0	2.6	3	18	30	10	12	5	14	5.9	
MACON	354	1004.4	1017.3	82	60	71.0	4.8	94	2	42	11	5	0	61	76	0.65	- 1.36	0.24	9	1	0.0	0	3.1	1	20	E	31	9	4	18	6.5	45
ROME	637			79	55	66.6	5.4	90	1	35	11	1	0			1.15	- 1.78	0.60	6		0.0	0										
SAVANNAH	46	1014.6	1016.2	82	63	72.4	5.2	93	2+	45	11	4	0	64	79																
HAWAII																7.28	- 3.52	1.68	21	0	0.0	0	1.2	19	16	E	12	5	11	15	6.8	45
HILO	27	1015.2	1016.5	84	67	75.4	0.3	87	12	63	18	0	0	68	80	2.27	0.43	1.23	12	2	0.0	0	10.5	5	28	NE	22	7	16	8	5.5	64
HONOLULU	7	1015.6	1016.1	85	71	78.0	- 0.2	88	6	64	28	0	0	66	69	0.07	- 0.80	0.03	4	0	0.0	0	9.9	5	31	NE	31	15	10	6	4.4	73
KAHULUI	48	1013.2	1015.5	87	67	76.7	- 0.6	92	13	60	28	1	0	66	71	3.18	- 0.85	1.24	16	1	0.0	0	8.5	6	22	NE	19	4	15	12	6.4	49
LIHUE	103	1012.2	1017.3	83	74	78.3	1.4	85	17+	68	28+	0	0	69	73	8.01	5.43	3.03	11	2	0.0	0	2.6	2	22	W	24	7	6	18	6.7	47
IDAHO																																
BOISE	2838	916.4	1017.3	60	38	49.0	- 2.6	81	9	11	29	0	11	33	57	0.53	- 0.31	0.20	7	0	2.7	T	0.7	28	29	SE	22+	13	6	12	5.1	69
LEWISTON	1413			60	38	48.8	- 3.2	85	5	16	29	0	10			1.01	- 0.20	0.29	7		2.5	1			46Y		13	9	6	16	6.4	
POCATELLO	4454	863.2	1017.3	54	31	42.8	- 6.3	76	10	10	29	0	16	30	67	2.29	1.40	1.08	10	0	12.6	3	4.9	21	30	SW	26+	7	10	14	6.1	54
ILLINOIS																																
CAIRO U	314			77	58	67.3	5.4	88	2+	45	10	0	0			0.89	- 1.99	0.33	6		0.0	0			40	SW	27	13	6	12	5.1	56
CHICAGO O HARE	658	991.2	1015.6	71	52	61.7	8.6	90	1	36	31	1	0	51	70	0.72	- 2.03	0.38	5	2	0.0	0	3.7	21	48	20	27	7	13	11	6.0	
CHICAGO MIDWAY	607	993.6	1016.0	72	53	62.2	7.1	92	1	37	31	2	0	51	70	0.85	- 1.93	0.27	7	2	0.0	0	3.5	21	38	S	27	9	13	9	5.7	71

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0.3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ILLINOIS																																
MOLINE	582	994.6	1016.0	71	49	59.9	5.1	87	1	32	31+	0	2	49	71	2.64	0.18	0.98	11	2	0.0	0	3.7	21	39	SW	27	9	12	10	5.5	61
PEORIA	652	992.2	1016.2	71	49	60.0	4.7	87	2+	34	12	0	0	51	74	1.71	- 0.82	1.00	6	1	0.0	0	3.4	20	35	SW	27	9	13	9	5.5	63
ROCKFORD	724	988.5	1015.5	70	49	59.2	6.7	90	1	34	31+	1	0	50	74	1.99	- 0.71	1.06	6	1	0.0	0	3.1	21	32	23	27	10	9	12	5.7	
SPRINGFIELD	588	993.9	1015.9	74	52	62.9	6.2	90	1	36	12	1	0	50	68	0.99	- 1.92	0.62	6	1	0.0	0	3.7	19	36	SW	27	13	9	9	4.6	65
INDIANA																																
EVANSVILLE	381	1003.1	1017.2	76	52	63.8	4.7	90	1	36	12	1	0	53	72	2.42	- 0.15	1.25	6	2	0.0	0	0.9	22	27	W	3	13	11	7	4.7	70
FORT WAYNE	791	987.8	1017.9	70	49	59.8	6.8	87	2+	37	12+	0	0	52	78	2.22	- 0.64	1.18	9	1	0.0	0	3.3	21	28	S	27	7	13	11	5.9	64
INDIANAPOLIS	792	988.2	1017.1	73	51	62.0	6.6	88	1	34	12	0	0	52	74	1.84	- 0.78	0.85	7	2	0.0	0	2.0	19	27	SW	27	12	9	10	5.1	60
SOUTH BEND	773	988.5	1016.4	69	52	60.4	7.0	85	2+	39	12	0	0	53	80	2.23	- 0.94	0.54	8	1	0.0	0	3.4	19	28	23	27	6	11	14	6.5	
IOWA																																
BURLINGTON	692			70	50	60.0	4.6	87	1	36	31	0	0	51	74	2.82	0.12	1.40	9	1	0.0	0	3.0	22	25	23	27	9	9	13	5.9	
DES MOINES	938	980.4	1015.0	71	50	60.5	6.3	89	1	30	31	0	1	47	66	3.51	1.45	1.04	10	0	0.0	0	2.2	22	38	SW	27	10	7	14	5.8	54
DUBUQUE	1056	976.6		68	46	57.1	6.4	86	1	30	7	0	2			3.69	0.95	1.15	12		0.0	0										
SIOUX CITY	1095	975.3	1015.1	68	45	56.6	2.6	87	1	26	31	0	3	42	64	3.16	1.74	0.95	9	2	0.0	0	1.3	26	45	NW	27	10	7	14	5.9	55
WATERLOO	868	983.4	1015.3	66	44	54.9	3.2	86	1	27	7	0	5	47	77	2.43	0.31	0.75	9	0	0.0	0	2.6	22	32	24	30	8	9	14	6.3	
KANSAS																																
CONCORDIA	1470	961.7	1014.3	71	46	58.2	0.5	87	7	31	31	0	1	45	67	2.74	1.06	0.82	6	3	0.0	0	2.8	20	36	SE	18	16	8	7	4.1	75
DODGE CITY	2582	923.8	1014.3	71	45	57.9	- 0.4	85	7	30	29	0	3	41	60	2.87	1.45	0.94	8	5	T	0	2.9	20	35	SW	1	16	10	5	3.8	75
GOODLAND	3654	887.2	1013.9	67	38	52.3	- 0.8	86	7+	23	30	0	6	35	59	1.32	0.56	0.96	4	2	1.3	1	3.4	24	35	31	1	17	8	6	3.5	
TOPEKA	877	983.4	1015.2	75	48	61.6	3.4	91	12	29	31	1	2	47	66	3.87	1.53	1.96	8	3	0.0	0	2.5	22	28	S	30	14	6	11	5.0	55
WICHITA	1321	967.2	1014.8	73	48	60.6	0.7	88	12	32	31	0	1	47	68	5.54	3.14	2.50	8	2	0.0	0	2.6	19	34	S	18	17	4	10	4.2	71
KENTUCKY																																
COVINGTON	869	986.1	1017.6	72	51	61.4	5.3	84	2+	37	12+	0	0	52	74	1.44	- 0.82	0.54	7	1	0.0	0	1.6	18	23	18	27	12	5	14	5.5	
LEXINGTON	966	982.7	1018.0	75	54	64.7	6.6	87	2	40	8	0	0	54	72	0.52	- 1.76	0.16	5	1	0.0	0	1.8	16	18	18	27+	13	5	13	5.5	
LOUISVILLE	477	1000.0	1017.4	75	54	64.4	6.5	87	3+	39	10	0	0	55	75	1.96	- 0.29	1.27	6	1	0.0	0	1.4	18	21	S	27	12	7	12	5.3	59
LOUISIANA																																
ALEXANDRIA	92	1012.9	1017.2	81	59	69.8	2.7	89	3	43	11	0	0	63	85	1.28	- 2.25	0.62	6	2	0.0	0	0.5	9	18	12	4	13	9	9	4.9	
BATON ROUGE	64	1013.9	1016.5	82	62	72.0	2.9	88	3+	46	11	0	0	62	75	2.65	0.20	1.26	5	2	0.0	0	2.1	7	20	34	10	13	13	5	4.3	
LAKE CHARLES	9	1015.2	1016.2	85	65	74.8	4.3	91	3+	49	11	4	0	66	79	2.64	- 0.42	1.05	5	3	0.0	0	2.1	10	16	17	16+	10	12	9	5.3	
NEW ORLEANS	4	1015.6	1016.5	82	62	71.7	1.3	89	2	46	12+	0	0	63	77	0.58	- 2.26	0.55	2	0	0.0	0	2.6	4	18	36	10	16	10	5	3.8	
SHREVEPORT	254	1006.8	1016.1	82	60	70.7	2.4	91	2+	46	11	2	0	59	72	3.86	1.05	1.41	10	3	0.0	0	1.3	16	24	25	27	12	7	12	5.4	57
MAINE																																
CARIBOU	624	995.6		56	36	46.4	3.4	72	2	20	31	0	11			3.43	0.07	1.39	14		T	0						4	6	21	7.3	
PORTLAND	43	1018.0	1020.3	62	43	52.5	3.9	83	2	30	13	0	2	46	80	3.95	0.75	2.78	7	1	0.0	0	1.6	23	28	NW	11	5	12	14	6.6	60
MARYLAND																																
BALTIMORE	148	1013.9	1019.6	70	56	62.9	5.5	82	3	43	8	0	0	56	81	6.88	3.70	2.40	11	2	0.0	0	2.4	4	24	E	24	11	1	19	6.8	33
MASSACHUSETTS																																
BLUE HILL OBS R	629			65	49	57.3	4.6	83	2	36	8	0	0			2.51	- 1.24	1.59	5		0.0	0			37	W	11					60
BOSTON	15	1019.3	1020.3	67	52	59.8	4.8	86	2	45	8	0	0	50	75	2.16	- 0.98	1.43	5	1	0.0	0	0.1	25	30	SE	10+	8	13	10	5.8	68
WORCESTER	986		1020.7	65	48	56.5	6.0	80	2	34	8	0	0	47	74	3.66	0.19	2.40	5	1	0.0	0	1.4	29	22	30	11+	7	13	11	6.0	
MICHIGAN																																
ALPENA	689	990.9		64	44	54.0	7.7	88	1	30	8	0	6	46	75	0.61	- 1.81	0.33	8	1	0.0	0	1.9	20	23	SW	27+	3	14	14	6.8	48
DETROIT	619			69	53	60.8	7.0	84	2+	42	12	0	0	50	70	0.68	- 1.95	0.44	6	0	0.0		2.5	21	21	25	28+					
DETROIT METRO	633	992.9	1016.9	69	48	58.5	6.3	86	2	35	12+	0	0	50	77	1.01	- 1.56	0.67	8	0	0.0	0	1.9	21	26	S	27	9	12	10	5.7	59
FLINT	771	988.8	1016.6	66	49	57.6	6.2	84	2+	35	12+	0	0	49	75	2.12	- 0.25	0.99	9	1	T	T	3.6	21	26	20	27	6	14	11	6.1	
GRAND RAPIDS	784	987.1	1016.4	68	49	58.3	7.2	87	2+	33	12	0	0	50	77	1.39	- 1.22	0.54	6	1	0.0	0	3.1	17	30	SW	31	5	12	14	6.8	46
HOUGHTON LAKE	1149	974.3	1016.5	64	45	54.7	7.7	85	2	29	10	0	3	49	83	0.47	- 2.52	0.14	4	2	T	T	2.9	20	25	24	27	4	9	18	7.4	
LANSING	841	985.1	1016.8	68	49	58.2	6.9	86	1	31	12	0	1	52	84	2.29	- 0.21	1.14	9	1	0.0	0	3.0	20	29	S	27	7	13	11	6.3	55
MARQUETTE U	677			60	48	53.6	5.6	80	1	36	31	0	0			4.71	2.38	1.08	18		0.0	0			35	S	27	1	5	25	8.5	28

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

OCTOBER 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	993.2	1016.2	67	49	57.8	5.3	83	2	33	12	0	0	49	77	0.71	- 1.84	0.23	10	3	0.0	0	3.1	18	30	18	27	7	9	15	6.6	
SAULT STE MARIE	721	988.5	1015.1	58	44	50.9	4.6	79	1	32	8+	0	2	46	85	2.85	0.03	0.63	16	5	0.0	0	2.4	12	31	SW	27	3	6	22	8.2	35
MINNESOTA																																
DULUTH	1428	962.4	1014.3	55	40	47.7	3.1	71	1	25	12	0	9	42	82	6.09	3.92	2.49	18	3	0.2	T	1.3	19	47	NW	27	2	7	22	8.2	33
INTERNATIONAL FALLS	1179	969.9	1013.2	54	37	45.1	2.7	67	18	23	31	0	15	41	85	4.84	3.10	1.48	18	3	1.5	1	1.9	22	35	22	30	3	6	22	8.1	
MINNEAPOLIS	834	984.1	1014.6	60	43	51.4	2.5	76	17	29	31	0	3	44	76	5.68	4.09	2.29	13	3	0.0	0	1.6	25	42	SW	30	4	8	19	7.2	47
ROCHESTER	1297	967.2	1014.9	63	44	53.5	3.6	79	1	28	31	0	2	47	80	3.37	1.67	0.97	11	1	0.0	0	3.5	23	37	25	30	6	9	16	7.0	
ST CLOUD	1034	976.3	1014.7	59	41	49.7	2.4	76	17	27	31	0	7			6.16	4.52	2.03	15		0.5	T						5	8	18	7.4	
MISSISSIPPI																																
JACKSON	310	1005.4	1017.2	83	57	70.1	3.1	91	3	39	11	4	0	62	82	0.09	- 1.95	0.06	3	1	0.0	0	1.1	11	22	NW	23	14	8	9	4.9	60
MERIDIAN	290	1006.1	1017.3	82	58	70.0	4.4	91	4	39	11	3	0	60	76	0.84	- 1.38	0.64	4	3	0.0	0	1.4	2	15	34	10	11	8	12	5.5	
MISSOURI																																
COLUMBIA REGIONAL	887	984.4	1016.4	74	52	63.0	4.3	88	1	35	31	0	0	50	67	1.94	- 1.18	0.80	10	1	0.0	0	3.4	18	34	SW	27	16	4	11	4.6	66
KANSAS CITY	742	988.2	1014.8	75	53	64.0	3.8	87	12+	35	31	0	0	51	66	3.47	0.61	2.45	7	3	0.0	0	2.1	20	33	SW	30	12	8	11	5.1	61
ST JOSEPH	811			74	46	59.7	2.3	90	1	30	31+	1	4	46	67	3.33	1.15		8				1.7	19	29	27	30	12	9	10	5.3	
ST LOUIS	535	996.3	1016.5	75	53	63.7	5.3	89	2+	36	12	0	0	54	73	1.51	- 1.35	0.69	5	0	0.0	0	3.0	19	33	SW	27	13	6	12	5.0	66
SPRINGFIELD	1268	971.2	1016.4	75	50	62.4	2.7	87	1	33	31	0	0	52	74	3.63	- 0.13	1.90	7	3	0.0	0	4.5	18	32	S	30	13	7	11	4.8	61
MONTANA																																
BILLINGS	3567	891.3	1016.7	53	34	43.4	- 6.1	78	11	3	29+	0	12	31	66	3.80	2.71	1.81	8	0	13.0	5	5.1	27	34	N	12	8	9	14	6.5	48
GLASGOW	2284	933.3	1016.1	55	33	44.3	- 1.1	80	6	13	28	0	12	29	60	1.08	0.44	0.74	6	0	0.1	T	2.3	33	38	33	12	8	8	15	6.2	
GREAT FALLS	3662	888.3	1016.8	56	34	44.7	- 2.8	84	9	0	28	0	15	28	57	0.30	- 0.43	0.15	3	0	3.8	1	9.0	24	45	SW	26	7	8	16	6.3	61
HAVRE	2584	922.8	1016.0	57	29	43.1	- 2.7	84	9+	0	29	0	21	26	56	0.33	- 0.46	0.19	6	0	3.7	2	5.1	26	34	NW	13	8	9	14	6.1	71
HELENA	3828	881.5	1018.4	54	30	42.0	- 3.6	75	10+	- 1	29	0	18	27	59	0.39	- 0.27	0.24	5	0	0.8	T	3.3	28	38	NW	26	7	7	17	6.5	64
KALISPELL	2965	913.0	1019.2	53	27	40.0	- 3.9	74	5	5	29	0	25	28	67	0.95	- 0.29	0.36	8	1	2.4	2	0.5	15	38	32	13	6	10	15	6.6	
MILES CITY	2629	921.8	1015.6	55	35	44.7	- 4.3	79	6	11	29	0	9	35	71	6.31	5.44		11	0	2.5		3.7	32								
MISSOULA	3190	906.2	1019.6	56	28	42.2	- 1.8	79	5	0	29	0	21	30	67	0.24	- 0.75	0.10	5	0	0.7	1	0.7	29	40	SW	26	8	7	16	6.7	54
NEBRASKA																																
GRAND ISLAND	1841	948.5	1014.5	68	44	56.0	2.6	86	10+	26	31	0	4	40	59	1.75	0.79	1.11	6	2	T	T	2.1	24	30	32	27	11	11	9	5.1	
LINCOLN U	1150			69	49	58.8	2.1	87	1	32	31	0	1			4.29	2.71	1.27	10		0.0	0			36	S	1	11	6	14	5.5	59
NORFOLK	1544			66	43	54.4	1.5	85	1	24	31	0	5			2.28	1.10	1.04	6		0.0	0						13	6	15	5.7	
NORTH PLATTE	2775	917.0	1015.3	65	34	49.5	- 1.5	86	1	15	31	0	11	36	66	1.75	0.84	0.73	6	3	2.0	2	1.2	34	46	S	18	15	7	9	4.4	73
OMAHA	977	979.3	1014.6	70	47	58.8	3.1	90	1	27	31	1	2	45	65	4.20	2.47	1.51	9	3	0.0	0	0.8	26	33	NW	27	9	8	14	5.8	52
SCOTTSBLUFF	3957	878.8	1015.4	62	33	47.5	- 2.9	84	10	13	30	0	10	33	65	0.69	0.00	0.29	6	1	1.0	1	3.0	32	32	29	18+	13	6	12	4.9	
VALENTINE	2587			63	35	49.0	- 0.3	85	10	13	30	0	8			1.76	0.88	0.62	7		4.7	4			65	SE	18	13	10	8	4.7	66
NEVADA																																
ELKO	5050	844.9	1017.0	59	29	43.7	- 3.2	80	10	10	30+	0	19	24	53	0.74	- 0.01	0.51	6	0	5.4	2	1.3	26	23	28	1	13	7	11	4.9	
ELY	6253	808.3	1016.0	57	23	40.3	- 5.6	78	11+	- 3	30	0	27	23	59	1.08	0.35	0.43	10	1	9.7	5	2.9	20	32	S	15	14	8	9	4.6	72
LAS VEGAS	2162	938.0	1014.2	76	48	61.7	- 4.9	95	14	26	30	9	3	25	28	0.06	- 0.14	0.06	1	0	0.0	0	3.3	25	40	NW	29	23	6	2	3.2	87
RENO	4404	866.6	1017.1	64	27	45.8	- 3.4	87	13	8	29	0	22	24	51	0.44	- 0.07	0.30	3	0	5.1	4	1.6	31	33	SW	23	16	9	6	4.1	80
WINNEMUCCA	4301	869.6	1017.8	63	26	44.6	- 3.1	87	10	9	29	0	27	24	52	0.26	- 0.55	0.19	4	0	2.3	1	1.3	31	24	NW	28	13	6	12	5.0	69
NEW HAMPSHIRE																																
CONCORD	342	1007.8	1020.5	65	39	51.9	3.2	84	2	26	13	0	8	45	80	2.69	0.03	1.76	6	1	0.0	0	0.6	19	25	W	12	6	11	14	6.6	51
MT WASHINGTON OBS	6262			45	35	39.7	8.8	53	27+	15	13	0	6			5.71	- 0.48	2.14	14	1	0.4	T			80Y	W	12+	3	8	20	7.8	43
NEW JERSEY																																
ATLANTIC CITY	64	1017.3	1019.6	68	53	60.7	3.5	77	2	38	8	0	0	56	87	4.20	1.00	2.12	9	0	0.0	0	2.6	7	28	13	10	6	7	18	7.2	30
ATLANTIC CITY U	11			65	55	60.0	1.3	73	6	42	8	0	0			3.60	0.21	1.75	10						31	NE	24					
NEWARK	7	1019.0	1019.9	70	56	63.2	6.6	79	5	45	8	0	0	54	74	2.96	- 0.15	1.77	7	0	0.0	0	1.0	3	23	33	10	6	8	17	6.9	
TRENTON U	56			69	56	62.2	5.4	78	29	45	13+	0	0			3.70	0.86	1.81	9		0.0	0			27	E	24	8	7	16	6.6	43

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						Snow, Ice pellets					Fastest mile								
		Station O	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In	In.	M.p.h.		M.p.h.							°.
NEW MEXICO																																
ALBUQUERQUE	5311	838.1	1014.6	67	41	53.8	- 4.2	79	14+	25	30	0	6	33	50	1.15	0.40	0.89	5	1	T	0	1.5	20	58	S	29	20	4	7	3.4	78
CLAYTON	4969			68	39	53.5	- 1.8	84	14	26	30+	0	6			0.90	- 0.10	0.37	4		T	T						20	4	7	3.1	
ROSWELL	3612			74	45	59.4	0.4	88	14	28	31	0	2			0.76	- 0.31	0.59	4		0.0	0			34	SW	18					73
NEW YORK																																
ALBANY	275	1009.5	1020.3	66	43	54.7	3.9	82	2	31	18	0	2	48	82	2.09	- 0.68	1.39	8	1	0.0	0	2.1	22	21	S	4	6	9	16	7.1	42
BINGHAMTON	1590	961.4	1020.5	63	48	55.4	5.6	79	2	37	13+	0	0	48	78	1.89	- 1.20	0.79	8	2	0.0	0	3.5	18	32	W	6	6	11	14	6.8	40
BUFFALO	705	992.6	1018.2	67	50	58.7	7.9	82	2	39	8	0	0	51	78	1.57	- 1.43	0.71	11	1	0.0	0	3.0	21	36	W	11	6	12	13	6.5	57
NEW YORK U	132	1019.6	1019.8	69	56	62.7	4.4	78	29	45	8	0	0	55	79	4.14	1.00	2.16	7	0	0.0	0	1.8	4	27	NE	24					45
NEW YORK KENNEDY	13	1019.3	1020.1	70	57	63.5	5.9	80	29	46	13	0	0	55	76	3.28	0.07	2.33	7	1	0.0	0	1.1	6	26	6	24	6	11	14	6.5	
NEW YORK LA GUARDIA	11	1019.0	1020.2	68	57	62.4	3.8	76	28+	47	8	0	0	55	77	3.32	- 0.05	2.26	7	1	0.0	0	2.2	6	32	NW	6	6	9	16	6.5	
ROCHESTER	547	998.3	1018.4	70	48	59.0	7.2	86	2	36	19	0	0	53	83	1.34	- 1.24	0.79	8	0	0.0	0	2.5	22	29	SW	11	7	12	12	6.0	54
SYRACUSE	410	1004.1	1018.9	67	47	56.6	4.8	82	2	36	19	0	0	51	84	1.62	- 1.56	0.54	9	2	0.0	0	2.1	16	30	NW	11	9	7	15	6.2	47
NORTH CAROLINA																																
ASHEVILLE	2140	942.4	1018.3	72	52	61.8	6.0	84	3	34	11	0	0	57	88	7.05	3.92	2.20	12	2	0.0	0	2.8	35	26	33	26	9	7	15	6.6	53
CAPE HATTEPAS P	7	1016.6	1016.9	76	65	70.9	5.5	81	2	54	13	0	0	65	84	11.24	7.00	3.65	17	3	0.0	0	3.5	7	36	18	10	5	10	16	6.9	36
CHARLOTTE	736	990.2	1017.5	73	56	64.7	2.2	85	5+	40	11	0	0	59	85	6.88	3.92	2.03	16	3	0.0	0	3.5	2	22	SW	24+	6	8	17	6.6	46
GREENSBORO	897	986.5	1018.1	72	55	63.0	3.7	84	5	38	8	0	0	58	87	6.71	4.00	1.69	15	2	0.0	0	3.3	1	24	N	1	8	7	16	6.5	44
RALEIGH	434	1001.7	1017.6	73	57	64.8	4.3	84	5	39	11	0	0	58	83	7.53	4.82	2.66	13	4	0.0	0	3.7	2	29	36	1	5	7	19	7.2	35
WILMINGTON	28	1015.6	1016.9	79	63	70.8	5.4	87	15	48	11	0	0	65	87	6.05	3.04	2.24	13	2	0.0	0	2.9	3	24	NE	21+	7	7	17	6.7	41
NORTH DAKOTA																																
BISMARCK	1647	953.9	1014.2	55	35	45.1	- 1.6	72	13+	18	31	0	9	36	74	3.74	2.89	1.62	10	4	3.1	3	3.7	32	45	S	18	8	5	18	6.5	54
FARGO	896	980.7	1013.7	57	38	47.4	0.9	70	18	24	31	0	0	8	41	81	4.42	3.31	2.06	11	4	3.8		1.6	25	48	SE	18	9	5	17	6.7	47
WILLISTON	1899	945.8	1015.1	54	32	43.0	- 2.6	73	9+	12	29	0	11	33	72	3.56	2.83	2.21	6	0	1.8	2	4.7	31	38	N	2	7	10	14	6.2	54
OHIO																																
AKRON	1208	973.6	1018.2	69	49	58.7	5.8	81	3+	35	8	0	0	50	78	1.07	- 1.41	0.59	8	1	0.0	0	2.8	17	21	27	13+	7	15	9	5.5	
CINCINNATI ABBE OR	761			73	54	63.8	5.9	86	2	41	12+	0	0			1.66	- 0.58	0.49	8		0.0	0			17	S	27					59
CLEVELAND	777	989.2	1018.2	69	50	59.9	6.5	83	3+	35	12	0	0	51	75	1.61	- 0.81	0.80	8	1	0.0	0	4.1	19	25	S	27	11	10	10	5.2	60
COLUMBUS	812	988.2	1018.1	70	49	59.8	5.6	84	3	33	12	0	0	51	76	1.32	- 0.79	0.42	7	1	0.0	0	1.8	16	24	SW	11	10	9	12	5.3	58
DAYTON	1002	981.7	1017.5	72	54	62.9	7.3	86	2+	39	12	0	0	52	71	2.17	- 0.06	0.67	8	1	0.0	0	2.6	18	25	SE	27	11	8	12	5.3	60
MANSFIELD	1295			70	50	60.0	7.6	84	2	34	12	0	0	51	76	1.15	- 1.12	0.72	7	0	0.0	0	4.7	19	21	18	27+	11	9	11	5.5	
TOLEDO	669	991.9	1017.0	71	47	59.0	6.9	87	2	32	12	0	1	51	79	1.77	- 0.62	0.60	10	0	0.0	0	2.3	20	29	S	27	8	12	11	5.5	58
YOUNGSTOWN	1178	975.6	1018.6	68	48	57.9	6.0	81	2	35	12	0	0	50	79	1.40	- 1.31	0.59	9	0	0.0	0	3.3	17	22	24	11	10	8	13	5.6	
OKLAHOMA																																
OKLAHOMA CITY	1285	969.5	1015.7	74	52	63.4	0.5	86	1	37	31	0	0	52	70	2.62	0.11	0.69	10	2	0.0	0	2.9	17	27	NW	30+	12	7	12	5.1	57
TULSA	650	991.2	1015.5	76	54	65.0	2.2	86	1	36	31	0	0	55	75	7.99	4.68	5.50	11	4	0.0	0	4.3	19	32	SW	26	10	7	14	5.6	53
OREGON																																
ASTORIA	8	1018.3	1018.9	59	43	51.3	- 1.6	81	8	26	28	0	3	46	84	6.34	- 1.44	1.42	15	0	T	0	1.8	18	40	19	19	8	4	19	6.7	
BURNS U	4151	874.4	1018.5	58	30	43.9	- 4.5	81	10+	9	29	0	20	30	63	0.51	- 0.35	0.18	6		1.3	1	3.6	31				9	9	13	5.5	
EUGENE	359	1006.1	1019.7	61	38	49.5	- 3.7	81	5	19	28	0	8	43	83	3.32	- 0.51	1.23	12	0	T	0	1.5	21	20	33	16	4	8	19	7.4	
MEACHAM	4050	878.1	1019.1	50	33	41.1	- 5.2	78	9	6	28	0	16			3.63	0.79	1.17	11		19.1	11			17	27	26	8	5	18	6.8	
MEDFORD	1298	971.2	1019.4	64	39	51.1	- 1.9	86	8+	18	29	0	8	39	69	0.61	- 1.33	0.18	7	0	T	T	0.7	29	26	16	19	10	8	13	5.5	
PENDLETON	1482	964.8	1018.8	63	40	51.4	- 2.3	84	5	19	29	0	7	35	59	0.70	- 0.48	0.28	5	0	1.9	2	2.0	24	35	28	26	9	9	13	5.7	
PORTLAND	21	1018.0	1019.2	61	44	52.4	- 1.8	82	8+	26	29	0	3	44	78	2.37	- 1.24	0.92	13	2	T	0	1.2	21	27	S	25	6	6	19	6.9	43
SALEM	196	1011.9	1019.4	62	40	50.6	- 3.5	84	8	23	29	0	5	44	82	3.09	- 0.82	1.34	13	0	0.0	0	1.9	19	30	18	19	5	7	19	6.9	
SEXTON SUMMIT R	3836	886.2	1019.1	54	40	46.9	- 3.8	80	8	20	28	0	12			1.31	- 2.10	0.60	7		3.5	1			39	20	19	11	9	11	5.1	
PACIFIC AREA																																
GUAM TAGUAC R	361	998.0	1010.4	86	72	78.8	- 0.5	90	18	68	28	1	0	75	88	8.63	- 4.47	2.18	25	3	0.0	0	7.3	9	29	E	7					34
JOHNSTON	7	1012.9	1013.3	83	77	80.1	- 0.8	85	13+	72	29	0	0	72	76	1.81	- 1.46	0.27	19	0	0.0	0	13.9	9	32	NE	31	7	14	10	6.0	63
KOROR R	94	1005.1	1008.8	87	75	80.9	- 0.3	90	31+	72	9+	5	0	76	86	19.59	6.50	4.23	23	5	0.0	0	1.9	10	30	N	7	0	3	28	9.5	29
KWAJALEIN	8	1009.1	1009.8	86	76	81.0	- 0.9	87	30+	73	25+	0	0	75	83	15.65	4.77	2.62	27	1	0.0	0	8.6	9	32	9	7	1	4	26	8.7	
MAJURO	10	1010.5	1010.8	85	76	80.5	0.0	87	19+	73	31+	0	0	74	80	18.06	2.89	2.84	23	0	0.0	0	7.1	8	32	E	19	2	6	23	8.4	52

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F	F.		F.				F.	%	In.	In.	In			In	In	Mph		Mph							
PACIFIC AREA																																
PAGO PAGO	12	1012.5	1012.7	85	73	79.3		87	18+	67	11	0	0	73	82	7.25		2.57	17	0	0.0	0	8.4	9	26	E	5+	2	22	7	5.8	70
PONAPE P	123	1003.7	1009.1	87	73	79.9	0.2	90	20+	70	17	3	0	74	87	19.11	3.14	3.26	27	6	0.0	0	3.0	16	23	E	25	1	3	27	8.7	28
TRUK MOEN ISLAND	5	1009.1	1009.2	87	76	81.3	0.7	89	15+	73	4	0	0	75	81	16.40	2.95	4.60	23	1	0.0	0	4.4	9	22	SE	25+	0	7	24	8.7	70
WAKE	11	1013.2	1013.4	87	76	81.5	- 0.1	89	27+	71	30+	0	0	71	72	5.00	- 0.27	1.48	22	1	0.0	0	13.8	7	34	E	2	12	10	9	5.2	70
YAP R	44			86	74	80.0	- 1.6	88	31+	69	10	0	0			15.15	1.96	2.83	27	4	0.0	0			26	SE	24	1	1	29	9.1	57
PENNSYLVANIA																																
ALLENTOWN	387	1006.1	1020.0	68	50	58.9	5.1	78	15+	38	19+	0	0	53	85	3.57	0.60	1.78	6	1	0.0	0	1.5	6	28	30	11	6	10	15	6.9	
ERIE	731	991.5	1018.3	65	50	57.0	4.4	80	3	40	8	0	0	50	79	3.48	0.18	1.12	9	2	T	0	3.9	19	23	32	11	10	7	14	5.5	
HARRISBURG	338	1007.1	1019.9	68	53	60.6	4.9	81	3	41	19+	0	0			2.85	- 0.12	0.92	7	0	0.0	0	0.7	10	26	NW	7	7	8	16	6.6	40
PHILADELPHIA	5	1018.3	1019.5	71	56	63.5	7.8	77	29+	43	8	0	0	55	76	3.84	1.06	2.12	6	0	0.0	0	2.8	6	25	NE	24	7	7	17	7.0	43
PITTSBURGH	1137	974.6	1018.6	69	50	59.5	6.4	80	2	37	8	0	0	50	75	0.84	- 1.68	0.49	8	1	0.0	0	0.9	18	25	26	11	10	8	13	5.7	58
SCRANTON	930	985.4	1019.7	65	48	56.4	5.4	78	3	36	19+	0	0	51	85	3.00	- 0.50	1.21	9	2	0.0	0	1.5	14	29	W	11	7	7	17	7.0	41
WILLIAMSPORT	524	1000.7	1019.9	68	50	58.8	5.7	81	3	38	13	0	0	51	80	3.88	0.56	1.38	10	1	0.0	0	0.6	10	20	25	11+	6	5	20	7.3	
RHODE ISLAND																																
BLOCK ISLAND	110			66	54	59.7	4.5	74	2	43	20	0	0			2.44	- 0.58	1.78	6		0.0	0										
PROVIDENCE	51	1018.0	1020.4	69	50	59.2	6.0	83	2	39	8	0	0	52	81	2.88	- 0.22	2.05	5	1	0.0	0	0.4	6	30	30	6	9	12	10	5.8	56
SOUTH CAROLINA																																
CHARLESTON	40	1014.6	1016.3	80	62	70.8	4.6	89	3+	44	11	0	0	64	84	7.22	4.38	3.60	10	2	0.0	0	3.1	1	36Y	W	24	6	11	14	6.7	56
CHARLESTON U	9			78	66	71.7	3.6	88	3	52	11	0	0			6.40	3.66	3.36	11		0.0	0										
COLUMBIA	213	1009.1	1017.1	80	60	69.8	5.1	89	5+	44	11	0	0	63	83	3.44	1.06	1.56	12	1	0.0	0	3.0	3	22	26	24	9	3	19	6.7	40
GRNVLLE-SPRTNBRG	957	983.1	1017.5	74	56	64.9	2.5	87	5	37	11	0	0	57	80	9.51	6.15	2.87	13	4	0.0	0	3.9	3	21	NE	19	9	8	14	5.8	46
SOUTH DAKOTA																																
ABERDEEN	1296	966.8	1014.1	59	38	48.5	0.3	80	10	21	31	0	5	40	76	2.80	1.61	0.86	11	5	2.9	2	1.9	30	32	18	18	8	8	15	6.6	
HURON	1281	967.2	1014.1	61	38	49.4	0.6	80	10	20	31	0	7	39	72	3.16	2.01	0.89	10	6	3.8	4	1.6	25	45	S	18	7	12	12	6.5	54
RAPID CITY	3162	903.8	1015.5	57	35	46.1	- 3.9	80	10	12	30	0	8	32	63	2.02	1.23	0.68	10	1	10.2	4	6.5	32	59	NW	13	10	8	13	5.6	56
SIOUX FALLS	1418	963.4	1015.1	64	39	51.7	1.4	79	10	24	31	0	6	41	71	3.06	1.81	1.18	9	3	T	T	1.8	27	38	16	1	10	5	16	5.4	
TENNESSEE																																
BRISTOL	1507	964.4	1018.4	74	53	63.4	5.4	84	4	38	11+	0	0	55	78	3.18	1.03	1.26	10	2	0.0	0	0.9	2	15	8	21+	8	9	14	6.0	
CHATTANOOGA	665	992.6	1017.3	77	56	66.4	4.3	90	1	38	11	1	0	58	80	2.11	- 0.91	0.69	9	4	0.0	0	1.0	1	18	NW	10	8	12	11	5.8	51
KNOXVILLE	980	983.1	1017.8	75	56	65.3	4.4	85	4+	40	11	0	0	57	79	1.98	- 0.63	0.83	9	4	0.0	0	2.0	3	20	E	20	8	10	13	6.0	48
MEMPHIS	258	1006.8	1016.8	81	58	69.3	6.2	89	1	45	10	0	0	55	62	0.06	- 2.66	0.06	1	0	0.0	0	1.6	18	18	22	27+	13	8	10	4.5	71
NASHVILLE	590	995.3	1017.0	78	56	66.7	5.2	90	1	40	11	1	0	56	74	1.27	- 1.05	0.96	5	3	0.0	0	0.8	22	21	S	27	13	6	12	5.3	59
OAK RIDGE R	905			74	54	64.0	4.1	85	1	37	11	0	0			1.75	- 0.92	0.68	9		0.0	0			24Y		20	10	7	14	6.3	
TEXAS																																
ABILENE	1784	953.9	1014.8	76	56	66.0	- 0.2	85	15+	45	31+	0	0	55	71	2.43	- 0.42	0.71	8	3	0.0	0	5.3	17	38	NE	22	10	7	14	5.7	50
AMARILLO	3604	891.0	1013.8	69	45	57.2	- 3.3	86	15	31	29	0	1	39	56	2.59	0.83	1.52	8	2	0.0	0	5.7	21	37	W	36+	18	5	8	3.8	75
AUSTIN	597	993.6	1015.3	81	63	72.2	1.5	90	2	52	11+	1	0	63	76	3.02	0.19	0.89	15	3	0.0	0	1.5	15	30	N	3	8	10	13	5.8	44
BROWNSVILLE	19	1013.9	1014.4	84	70	76.9	1.0	89	19+	56	11	0	0	69	79	3.11	- 0.42	2.00	6	3	0.0	0	4.4	13	28	SE	17	8	14	9	5.7	53
CORPUS CHRISTI	41	1013.5	1014.8	85	69	76.6	2.1	90	3+	55	11	3	0	69	81	3.96	1.20	1.12	8	2	0.0	0	4.9	11	27	SE	17	10	12	9	5.4	60
DALLAS	481	998.3	1015.6	80	61	70.7	2.9	91	2	48	10	2	0	59	71	9.78	7.08	4.06	11	3	0.0	0	3.7	16	29	NW	26	7	9	15	6.1	48
DEL RIO	1026	978.7	1014.4	80	62	71.1	- 0.3	87	18+	51	21	0	0	63	78	2.36	0.38	0.78	10	2	0.0	0	5.1	12	22	32	26+	8	4	19	6.7	
EL PASO	3918	882.2	1013.5	75	50	62.5	- 1.9	84	14+	35	20	0	0	42	51	1.07	0.22	0.54	8	5	0.0	0	1.0	26	35	W	26	15	10	6	4.1	73
FORT WORTH	537	995.6	1015.8	80	60	70.1	2.2	89	2+	46	10	0	0	61	79	7.64	5.05	2.65	8	3	0.0	0	2.8	18	32	29	26	6	9	16	6.4	
GALVESTON U	7			80	72	75.7	2.2	85	8+	61	10	0	0			2.37	- 0.49	0.69	8		0.0	0			24	NE	10					66
HOUSTON INTERCON	96	1012.2	1016.0	82	62	72.0	2.1	89	2	45	11	0	0	65	83	3.49	- 0.24	2.22	10	5	0.0	0	2.2	9	21	17	2	11	9	11	5.6	55
LUBBOCK	3254	903.5	1013.9	74	50	61.9	0.7	87	15	39	31	0	0	48	65	1.79	- 0.21	1.10	6	3	0.0	0	2.8	20	29	25	26	13	6	12	4.9	
MIDLAND	2851	916.4	1014.0	75	53	64.0	- 1.9	85	15	40	20	0	0	52	72	0.67	- 0.99	0.23	6	1	0.0	0	4.0	17	26	17	29	12	7	12	5.1	
PORT ARTHUR	16	1015.6		81	63	71.8	1.5	87	2+	47	11	0	0	64	81	2.16	- 0.72	1.10	8	3	0.0	0	2.2	10	18	SE	15+	12	10	9	5.0	59
SAN ANGELO	1903	948.2	1014.3	78	56	66.8	- 1.5	86	16	43	24+	0	0	57	75	2.09	0.26	0.69	6	2	0.0	0	3.9	19	23	19	26	10	7	14	5.9	
SAN ANTONIO	788	987.5	1015.2	83	65	73.9	3.3	90	3+	52	24+	3	0	62	71	4.62	2.12	1.29	14	2	0.0	0	2.1	12	21	S	18+	7	12	12	6.2	48
VICTORIA	104	1011.2	1015.3	84	66	74.5	1.9	90	3+	53	11+	3	0	65	78	6.87	3.39	4.34	9	2	0.0	0	3.6	10	32Y	S	16	13	7	11	5.3	
WACO	501	997.6	1015.6	81	61	71.2	1.8	89	3+	45	10	0	0	61	74	3.26	0.71	1.37	10	2	0.0	0	3.2	16	23	18	19+	9	14	8	5.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

OCTOBER 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No of days							No of days		Snow, Ice pellets				Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	ft.	Mb.	Mb.	F.	F.	F	F.	F.		F.					°	In	In	In.			In	In	M.p.h.		M p h.							°
TEXAS																																
WICHITA FALLS	994	978.0	1014.3	79	57	67.9	1.5	90	2	43	31	1	0	57	72	4.21	1.34	2.06	8	3	0.0	0	3.9	14	41	23	26	9	12	10	5.6	
UTAH																																
MILFORD	5028	845.9		60	30	45.0	- 5.7	82	10+	- 2	30	0	19			2.47	1.70	0.86	7		17.4	13						14	10	7	4.4	
SALT LAKE CITY	4220	871.7	1016.2	58	37	47.5	- 4.2	76	11	16	30	0	5	35	65	3.23	2.08	1.44	12	0	16.6	8	2.5	16	35	NE	29	8	9	14	6.3	58
WENDOVER	4237	871.0	1016.5	59	39	48.6	- 4.6	76	11	19	30	0	7	29	51	0.16	- 0.30	0.10	5		0.4	T						10	9	12	5.6	
VERMONT																																
BURLINGTON	332	1006.8	1019.4	63	44	53.8	6.2	79	2	32	13	0	1	49	84	2.16	- 0.81	1.17	10	1	0.0	0	3.2	20	32	SW	31	4	7	20	7.4	54
VIRGINIA																																
LYNCHBURG	916			71	54	62.6	4.4	82	3	36	8	0	0			7.40	4.76	2.67	15		0.0	0			26	NE	1	10	4	17	6.4	40
NORFOLK	24	1016.6	1017.8	72	61	66.7	4.7	82	5	47	11	0	0	60	80	10.12	7.20	4.38	17	2	0.0	0	4.8	4	41	S	2	4	6	21	7.9	28
RICHMOND	164	1011.9	1018.3	72	57	64.6	5.9	83	5	41	11+	0	0	60	88	9.39	6.39	3.26	16	2	0.0	0	2.7	4	23	NE	23	7	3	21	7.5	30
ROANOKE	1149	976.6	1018.5	71	53	62.1	3.9	83	3	35	8	0	0	55	80	6.75	3.54	2.38	16	0	0.0	0	2.7	35	23	30	11+	11	4	16	6.2	
WALLOPS ISLAND	9			72	62	66.9		78	6	48	8	0	0			6.86		1.80	11		0.0	0			50Y	E	23					
WASHINGTON																																
OLYMPIA	195	1011.5	1018.7	59	39	48.6	- 2.8	75	5+	20	28	0	8	43	85	4.43	- 0.85	1.61	12	0	T	T	3.2	20	23	18	19	6	5	20	7.3	
QUILLAYUTE	179	1010.5	1018.2	57	41	48.8	- 2.6	79	8	25	28	0	6	44	84	13.21	2.68	3.38	22	1	T	T	1.5	16	25	SE	22	6	6	19	7.1	34
SEATTLE-TACOMA	400	1002.0	1018.5	57	45	51.0	- 1.4	72	4	30	28	0	2	43	77	3.57	- 0.45	1.03	13	0	2.0	2	2.4	16	26	NW	27	3	7	21	7.7	31
SPOKANE	2356	933.3	1017.9	55	34	44.2	- 4.9	78	5	13	29	0	12	30	62	0.82	- 0.75	0.40	7	0	3.1	3	2.4	19	35	W	13	10	6	15	5.9	56
STAMPEDE PASS R	3958	880.1		45	34	39.9	- 2.5	72	9	17	28	0	17			9.92	1.11	3.24	17		26.2	12						6	3	22	7.6	
WALLA WALLA U	949			62	42	52.0	- 3.1	82	4	22	29+	0	6			1.25	- 0.28	0.34	9		2.5	2			25	W	19	11	5	15	5.8	53
YAKIMA	1052	979.7	1018.5	63	31	47.1	- 3.4	84	5	11	29	0	17	32	62	0.27	- 0.33	0.14	6	0	1.1	T	3.5	29	26	29	26+	9	9	13	5.5	
WEST INDIES																																
SAN JUAN P.R.	13	1012.2	1014.8	88	76	81.9	1.9	92	28+	74	19+	6	0	70	71	4.61	- 1.22	1.44	23	12	0.0	0	4.3	11	25	SE	25+	1	10	20	7.5	49
WEST VIRGINIA																																
BECKLEY	2504	930.9	1018.6	66	50	58.3	4.7	78	4	32	8	0	1	52	82	3.01	0.30	0.82	14	1	0.0	0	2.7	15	24	30	10	8	7	16	6.6	
CHARLESTON	939	984.1	1018.1	74	54	63.8	6.5	82	30+	38	8	0	0	54	76	1.30	- 1.28	0.50	7	1	0.0	0	0.5	18	20	25	6	9	8	14	6.4	
ELKINS	1948	948.5		69	46	57.7	5.6	80	4+	31	8	0	2			1.85	- 1.18	0.92	11		0.0	0						5	9	17	7.1	
HUNTINGTON	827	987.8	1017.8	74	54	63.9	6.6	83	4+	36	8	0	0	55	77	1.48	- 0.37	0.80	8	1	0.0	0	1.1	16	21	22	11	9	6	16	6.2	
PARKERSBURG U	615			73	53	63.2	6.2	83	30+	36	8	0	0			1.38	- 0.67	0.46	6		0.0	0			20	SW	11					55
WISCONSIN																																
GREEN BAY	682	989.5	1015.0	63	46	54.6	5.2	84	2+	30	12	0	3	48	81	2.01	0.10	0.62	11	1	0.0	0	1.9	21	43	SW	30	3	7	21	7.7	32
LA CROSSE	651	990.9	1015.3	65	47	55.7	4.6	81	1	31	31+	0	2	49	80	1.09	- 1.10		9	1	0.0		1.7	19									
MADISON	858	983.7	1015.1	68	44	55.9	6.0	88	1	28	7	0	5	49	80	1.30	- 0.91	0.28	13	2	0.0	0	3.3	21	38	NW	5	6	11	14	6.5	53
MILWAUKEE	672	990.5	1015.7	64	47	55.5	5.5	86	2+	31	12	0	1	50	83	1.90	- 0.20	0.71	10	0	0.0	0	3.4	23	42	SW	30	9	7	15	6.3	58
WYOMING																																
CASPER	5338	836.8	1015.8	56	30	42.8	- 5.5	81	10	- 3	30	0	14	29	68	1.73	0.89	0.63	10	1	13.1	12	5.1	24	33	21	31+	8	7	16	6.5	
CHEYENNE	6126	811.0	1014.9	57	32	44.3	- 3.2	76	11+	10	29	0	11	26	55	1.16	0.33	0.47	6	2	8.1	6	5.8	28	48	SW	30	12	9	10	4.8	67
LANDER	5563	828.7	1016.6	53	29	41.0	- 6.1	79	10	0	31+	0	19	28	66	3.58	2.37	1.21	11	0	39.9	17	1.0	25	25	NW	26+	9	6	16	6.3	55
SHERIDAN	3964	878.4	1016.7	56	30	42.8	- 5.0	79	9	1	29	0	14	30	65	3.16	2.03	0.97	14	0	14.8	9	4.6	32	37	NW	2	7	8	16	6.6	46

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70°F. or obove for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevation [illegible]

CLIMATOLOGICAL DATA

METRIC UNITS

OCTOBER 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 32.2 °C or above	Temperature: No of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No of days (sunrise to sunset): Clear, 0-3	No of days (sunrise to sunset): Partly cloudy 4-7	No of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb	C	C.	C.	C	C		C				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M p.s.		M p.s							%
ALABAMA																																
BIRMINGHAM	189	994.9	1017.3	25.6	13.9	19.6	0.8	31.1	1	3.9	11	0	0	15.6	80	31	- 44	19	6	1	0	0	0.8	4	8.9	W	23	12	7	12	5.5	58
HUNTSVILLE	190	994.2	1017.4	25.0	13.3	19.1	1.7	30.6	4+	3.9	11	0	0	15.0	80	20	- 50	16	5	2	0	0	0.6	11	8.9	35	10+	13	6	12	5.2	
MOBILE	64	1008.8	1016.8	28.9	16.7	22.7	1.7	32.8	4+	7.2	11	4	0	17.2	76	1	- 76	1	2	0	0	0	1.2	2	8.0	34	10	13	9	9	4.9	
MONTGOMERY	56	1009.8	1017.0	27.2	15.0	21.2	2.0	32.8	2+	5.0	11	6	0	15.6	76	7	- 51	6	4	0	0	0	0.8	2	8.9	NW	10	13	8	10	5.2	54
ALASKA												B																				
ANCHORAGE	35	1000.3	1005.2	3.3	- 2.8	0.2	- 1.9	8.9	8	-16.7	25	0	19	- 2.8	81	55	7	15	18	0	302	203	0.8	1	9.4	17	9+	6	3	22	7.6	27
ANNETTE	34	1008.5	1012.6	9.4	3.9	6.6	- 1.6	13.3	7	- 3.9	27	0	4	3.9	85	357	- 72	82	23	0	T	T	1.5	14	17.0	14	28	2	4	25	8.5	
BARROW	9	1005.8	1006.4	- 6.7	-13.3	- 9.9	- 1.3	- 1.1	28+	-22.8	26	0	31			9	- 4	4	9	0	127	102	2.1	12	12.5	11	26+	1	7	23	8.4	
BARTER ISLAND	12			- 7.8	-15.0	-11.4	- 3.2	- 1.7	6+	-28.3	21	0	31			30	9	13	14	0	508	381			14.8	26	29	3	5	23	8.1	
BETHEL	38	1001.0	1006.6	1.7	- 3.3	- 0.7	- 0.3	6.1	16	-10.0	24	0	25	- 2.2	90	56	17	15	19	0	203	51	1.6	24	14.3	18	26	3	1	27	8.9	
BETTLES	196	981.7	1006.9	- 6.1	-13.9	- 9.9		3.3	10	-27.8	24+	0	31	-12.8	77	41		10	16	0	574	483	1.9	35	7.6	2	26+	1	6	24	8.7	
BIG DELTA	386			- 1.1	- 7.8	- 4.4		10.6	10+	-21.7	20	0	28			23		4	14	0	356	254			13.0	19	8	1	4	26	8.7	
COLD BAY	29	1007.1	1010.7	6.1	1.1	3.7	- 0.8	13.3	14	- 2.8	24+	0	11	0.6	82	83	- 33	26	15	0	T	T	3.8	29	21.5	26	30	0	1	30	9.3	
FAIRBANKS	133	989.2	1006.5	0.0	- 5.0	- 2.3	0.9	13.3	8	-12.8	23	0	27	- 7.8	66	34	13	9	21	0	518	102	0.4	27	10.3	27	8	1	1	29	9.2	
GULKANA	479			0.0	- 8.9	- 4.3		10.0	7	-27.2	24	0	24			44		11	9	0	490				13.4	15	8	3	5	23	8.1	
HOMER	20	1001.7	1005.0	6.1	- 1.1	2.7		11.7	7	-11.1	25	0	20	- 0.6	78	107	18	28	14	0	43	51	0.7	35	11.2	14	27+	5	6	20	7.5	
JUNEAU	4	1009.1	1009.8	6.7	0.6	3.6	- 1.7	12.8	8	-11.1	27+	0	12	1.7	89	147	- 64	16	25	0	175	127	3.2	10	15.6	12	28	3	0	28	9.0	24
KING SALMON	15	1003.1	1005.1	5.0	- 2.2	1.3	- 0.8	11.1	15	-11.1	25	0	23	- 2.8	74	69	14	15	18	0	201	102	0.8	27	20.1	13	14	4	7	20	7.7	
KOTZEBUE	3	1003.7	1004.2	- 2.8	- 8.9	- 5.7	- 1.7	2.8	15	-15.0	13	0	31	- 7.8	83	19	4	5	16	0	457	203	3.8	9	20.6	10	21	3	3	25	8.2	
MC GRATH	105	993.2	1006.6	0.6	- 5.0	- 2.3	0.6	7.2	1	-13.9	24	0	27	- 3.3	90	70	36	24	16	0	815	279	0.4	30	8.9	1	7	2	3	26	8.9	
NOME	4	1002.4	1003.2	1.1	- 5.6	- 2.2	- 0.9	3.9	15+	-14.4	13	0	27	- 5.0	78	58	14	11	19	0	277	102	0.8	17	17.9	15	21	6	3	22	7.6	27
ST. PAUL ISLAND	7	1009.1	1009.8	5.6	1.1	3.2	0.3	7.2	15+	- 3.3	23	0	14	1.1	87	54	- 26	13	29	0	109	51	3.9	26	20.6	19	25	0	7	24	8.6	
SHEMYA	37	1009.8	1013.6	6.7	3.3	4.9	0.6	8.3	11+	- 1.1	5	0	3	1.1	75	80	9	37	15	0	T	T	4.3	24	21.7	20	12	2	9	20	7.7	
SUMMIT	732	918.4	1007.7	- 2.8	-10.0	- 6.5		5.0	10+	-20.0	29	0	31	- 8.3	84	36		9	16	0	902	279	2.3	5	11.6	22	8	4	1	26	8.3	
TALKEETNA	105			1.7	- 6.7	- 2.4	- 3.0	8.3	11+	-26.1	25	0	24			67	- 5	28	15	0	638	305			6.7	6	27					
UNALAKLEET	5			0.6	- 4.4	- 1.8		5.6	15	-10.6	4	0	26			40		11	19	0	241	152			17.0	10	14					
YAKUTAT	9	1005.4	1006.6	7.8	0.0	3.9	- 1.6	11.7	8+	-11.7	26	0	14	1.1	85	518	21	75	27	0	683	229	2.2	12	17.9	13	28	3	4	24	8.4	
ARIZONA																																
FLAGSTAFF	2135	787.3	1017.3	11.7	- 3.9	3.7	- 4.7	21.1	13+	-18.9	30	0	26	- 3.9	63	111	72	56	8	3	627	279	1.0	18	11.6	21	28+	17	5	9	3.7	
PHOENIX	340	973.9	1012.4	27.8	13.9	20.7	- 0.8	35.0	13	1.1	30	12	0	5.6	41	7	- 5	5	3	1	0	0	1.1	13	17.4	5	24	9	7	5	2.9	81
TUCSON	788	924.8	1012.3	24.4	11.1	17.9	- 3.2	31.7	14+	- 3.3	30	0	1	6.7	52	30	14	25	7	3	0	0	1.7	15	15.6	5	24	14	5	7	3.3	76
WINSLOW	1492	851.7	1015.6	20.0	4.4	12.2	- 1.9	28.9	14+	- 5.6	30	0	5	0.6	50	25	8	19	5	0	T	0	1.9	20	17.0	21	28	17	8	6	3.5	
YUMA	59	1004.7	1012.1	27.2	13.9	20.6	- 3.1	36.7	10	1.7	30	11	0	5.6	42	T	- 10	T	0	1	0	0	1.1	35	16.5	NE	5	26	2	3	1.7	88
ARKANSAS																																
FORT SMITH	136	1000.0	1016.4	26.1	12.2	19.3	1.7	32.8	2	3.3	11+	2	0	12.8	74	95	7	40	11	3	0	0	0.1	17	16.5	W	26	7	9	14	5.9	61
LITTLE ROCK	78	1006.8	1016.3	27.8	13.9	20.7	3.4	33.3	3	7.2	11	3	0	13.9	72	65	- 8	39	5	1	0	0	0.8	23	13.9	W	27	16	6	9	4.7	72
CALIFORNIA																																
BAKERSFIELD	149	997.6	1015.2	25.0	10.6	17.8	- 1.5	35.6	7	- 1.7	30	10	2	5.0	47	2	- 6	2	4	0	0	0	0.7	1	10.7	30	15	23	6	3	2.1	
BISHOP	1252	873.4		22.2	0.6	11.4	- 2.7	33.3	10	- 8.3	30	4	15			T	- 11	T	1		0	0						18	7	4	2.8	
BLUE CANYON	1609			14.4	4.4	9.4	- 2.7	27.2	12	- 8.3	28	0	12			32	- 55	16	5		193	127			9.8	6	27	18	5	8	3.7	
EUREKA	13			13.3	7.2	10.3	- 2.1	18.9	5	0.0	29	0	1			23	- 58	11	9		0	0			14.4	5	19	9	7	13	6.0	56
FRESNO	100	1003.7	1015.4	25.6	6.7	16.1	- 2.1	35.6	7	- 1.7	30+	10	2	4.4	53	1	- 10	1	1	0	0	0	0.4	31	8.5	NW	28	23	5	3	2.3	88
LONG BEACH	8	1012.9	1014.2	27.2	12.8	20.1	0.9	40.6	6	4.4	29	8	0	10.0	59	14	10	10	3	2	0	0	1.0	26	10.7	34	28	14	8	4	3.1	
LOS ANGELES	30	1009.8	1013.6	23.9	11.8	18.3	0.1	38.3	6+	6.1	30	5	0	8.9	61	7	- 3	5	2	1	0	0	1.2	26	16.9	N	28	18	9	4	3.2	
LOS ANGELES C	82			25.6	13.9	19.7	0.0	38.9	6	5.0	30	7	0			1	- 9	1	1		0	0			11.2	N	28	22	6	3	2.6	
MT SHASTA	1080	893.7	1018.7	15.6	1.7	8.7	- 2.4	29.4	5	- 6.1	29	0	14	0.6	62	36	- 26	15	6		180	51	1.2	33				14	2	4	2.0	
OAKLAND	2	1016.6	1016.7	18.9	9.4	14.2	- 1.9	28.9	12	5.6	30	0	0	7.8	69	2	- 18	1	3	0	0	0	1.7	30	13.4	29	05	22	7	2	2.4	
RED BLUFF	104	1003.1	1015.8	24.4	8.9	16.6	- 2.1	37.8	8	0.6	31	9	0	2.2	45	2	- 33	2	3	0	T	0	2.3	34	21.0		29	14	12	5	3.8	86
SACRAMENTO	5	1014.6	1015.5	24.4	7.8	16.2	- 1.3	35.6	8	2.2	30+	8	0	5.6	56	3	- 16	2	2	0	0	0	0.6	29	14.3	NW	28	20	6	5	2.9	86
SANDBERG	1377	862.5		17.8	7.2	12.5	- 2.3	31.7	13	- 6.1	29	0	7			1	- 11	1	1		13	0			13.9	35	28	22	1	6	2.7	
SAN DIEGO	4	1012.9	1013.9	23.3	13.9	18.7	- 0.2	38.3	6	6.1	30	3	0	8.9	58	42	30	20	3	3	0	0	1.5	29	11.6	NW	5	20	5	6	3.2	78
SAN FRANCISCO	2	1016.3	1016.8	19.4	8.3	13.9	- 1.9	32.2	12	3.9	30	1	0	6.7	70	1	- 18	1	2	0	0	0	3.5	29	15.6	36	28	23	6	2	2.5	
SAN FRANCISCO U	16			18.3	10.6	14.3	- 2.0	31.7	12	7.8	28	0	0			3	- 20	2	3		0	0			12.6	W	15					84
SANTA MARIA	72			21.1	5.0	13.2	- 2.6	35.6	6+	- 3.3	29	3	4			6	- 9	3	3		0	0						23	3	5	2.4	
STOCKTON	7	1015.2	1016.2	24.4	8.9	16.7	- 1.1	34.4	8	1.1	30	8	0	4.4	50	7	- 9	7	2	0	0	0	1.6	30	16.1	34	28	21	7	3	2.6	
COLORADO																																
ALAMOSA	2297	769.1		15.6	- 4.4	5.7	- 1.2	23.3	14+	-14.4	31	0	30			18	3	8	7		T	T						18	10	3	3.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

OCTOBER 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32°C or above	Temperature: No. of days: Min 0°C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Wind: Fastest mile (1.6 kilometers): Resultant speed	Wind: Fastest mile (1.6 kilometers): Resultant direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0.3	No. of days (sunrise to sunset): Partly cloudy 4.7	No. of days (sunrise to sunset): Cloudy 8.10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb	C	C.	C.	C	C.		C.				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							%
COLORADO																																
COLORADO SPRINGS	1873	810.7	1014.8	17.2	2.2	9.6	- 0.6	26.1	14+	-11.7	30	0	8	- 3.3	46	6	- 12	4	4	0	74	76	3.9	6	15.6	30	30+	18	9	4	3.3	
DENVER	1610	835.8	1013.8	18.3	1.1	9.7	- 1.1	28.3	10	-10.6	30	0	13	- 0.6	55	11	- 14	5	4	1	79	51	0.4	21	14.8	SW	1	17	8	6	3.7	77
GRAND JUNCTION	1476	851.7	1014.3	18.3	4.4	11.3	- 1.5	26.7	11+	- 5.0	31+	0	4	1.1	56	29	10	17	8	2	13	T	0.7	15	14.3	SW	28	14	9	8	4.5	69
PUEBLO	1428	854.7	1013.7	21.1	1.7	11.6	- 1.1	29.4	14+	- 7.8	20	0	9	- 1.7	46	5	- 20	5	2	0	48	51	0.4	24	17.9	SW	17+	18	9	4	3.5	85
CONNECTICUT																																
BRIDGEPORT	2	1020.0	1020.7	20.0	11.7	15.7	2.7	23.3	14+	4.4	8	0	0	11.7	79	82	- 4	54	6	0	0	0	1.0	4	15.6	24	11	7	10	14	6.3	
HARTFORD	52	1013.5	1020.1	20.6	8.3	14.6	2.9	30.0	2	2.2	8	0	0	10.0	78	113	33	74	7	1	0	0	0.3	32	11.2	W	6	8	9	14	6.4	44
DELAWARE																																
WILMINGTON	23	1016.6	1019.5	21.7	12.8	17.2	3.5	26.7	3	5.0	8	0	0	13.3	82	163	89	95	9	1	0	0	1.3	5	9.4	26	11+	8	4	19	6.9	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	88	1007.1	1019.0	21.1	11.1	16.3		28.3	3	2.8	8	0	0	13.3	86	233		86	9	2	0	0	0.8	4	8.9	8	24	6	7	18	7.2	
WASHINGTON NATIONAL	3	1016.6	1019.0	22.2	14.4	18.2	3.2	28.3	3	7.8	8	0	0	13.9	78	155	77	59	12	1	0	0	1.3	5	11.2	NW	7	7	5	19	6.9	34
FLORIDA																																
APALACHICOLA U	4			27.8	19.4	23.7	1.9	31.7	4+	12.2	11	0	0			91	29	82	5	0	0	0			9.8	S	9	14	13	4	4.2	90
DAYTONA BEACH	9	1014.2	1015.5	28.9	20.0	24.5	1.5	32.8	1	13.9	11	1	0	20.0	79	242	100	66	17	7	0	0	1.1	5	13.9	12	9	8	13	10	5.7	
FORT MYERS	5	1014.2	1014.7	30.0	22.2	26.1	1.6	33.3	5	17.8	28+	7	0	21.1	79	165	61	41	14	10	0	0	1.1	8	9.8	21	10	8	14	9	5.9	
JACKSONVILLE	8	1014.9	1016.0	28.3	17.8	22.9	1.3	33.3	3+	7.8	12	4	0	19.4	84	164	33	56	14	6	0	0	1.1	2	12.1	W	10	9	7	15	5.9	50
KEY WEST	1	1013.2	1013.9	29.4	25.0	27.3	1.2	31.1	17+	21.7	30	0	0	22.2	75	282	135	215	15	10	0	0	2.5	11	13.9	S	12	4	17	10	5.8	75
LAKELAND U	65			29.4	20.6	25.1	1.5	33.3	3+	15.6	11	5	0			146	72	57	17		0	0						10	15	6	5.0	63
MIAMI	2	1014.2	1014.3	28.9	23.3	26.1	0.6	31.7	10	20.0	27	0	0	22.2	81	190	- 19	54	17	6	0	0	1.7	8	8.9	11	29	6	10	15	6.5	
ORLANDO	33	1010.8	1015.3	31.1	21.1	26.1	2.8	34.4	3	16.7	11	10	0	20.6	76	78	- 23	24	12	6	0	0	1.0	3	8.9	27	10+	8	11	12	5.8	
PENSACOLA	34	1012.2	1016.3	28.3	17.8	23.1	1.7	32.2	4+	6.1	11	2	0	16.7	72	T	- 76	T	0	0	0	0	1.4	2	9.4	36	10	11	10	10	4.8	
TALLAHASSEE	17	1013.5	1015.9	28.9	15.0	21.9	1.1	33.9	3+	5.6	12	6	0	16.7	76	88	26	66	5	1	0	0	1.3	3	7.6	4	19	12	8	11	5.2	
TAMPA	6	1014.6	1014.8	30.6	20.0	25.3	1.6	33.9	5	15.0	11	6	0	20.0	77	119	49	56	10	7	0	0	1.1	6	8.0	6	18+	6	16	9	5.7	49
WEST PALM BEACH	5	1013.9	1014.4	30.6	21.7	26.1	0.4	33.9	10+	16.7	27	8	0	21.7	79	130	- 72	38	18	9	0	0	1.0	10	10.3	26	24	4	12	15	6.9	
GEORGIA																																
ATHENS	244	988.5	1017.1	25.0	14.4	19.5	2.3	32.2	1	5.0	11	1	0	15.0	79	75	2	30	11	2	0	0	1.3	2	8.9	4	20	9	6	16	6.2	
ATLANTA	308	980.4	1016.7	24.4	14.4	19.3	2.4	31.1	1	3.9	11	0	0	14.4	77	8	- 54	4	6	1	0	0	1.5	4	9.8	NW	10	10	7	14	6.1	54
AUGUSTA	41	1011.2	1016.5	26.7	14.4	20.5	2.1	31.7	5	5.6	11	0	0	16.1	83	88	37	36	11	1	0	0	0.9	1	7.6	28	10	8	6	17	6.6	
COLUMBUS	117	1002.7		26.7	16.1	21.2	2.7	32.8	1	7.2	11	3	0	16.1	77	7	- 38	6	3	0	0	0	1.2	3	8.0	30	10	12	5	14	5.5	
MACON	108	1004.4	1017.3	27.8	15.6	21.7	2.7	34.4	2	5.6	11	5	0	16.1	76	17	- 35	6	9	1	0	0	1.4	1	8.9	E	31	9	4	18	6.5	45
ROME	194			26.1	12.8	19.2	3.0	32.2	1	1.7	11	1	0			29	- 45	15	6		0	0										
SAVANNAH	14	1014.6	1016.2	27.8	17.2	22.4	2.9	33.9	2+	7.2	11	4	0	17.8	79	203	138	77	11	2	0	0	1.2	2	9.8	W	24	7	6	18	6.7	47
HAWAII																																
HILO	8	1015.2	1016.5	28.9	19.4	24.1	0.2	30.6	12	17.2	18	0	0	20.0	80	185	- 89	43	21	0	0	0	0.5	19	7.2	E	12	5	11	15	6.8	45
HONOLULU	2	1015.6	1016.1	29.4	21.7	25.6	- 0.1	31.1	6	17.8	28	0	0	18.9	69	58	11	31	12	2	0	0	4.7	5	12.5	NE	22	7	16	8	5.5	64
KAHULUI	15	1013.2	1015.5	30.6	19.4	24.8	- 0.3	33.3	13	15.6	28	1	0	18.9	71	2	- 20	1	4	0	0	0	4.4	5	13.9	NE	31	15	10	6	4.4	73
LIHUE	31	1012.2	1017.3	28.3	23.3	25.7	0.8	29.4	17+	20.0	28+	0	0	20.6	73	81	- 22	31	16	1	0	0	3.8	6	9.8	NE	19	4	15	12	6.4	49
IDAHO																																
BOISE	865	916.4	1017.3	15.6	3.3	9.4	- 1.4	27.2	9	-11.7	29	0	11	0.6	57	13	- 8	5	7	0	69	T	0.3	28	13.0	SE	22+	13	6	12	5.1	69
LEWISTON	431			15.6	3.3	9.3	- 1.8	29.4	5	- 8.9	29	0	10			26	- 5	7	7		64	25			20.6Y		13	9	6	16	6.4	
POCATELLO	1358	863.2	1017.3	12.2	- 0.6	6.0	- 3.5	24.4	10	-12.2	29	0	16	- 1.1	67	58	36	27	10	0	320	76	2.2	21	13.4	SW	26+	7	10	14	6.1	54
ILLINOIS																																
CAIRO U	96			25.0	14.4	19.6	3.0	31.1	2+	7.2	10	0	0			23	- 51	8	6		0	0			17.9	SW	27	13	6	12	5.1	56
CHICAGO O HARE	201	991.2	1015.6	21.7	11.1	16.5	4.8	32.2	1	2.2	31	1	0	10.6	70	18	- 52	10	5	2	0	0	1.7	21	21.5	20	27	7	13	11	6.0	
CHICAGO MIDWAY	185	993.6	1016.0	22.2	11.7	16.8	3.9	33.3	1	2.8	31	2	0	10.6	70	22	- 49	7	7	2	0	0	1.6	21	17.0	S	27	9	13	9	5.7	71
MOLINE	177	994.6	1016.0	21.7	9.4	15.5	2.8	30.6	1	0.0	31+	0	2	9.4	71	67	5	25	11	2	0	0	1.7	21	17.4	SW	27	9	12	10	5.5	61
PEORIA	199	992.2	1016.2	21.7	9.4	15.6	2.6	30.6	2+	1.1	12	0	0	10.6	74	43	- 21	25	6	1	0	0	1.5	20	15.6	SW	27	9	13	9	5.5	63
ROCKFORD	221	988.5	1015.5	21.1	9.4	15.1	3.7	32.2	1	1.1	31+	1	0	10.0	74	51	- 18	27	6	1	0	0	1.4	21	14.3	23	27	10	9	12	5.7	
SPRINGFIELD	179	993.9	1015.9	23.3	11.1	17.2	3.4	32.2	1	2.2	12	1	0	10.0	68	25	- 49	16	6	1	0	0	1.7	19	16.1	SW	27	13	9	9	4.6	65
INDIANA																																
EVANSVILLE	116	1003.1	1017.2	24.4	11.1	17.7	2.6	32.2	1	2.2	12	1	0	11.7	72	61	- 4	32	6	2	0	0	0.4	22	12.1	W	3	13	11	7	4.7	70

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

OCTOBER 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm. or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Average speed	Wind: Prevailing direction	Wind: Fastest mile (1.6 kilometers): Resultant speed	Wind: Fastest mile (1.6 kilometers): Resultant direction	Wind: Fastest mile (1.6 kilometers): Date	No of days (sunrise to sunset): Clear, 0-3	No of days (sunrise to sunset): Partly cloudy, 4-7	No of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb	C	C	C.	C	C		C.				C.	%	Mm.	Mm	Mm			Mm	Mm.	M.p.s		M.p.s							%
INDIANA																																
FORT WAYNE	241	987.8	1017.9	21.1	9.4	15.4	3.8	30.6	24	2.8	12+	0	0	11.1	78	56	- 16	30	4	1	0	0	1.5	21	12.5	5	27	7	13	11	5.9	64
INDIANAPOLIS	241	988.2	1017.1	22.8	10.6	16.7	3.7	31.1	1	1.1	12	0	0	11.1	74	47	- 20	22	7	2	0	0	0.9	19	12.1	SW	27	12	9	10	5.1	60
SOUTH BEND	236	988.5	1016.4	20.6	11.1	15.8	3.9	29.4	24	3.9	12	0	0	11.7	80	57	- 24	14	8	1	0	0	1.5	19	12.5	23	27	6	11	14	6.5	
IOWA																																
BURLINGTON	211			21.1	10.0	15.6	2.6	30.6	1	2.2	31	0	0	10.6	74	72	3	36	9	1	0	0	1.3	22	11.2	23	27	9	9	13	5.9	
DES MOINES	286	980.4	1015.0	21.7	10.0	15.8	3.5	31.7	1	- 1.1	31	0	1	8.3	66	89	37	26	10	0	0	0	1.0	22	17.0	SW	27	10	7	14	5.8	54
DUBUQUE	322	976.6		20.0	7.8	13.9	3.6	30.0	1	- 1.1	7	0	2			94	24	29	12		0	0										
SIOUX CITY	334	975.3	1015.1	20.0	7.2	13.7	1.4	30.6	1	- 3.3	31	0	3	5.6	64	80	44	24	9	2	0	0	0.6	26	20.1	NW	27	10	7	14	5.9	55
WATERLOO	265	983.4	1015.3	18.9	6.7	12.7	1.8	30.0	1	- 2.8	7	0	5	9.3	77	62	8	19	7	0	0	0	1.2	22	14.3	24	30	8	9	14	6.3	
KANSAS																																
CONCORDIA	448	961.7	1014.3	21.7	7.8	14.6	0.3	30.6	7	- 0.6	31	0	1	7.2	67	70	27	21	6	3	0	0	1.3	20	16.1	SE	18	16	8	7	4.1	75
DODGE CITY	787	923.8	1014.3	21.7	7.2	14.4	- 0.2	29.4	7	- 1.1	29	0	3	5.0	60	73	37	24	8	5	T	0	1.3	20	15.6	SW	1	16	10	5	3.8	75
GOODLAND	1114	887.2	1013.9	19.4	3.3	11.3	- 0.4	30.0	7+	- 5.0	30	0	6	1.7	59	34	14	24	4	2	33	25	1.5	24	15.6	31	1	17	8	6	3.5	
TOPEKA	267	983.4	1015.2	23.9	8.9	16.4	1.9	32.8	12	- 1.7	31	1	2	8.3	66	98	39	50	8	3	0	0	1.1	22	12.5	5	30	14	6	11	5.0	55
WICHITA	403	967.2	1014.8	22.8	8.9	15.9	0.4	31.1	12	0.0	31	0	1	8.3	68	141	80	64	8	2	0	0	1.2	19	15.2	5	18	17	4	10	4.2	71
KENTUCKY																																
COVINGTON	265	986.1	1017.6	22.2	10.6	16.3	2.9	28.9	24	2.8	12+	0	0	11.1	74	37	- 21	14	7	1	0	0	0.7	18	10.3	18	27	12	5	14	5.5	
LEXINGTON	294	982.7	1018.0	23.9	12.2	18.2	3.7	30.6	2	4.4	8	0	0	12.2	72	13	- 45	4	5	1	0	0	0.8	16	8.0	18	27+	13	5	13	5.5	
LOUISVILLE	145	1000.0	1017.4	23.9	12.2	18.0	3.6	30.6	3+	3.9	10	0	0	12.8	75	50	- 7	32	6	1	0	0	0.6	18	9.4	9	27	12	7	12	5.3	49
LOUISIANA																																
ALEXANDRIA	28	1012.9	1017.2	27.2	15.0	21.0	1.5	31.7	3	6.1	11	0	0	17.2	85	33	- 57	16	6	2	0	0	0.2	9	8.0	12	4	13	9	9	4.9	
BATON ROUGE	20	1013.9	1016.5	27.8	16.7	22.2	1.6	31.1	3+	7.8	11	0	0	16.7	75	67	5	32	5	2	0	0	0.9	7	8.9	34	10	13	13	5	4.3	
LAKE CHARLES	3	1015.2	1016.2	29.4	18.3	23.8	2.4	32.8	3+	9.4	11	4	0	18.9	79	67	- 11	27	5	3	0	0	0.9	10	7.2	17	16+	10	12	9	5.8	
NEW ORLEANS	1	1015.6	1016.5	27.8	16.7	22.1	0.7	31.7	2	7.8	12+	0	0	17.2	77	15	- 57	14	2	0	0	0	1.2	4	8.0	36	10	16	10	5	3.8	
SHREVEPORT	77	1006.8	1016.1	27.8	15.6	21.5	1.3	32.8	24	7.8	11	2	0	15.0	72	98	27	36	10	3	0	0	0.6	16	10.7	25	27	11	7	12	5.4	57
MAINE																																
CARIBOU	190	995.6		13.3	2.2	8.0	1.9	22.2	2	- 6.7	31	0	11			87	2	35	14		T	0						4	6	21	7.5	
PORTLAND	13	1018.0	1020.3	16.7	6.1	11.4	2.2	28.3	2	- 1.1	13	0	2	7.8	80	100	19	71	7	1	0	0	0.7	23	12.5	NW	11	5	12	14	6.6	60
MARYLAND																																
BALTIMORE	45	1013.9	1019.6	21.1	13.3	17.2	3.3	27.8	3	6.1	8	0	0	13.3	81	175	94	61	11	2	0	0	1.1	4	10.7	6	24	11	1	19	6.8	53
MASSACHUSETTS																																
BLUE HILL OBS	192			18.3	9.4	14.1	2.6	28.3	2	2.2	8	0	0			64	- 31	40	5		1	0			16.5	W	11					10
BOSTON	5	1019.3	1020.3	19.4	11.1	15.4	2.7	30.0	2	7.2	8	0	0	10.0	75	55	- 25	36	5	1	0	0	0.0	25	13.4	SE	10+	8	13	10	5.8	68
WORCESTER	301		1020.7	18.3	8.9	13.6	3.3	26.7	2	1.1	8	0	0	8.3	74	93	5	61	5	1	1	1	0.6	24	9.8	30	11+	7	13	11	6.6	
MICHIGAN																																
ALPENA	210	990.9		17.8	6.7	12.2	4.3	31.1	1	- 1.1	8	0	6	7.8	75	15	- 46	8	8	1	0	0	0.8	20	10.3	SW	27+	3	14	14	6.8	48
DETROIT	189			20.6	11.7	16.0	3.9	28.9	24	5.6	12	0	0	10.0	70	17	- 50	11	6	2	0	0	1.1	22	9.4	25	28+	5	11	15	6.7	
DETROIT METRO	193	992.9	1016.9	20.6	8.9	14.7	3.5	30.0	2	1.7	12+	0	0	10.0	77	26	- 40	17	8	0	0	0	0.8	21	11.6	3	27	9	11	10	5.7	50
FLINT	235	988.8	1016.6	18.9	9.4	14.2	3.4	28.9	24	1.7	12+	0	0	9.4	75	54	- 6	25	9	1	T	T	1.6	21	11.6	23	27	6	14	11	6.1	
GRAND RAPIDS	237	987.1	1016.4	20.0	9.4	14.6	4.0	30.6	24	0.6	12	0	0	10.0	77	35	- 31	14	6	1	0	0	1.4	17	13.4	SW	31	5	12	14	6.5	46
HOUGHTON LAKE	358	974.3	1016.9	17.8	7.2	12.6	4.4	29.4	2	- 1.7	10	0	3	9.4	83	12	- 64	4	4	2	T	T	1.1	20	11.6	24	27	4	9	18	7.4	
LANSING	256	985.1	1016.8	20.0	9.4	14.6	3.8	30.0	1	- 0.6	12	0	1	11.1	84	58	- 5	29	4	1	1	0	1.0	20	13.0	5	27	7	13	11	6.3	55
MARQUETTE CO	208			15.6	8.9	12.2	3.1	26.7	1	2.2	31	0	0			120	60	27	18		2	1			15.0	5	27	1	5	25	8.5	28
MUSKEGON	191	993.2	1016.2	19.4	9.4	14.3	2.9	28.3	2	0.6	12	0	0	9.4	77	18	- 47	6	10	3	0	0	1.4	18	13.4	18	27	7	9	15	6.6	
SAULT STE MARIE	221	988.5	1015.1	14.4	6.7	10.5	2.6	26.1	1	0.0	8+	0	2	7.8	85	72	1	16	16	6	3	0	1.1	12	13.7	SW	27	2	4	25	8.2	15
MINNESOTA																																
DULUTH	435	962.4	1014.3	12.8	4.4	8.7	1.7	21.7	1	- 3.9	12	0	9	5.6	82	155	100	63	18	3	5	T	2.6	19	21.0	NW	27	2	7	22	8.1	33
INTERNATIONAL FALLS	359	969.9	1013.2	12.2	2.8	7.5	1.5	19.4	18	- 5.0	31	0	15	5.0	85	123	79	38	18	3	38	25	0.8	22	15.6	22	30	2	6	23	8.1	
MINNEAPOLIS	264	984.1	1014.6	15.6	6.1	10.8	1.4	24.4	17	- 1.7	31	0	3	6.7	76	144	104	58	13	3	0	0	0.7	25	18.8	SW	30	4	8	19	7.2	47
ROCHESTER	395	967.2	1014.9	17.2	6.7	11.9	2.0	26.1	1	- 2.2	31	0	2	8.3	80	86	42	25	11	1	0	0	1.6	23	16.5	25	30	6	9	16	7.1	
ST CLOUD	315	976.3	1014.7	15.0	5.0	9.8	1.3	24.4	17	- 2.8	31	0	7			156	115	52	15		23	T						5	8	18	7.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

OCTOBER 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max 32.2 °C or above	Temperature: No. of days Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 25 mm or more	Precipitation: No. of days With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile 11.6 kilometers Speed	Wind: Fastest mile 11.6 kilometers Direction	Wind: Fastest mile 11.6 kilometers Date	No. of days (sunrise to sunset) Clear 0-3	No. of days (sunrise to sunset) Partly cloudy 4-7	No. of days (sunrise to sunset) Cloudy 8-10	Sky cover tenths (sunrise to sunset	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm	Mm	Mm			Mm	Mm	M.p.s.		M p s							%
MISSISSIPPI																																
JACKSON	94	1005.4	1017.2	28.3	13.9	21.2	1.7	32.8	3	3.9	11	4	0	16.7	82	2	- 50	2	3	1	0	0	0.5	11	9.8	NW	23	14	8	9	4.9	60
MERIDIAN	88	1006.1	1017.3	27.8	14.4	21.1	2.4	32.8	4	3.9	11	3	0	15.6	76	21	- 35	16	4	3	0	0	0.6	2	6.7	34	10	11	8	12	5.5	
MISSOURI																																
COLUMBIA REGIONAL	270	984.4	1016.4	23.3	11.1	17.2	2.4	31.1	1	1.7	31	0	0	10.0	67	49	- 33	20	10	1	0	0	1.5	18	15.2	SW	27	16	4	11	4.6	66
KANSAS CITY	226	988.2	1014.8	23.9	11.7	17.8	2.1	30.6	12+	1.7	31	0	0	10.6	66	88	15	62	7	3	0	0	0.9	20	14.8	SW	30	12	8	11	5.1	61
ST JOSEPH	247			23.3	7.8	15.4	1.3	32.2	1	- 1.1	31+	1	4	7.8	67	85	29		8				0.8	19	13.0	27	30	12	9	10	5.3	
ST LOUIS	163	996.3	1016.5	23.9	11.7	17.6	2.9	31.7	2+	2.2	12	0	0	12.2	73	38	- 34	18	5	0	0	0	1.3	19	14.8	SW	27	13	6	12	5.0	66
SPRINGFIELD	386	971.2	1016.4	23.9	10.0	16.9	1.5	30.6	1	0.6	31	0	0	11.1	74	92	- 3	48	7	3	0	0	2.0	18	14.3	S	30	13	7	11	4.8	61
MONTANA																																
BILLINGS	1087	891.3	1016.7	11.7	1.1	6.3	- 3.4	25.6	11	-16.1	29+	0	12	- 0.6	66	97	69	46	8	0	330	127	2.3	27	15.2	N	12	8	9	14	6.5	48
GLASGOW	696	933.3	1016.1	12.8	0.6	6.8	- 0.6	26.7	6	-10.6	28	0	12	- 1.7	60	27	11	19	6	0	T	T	1.0	33	17.0	33	12	8	8	15	6.2	
GREAT FALLS	1116	888.3	1016.8	13.3	1.1	7.1	- 1.6	28.9	9	-17.8	28	0	15	- 2.2	57	8	- 11	4	3	0	97	25	4.0	24	20.1	SW	26	7	8	16	6.3	61
HAVRE	788	922.8	1016.0	13.9	- 1.7	6.2	- 1.5	28.9	9+	-17.8	29	0	21	- 3.3	56	8	- 12	5	6	0	94	51	2.3	26	15.2	NW	13	8	9	14	6.1	71
HELENA	1167	881.5	1018.4	12.2	- 1.1	5.6	- 2.0	23.9	10+	-18.3	29	0	18	- 2.8	59	10	- 7	6	5	0	20	T	1.5	28	17.0	NW	26	7	7	17	6.5	64
KALISPELL	904	913.0	1019.2	11.7	- 2.8	4.4	- 2.2	23.3	5	-15.0	29	0	25	- 2.2	67	24	- 7	9	8	1	61	51	0.2	15	17.0	32	13	6	10	15	6.6	
MILES CITY	801	921.8	1015.6	12.8	1.7	7.1	- 2.4	26.1	6	-11.7	29	0	9	1.7	71	160	138		11	0	64		1.7	32								
MISSOULA	972	906.2	1019.6	13.3	- 2.2	5.7	- 1.0	26.1	5	-17.8	29	0	21	- 1.1	67	6	- 19	3	5	0	18	25	0.3	29	17.9	SW	26	8	7	16	6.7	54
NEBRASKA																																
GRAND ISLAND	561	948.5	1014.5	20.0	6.7	13.3	1.4	30.0	10+	- 3.3	31	0	4	4.4	59	44	20	28	6	2	T	T	0.9	24	13.4	32	27	11	11	9	5.1	
LINCOLN U	351			20.6	9.4	14.9	1.2	30.6	1	0.0	31	0	1			109	69	32	10		0	0			16.1	S	1	11	6	14	5.5	59
NORFOLK	471			18.9	6.1	12.4	0.8	29.4	1	- 4.4	31	0	5			58	28	26	6		0	0						10	6	15	5.7	
NORTH PLATTE	846	917.0	1015.3	18.3	1.1	9.7	- 0.8	30.0	1	- 9.4	31	0	11	2.2	66	44	21	19	6	3	51	51	0.5	34	20.6	S	18	15	7	9	4.4	75
OMAHA	298	979.3	1014.6	21.1	8.3	14.9	1.7	32.2	1	- 2.8	31	1	2	7.2	65	107	63	38	9	3	0	0	0.4	26	14.8	NW	27	9	8	14	5.9	52
SCOTTSBLUFF	1206	878.8	1015.4	16.7	0.6	8.6	- 1.6	28.9	10	-10.6	30	0	10	0.6	65	18	0	7	6	1	25	25	1.3	32	14.3	29	18+	13	6	12	4.9	
VALENTINE	789			17.2	1.7	9.4	- 0.2	29.4	10	-10.6	30	0	8			45	22	16	7		119	102			29.1	SE	18	13	10	8	4.7	66
NEVADA																																
ELKO	1539	844.9	1017.0	15.0	- 1.7	6.5	- 1.8	26.7	10	-12.2	30+	0	19	- 4.4	53	19	T	13	6	0	137	51	0.6	26	10.3	28	1	13	7	11	4.9	
ELY	1906	808.3	1016.0	13.9	- 5.0	4.6	- 3.1	25.6	11+	-19.4	30	0	27	- 5.0	59	27	9	11	10	1	246	127	1.3	20	14.3	S	15	14	8	9	4.6	72
LAS VEGAS	659	938.0	1014.2	24.4	8.9	16.5	2.7	35.0	14	- 3.3	30	9	3	- 3.9	28	2	- 4	2	1	0	0	0	1.5	25	17.9	NW	29	23	6	2	2.2	87
RENO	1342	866.6	1017.1	17.8	- 2.8	7.7	- 1.9	30.6	13	-13.3	29	0	22	- 4.4	51	11	- 2	8	3	0	130	102	0.7	31	14.8	SW	23	16	9	6	4.1	80
WINNEMUCCA	1311	869.6	1017.8	17.2	- 3.3	7.0	- 1.7	30.6	10	-12.8	29	0	27	- 4.4	52	7	- 14	5	4	0	58	25	0.6	31	10.7	NW	28	13	6	12	5.0	69
NEW HAMPSHIRE																																
CONCORD	104	1007.8	1020.5	18.3	3.9	11.1	1.8	28.9	2	- 3.3	13	0	8	7.2	80	68	1	45	6	1	0	0	0.3	19	11.2	W	12	6	11	14	6.6	51
MT WASHINGTON OBS	1909			7.2	1.7	4.3	4.9	11.7	27+	- 9.4	13	0	6			145	- 12	54	14	1	10	T			35.8Y	W	12+	3	8	20	7.8	43
NEW JERSEY																																
ATLANTIC CITY	20	1017.3	1019.6	20.0	11.7	15.9	1.9	25.0	2	3.3	8	0	0	13.3	87	107	25	54	9	0	0	0	1.2	7	12.5	13	10	6	7	18	7.2	30
ATLANTIC CITY U	3			18.3	12.8	15.6	0.7	22.8	6	5.6	8	0	0			91	5	44	10						13.9	NE	24					
NEWARK	2	1019.0	1019.9	21.1	13.3	17.3	3.7	26.1	5	7.2	8	0	0	12.2	74	75	- 4	45	7	0	0	0	0.4	3	10.3	33	10	6	8	17	6.9	
TRENTON U	17			20.6	13.3	16.8	3.0	25.6	29	7.2	13+	0	0			94	22	46	9		0	0			12.1	E	24	8	7	16	6.6	43
NEW MEXICO																																
ALBUQUERQUE	1619	838.1	1014.6	19.4	5.0	12.1	- 2.3	26.1	14+	- 3.9	30	0	6	0.6	50	29	10	23	5	1	T	0	0.7	20	25.9	S	29	20	4	7	3.4	78
CLAYTON	1515			20.0	3.9	11.9	- 1.0	28.9	14	- 3.3	30+	0	6			23	- 3	9	4		T	T						20	4	7	3.1	
ROSWELL	1101			23.3	7.2	15.2	0.2	31.1	14	- 2.2	31	0	2			19	- 8	15	4		0	0			15.2	SW	18					73
NEW YORK																																
ALBANY	84	1009.5	1020.3	18.9	6.1	12.6	2.2	27.8	2	- 0.6	18	0	2	8.9	82	53	- 17	35	8	1	0	0	0.9	22	9.4	S	4	6	9	16	7.1	42
BINGHAMTON	485	961.4	1020.5	17.2	8.9	13.0	3.1	26.1	2	2.8	13+	0	0	8.9	78	48	- 30	20	8	2	0	0	1.6	18	14.3	W	6	6	11	14	6.8	40
BUFFALO	215	992.6	1018.2	19.4	10.0	14.8	4.4	27.8	2	3.9	8	0	0	10.6	78	40	- 36	18	11	1	0	0	1.3	21	16.1	W	11	6	12	13	6.5	57
NEW YORK U	40	1019.6	1019.8	20.6	13.3	17.1	2.4	25.6	29	7.2	8	0	0	12.8	79	105	25	55	7	0	0	0	0.8	4	12.1	NE	24					45
NEW YORK KENNEDY	4	1019.3	1020.1	21.1	13.9	17.5	3.3	26.7	29	7.8	13	0	0	12.8	76	83	2	59	7	1	0	0	0.5	6	11.6	6	24	6	11	14	6.5	
NEW YORK LA GUARDIA	3	1019.0	1020.2	20.0	13.9	16.9	2.1	24.4	28+	8.3	8	0	0	12.8	77	84	- 1	57	7	1	0	0	1.0	6	14.3	NW	6	6	9	16	6.5	
ROCHESTER	167	998.3	1018.4	21.1	8.9	15.0	4.0	30.0	2	2.2	19	0	0	11.7	83	34	- 31	20	8	0	0	0	1.1	22	13.0	SW	11	7	12	12	6.0	54
SYRACUSE	125	1004.1	1018.9	19.4	8.3	13.7	2.7	27.8	2	2.2	19	0	0	10.6	84	41	- 40	14	9	2	0	0	0.9	16	13.4	NW	11	9	7	15	6.2	47

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

OCTOBER 1971

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm. or more	Precipitation: No. of days: With thunderstorms	Snow, ice pellets: Total	Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M.p.s		M.p.s							%
NORTH CAROLINA																																
ASHEVILLE	652	942.4	1018.3	22.2	11.1	16.6	3.3	28.9	3	1.1	11	0	0	13.9	88	179	100	56	12	2	0	0	1.3	35	11.6	33	26	9	7	15	6.6	53
CAPE HATTERAS R	2	1016.6	1016.9	24.4	18.3	21.6	3.1	27.2	2	12.2	13	0	0	18.3	84	285	178	93	17	3	0	0	1.6	7	16.1	18	10	5	10	16	6.9	56
CHARLOTTE	224	990.2	1017.6	22.8	13.3	18.2	1.2	29.4	5+	4.4	11	0	0	15.0	85	175	100	52	16	3	0	0	1.6	2	9.8	SW	24+	6	8	17	6.6	46
GREENSBORO	273	986.5	1018.1	22.2	12.8	17.2	2.1	28.9	5	3.3	8	0	0	14.4	87	170	102	43	15	2	0	0	1.5	1	10.7	N	1	8	7	16	6.5	44
RALEIGH	132	1001.7	1017.6	22.8	13.9	18.2	2.4	28.9	5	3.9	11	0	0	14.4	83	191	122	68	13	4	0	0	1.7	2	13.0	SE	1	5	7	19	7.2	35
WILMINGTON	9	1015.6	1016.9	26.1	17.2	21.6	3.0	30.6	15	8.9	11	0	0	18.3	87	154	77	57	13	2	0	0	1.3	3	10.7	NE	21+	7	7	17	6.7	41
NORTH DAKOTA																																
BISMARCK	502	953.9	1014.2	12.8	1.7	7.3	- 0.9	22.2	13+	- 7.8	31	0	3	2.2	74	95	73	41	10	4	79	76	1.7	32	20.1	S	18	8	5	18	6.5	54
FARGO	273	980.7	1013.7	13.9	3.3	8.6	0.5	21.1	18	- 4.4	31	0	0	5.0	81	112	84	52	11	4	97		0.7	25	21.5	E	18	9	5	17	6.7	47
WILLISTON	579	945.8	1015.1	12.2	0.0	6.1	- 1.4	22.8	9+	-11.1	29	0	11	0.6	72	90	72	56	6	3	46	51	2.1	31	17.0	N	2	7	10	14	6.2	54
OHIO																																
AKRON	368	973.6	1018.2	20.6	9.4	14.8	3.2	27.2	3+	1.7	8	0	0	10.0	78	27	- 36	15	8	1	0	0	1.3	17	9.4	27	13+	7	15	9	5.5	
CINCINNATI, ABBE OB	232			22.8	12.2	17.7	3.3	30.0	2	5.0	12+	0	0			42	- 15	12	8		0	0			7.6	S	27					59
CLEVELAND	237	989.2	1018.2	20.6	10.0	15.5	3.6	28.3	3+	1.7	12	0	0	10.6	75	41	- 21	20	6	1	0	0	1.8	19	11.2	-	27	11	10	10	5.2	60
COLUMBUS	247	988.2	1018.1	21.1	9.4	15.4	3.1	28.9	3	0.6	12	0	0	10.6	76	34	- 20	11	7	1	0	0	0.8	16	10.7	SW	11	10	9	12	5.3	58
DAYTON	335	981.7	1017.5	22.2	12.2	17.2	4.1	30.0	2+	3.9	12	0	0	11.1	71	55	- 2	17	8	1	0	0	1.2	18	11.2	E	27	11	8	12	5.2	60
MANSFIELD	395			21.1	10.0	15.6	4.2	28.9	2	1.1	12	0	0	10.6	76	29	- 28	18	7	0	0	0	2.1	19	9.4	18	27+	11	9	11	5.5	
TOLEDO	204	991.9	1017.3	21.7	8.3	15.0	3.8	30.6	2	0.0	12	0	1	10.6	79	45	- 16	15	10	0	0	0	1.0	20	13.0	-	27	8	12	11	5.9	58
YOUNGSTOWN	359	975.6	1018.6	20.0	8.9	14.4	3.3	27.2	2	1.7	12	0	0	10.0	79	36	- 33	15	9	0	0	0	1.5	17	9.8	24	11	10	8	13	5.6	
OKLAHOMA																																
OKLAHOMA CITY	332	969.5	1015.7	23.3	11.1	17.4	0.3	30.0	1	2.8	31	0	0	11.1	70	67	- 3	18	10	2	0	0	1.3	17	12.1	NW	30+	11	7	12	5.1	57
TULSA	198	991.2	1015.5	24.4	12.2	18.3	1.2	30.0	1	2.2	31	0	0	12.8	75	203	119	140	11	4	0	0	1.7	19	14.3	SW	26	10	7	14	5.0	53
OREGON																																
ASTORIA	2	1018.3	1018.9	15.0	6.1	10.7	- 0.9	27.2	8	- 3.3	28	0	3	7.8	84	161	- 37	36	15	0	T	0	0.8	18	17.9	W	14	8	4	17	6.7	
BURNS	1269	874.4	1018.5	14.4	- 1.1	6.6	- 2.5	27.2	10+	-12.8	29	0	20	- 1.1	63	13	- 9	5	6		33	25	1.6	32				2	4	25	5.6	
EUGENE	139	1006.1	1019.7	16.1	3.3	9.7	- 2.1	27.2	5	- 7.2	28	0	3	6.1	83	84	- 13	31	12	0	T	0	0.7	21	5.4	SW	17	4	4	23	7.4	
MEACHAM	1234	878.1	1019.1	10.0	0.6	5.1	- 2.9	25.6	9	-14.4	28	0	16			92	20	30	11		485	279			7.6	E	26	5	5	20	6.8	
MEDFORD	396	971.2	1019.4	17.8	3.9	10.6	- 1.1	30.0	8+	- 7.8	29	0	8	3.9	69	15	- 34	5	7	0	T	T	0.3	29	11.6	SW	19	10	8	13	5.5	
PENDLETON	452	964.8	1018.8	17.2	4.4	10.8	- 1.3	28.9	5	- 7.2	29	0	7	1.7	59	18	- 12	7	5	0	48	51	0.7	24	15.6	SW	26	12	9	11	5.7	
PORTLAND	6	1018.0	1019.2	16.1	6.7	11.3	- 1.0	27.8	8+	- 3.3	29	0	3	6.7	78	60	- 31	23	13	2	T	0	0.3	21	12.1	-	25	6	6	19	6.7	41
SALEM	60	1011.9	1019.4	16.7	4.4	10.3	- 1.9	28.9	8	- 5.0	29	0	5	6.7	82	78	- 24	34	13	0	0	0	0.8	19	13.4	SE	19	5	7	19	6.6	
SISTON SUMMIT R	1169	886.6	1019.1	12.2	4.4	8.3	- 2.1	26.7	8	- 6.7	28	0	12			33	- 53	15	7		89	25			17.4	SW	19	11	4	11	5.1	
PACIFIC AREA																																
GUAM TAGUAC R	111	998.0	1010.4	30.0	22.2	26.0	- 0.3	32.2	18	20.0	28	1	0	23.9	88	249	-114	55	23	3	0	0	3.3	9	13.0	E	7					46
JOHNSTON	2	1012.7	1014.3	28.3	25.0	26.7	0.4	29.4	13+	22.2	29	0	0	22.2	76	46	- 37	7	19	0	0	0	6.2	9	14.3	NE	31	7	14	10	6.0	63
KWAJALEIN	29	1009.1	1008.8	30.6	25.9	27.2	- 0.2	32.2	31+	22.2	9+	5	0	24.4	86	498	165	167	23	5	0	0	3.8	18	17.4	N	7	1	3	26	7.5	49
KWAJALEIN	2	1009.1	1009.8	30.0	24.4	27.2	- 0.5	30.6	30+	22.8	2+	0	0	23.9	83	398	121	67	27	1	0	0	3.8	9	14.3	W	7	1	4	25	8.0	
MAJURO	3	1010.5	1010.8	29.4	24.4	26.9	0.0	30.6	19+	22.8	31+	0	0	22.3	80	459	73	72	23	0	0	0	3.2	8	14.1	-	19	2	7	21	8.4	51
MAJURO	4	1012.5	1012.7	29.4	24.8	26.3		30.6	18+	19.4	11	0	0	22.8	82	184		65	17	0	0	0	3.8	9	13.8	-	7+	3	8	17	6.8	70
PALAU R	57	1008.7	1009.1	30.6	22.8	26.6	0.1	32.2	20+	21.1	17	3	0	23.3	87	485	80	83	23	6	0	0	1.3	15	11.3	-	36	2	7	21	8.7	46
TRUK MAIN ISLAND	2	1009.1	1009.4	30.6	24.4	27.4	0.4	31.7	15+	22.8	4	0	0	23.9	81	417	75	117	25	1	0	0	2.8	9	14.8	E	25+	3	7	20	8.7	73
WAKE	3	1013.1	1013.4	30.6	24.4	27.5	- 0.1	31.7	27+	21.7	30+	0	0	21.7	72	127	- 7	38	22	1	0	0	5.2	9	15.0	-	-	12	15	4	9.3	70
YAP R	13			30.0	23.3	26.7	- 0.9	31.1	3+	20.6	10	0	0			385	50	72	27	4		0			11.8	W	24	1	1	29	9.4	57
PENNSYLVANIA																																
ALLENTOWN	118	1006.1	1020.6	20.0	10.2	14.9	2.8	25.6	15+	3.3	19+	0	0	11.7	85	91	15	45	6	1	0	0	0.7	1	12.5	-	11	5	11	15	6.3	
ERIE	223	991.5	1018.4	18.3	10.0	13.9	2.4	26.7	3	4.4	8	0	0	10.6	79	88	5	28	4	3	T	0	1.3	19	11.3	SE	11	10	7	14	6.3	
HARRISBURG	123	1007.1	1019.9	20.0	11.7	15.9	2.7	27.2	3	5.0	19+	0	0			72	3	23	7	0	0	0	0.8	18	11.6	NW	7	3	8	18	6.6	40
PHILADELPHIA	2	1018.3	1019.4	21.7	13.3	17.5	4.3	28.3	29+	6.1	8	0	0	12.8	76	98	17	54	6	0	1	0	1.3	1	11.2	NE	24	7	7	17	7.1	41
PITTSBURGH	367	974.6	1018.6	18.6	10.6	15.3	3.6	26.7	2	2.8	8	0	0	10.0	75	21	- 43	12	8	1	1	0	0.4	18	11.2	26	11	11	9	11	5.1	58
SCRANTON	288	985.4	1019.7	18.3	8.9	13.6	3.0	25.6	3	2.2	29+	0	0	10.6	85	76	- 18	31	7	2	1	0	0.8	14	11.3	W	11	1	7	17	7.0	41
WILLIAMSPORT	166	1000.7	1019.9	22.0	10.0	14.9	3.2	27.2	3	3.3	13	0	0	10.6	80	99	14	35	10	1	1	0	0.4	10	8.9	29	11+	8	5	10	7.1	
RHODE ISLAND																																
BLOCK ISLAND	36			18.9	12.2	15.4	2.5	23.3	2	6.1	20	0	0			62	- 15	45	6		1	0										
PROVIDENCE	16	1018.0	1020.4	20.6	10.0	15.1	3.3	28.3	2	3.9	8	0	0	11.1	81	73	6	52	9	1	1	0	0.6	6	13.4	SE	6	9	12	10	5.8	56

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days Max 32.2 °C or above	Temperature: No of days Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days 25 mm or more	Precipitation: No of days With thunderstorms	Precipitation: Snow, Ice pellets Total	Precipitation: Snow, Ice pellets Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset) Clear 0.3	No. of days (sunrise to sunset) Partly cloudy 4.7	No. of days (sunrise to sunset) Cloudy, 8.10	Sky cover, tenths sunrise to sunset	Possible sunshine
SOUTH CAROLINA	M	Mb	Mb	C.	C.	C	C	C		C.				C	%	Mm.	Mm	Mm			Mm	Mm	Mps		Mps							%
CHARLESTON	12	1014.6	1016.3	26.7	16.7	21.6	2.6	31.7	3+	6.7	11	0	0	17.8	84	183	111	91	10	2	0	0	1.4	1	16.1Y	W	24	6	11	14	6.7	56
CHARLESTON U	3			25.6	18.9	22.1	2.0	31.1	3	11.1	11	0	0			163	93	85	11		0	0										
COLUMBIA	65	1009.1	1017.1	26.7	15.6	21.0	2.8	31.7	5+	6.7	11	0	0	17.2	83	87	27	40	12	1	0	0	1.3	3	9.8	26	24	9	3	19	5.7	40
GRNVLLE-SPRTNBRG	292	983.1	1017.5	23.3	13.3	18.3	1.4	30.6	5	2.8	11	0	0	13.9	80	242	156	73	13	4	0	0	1.7	3	9.4	NE	19	9	8	14	5.8	46
SOUTH DAKOTA																																
ABERDEEN	395	966.8	1014.1	15.0	3.3	9.2	0.2	26.7	10	- 6.1	31	0	5	4.4	76	71	41	22	11	5	74	51	0.8	30	14.3	18	18	8	8	15	6.6	
HURON	390	967.2	1014.1	16.1	3.3	9.7	0.3	26.7	10	- 6.7	31	0	7	3.9	72	80	51	25	10	6	97	102	0.7	25	20.1	S	18	7	12	12	6.5	54
RAPID CITY	964	903.8	1015.5	13.9	1.7	7.8	- 2.2	26.7	10	-11.1	30	0	8	0.0	63	51	31	17	10	1	259	102	2.9	32	26.4	NW	13	10	8	13	5.6	56
SIOUX FALLS	432	963.4	1015.1	17.8	3.9	10.9	0.8	26.1	10	- 4.4	31	0	6	5.0	71	78	46	30	9	3	T	T	0.8	27	17.0	16	1	10	5	16	6.4	
TENNESSLE																																
BRISTOL	459	964.4	1018.4	23.3	11.7	17.4	3.0	28.9	4	5.3	11+	0	0	12.8	78	81	26	32	10	2	0	0	0.4	2	6.7	S	21+	8	9	14	6.0	
CHATTANOOGA	203	992.6	1017.3	25.0	13.3	19.1	2.4	32.2	1	3.3	11	1	0	14.4	80	54	- 23	18	9	4	0	0	0.4	1	8.0	NW	10	8	12	11	5.8	51
KNOXVILLE	299	983.1	1017.8	23.9	13.3	18.5	2.4	29.4	4+	4.4	11	0	0	13.9	79	50	- 16	21	9	4	0	0	0.9	3	8.9	E	23	8	10	13	6.0	48
MEMPHIS	79	1006.8	1016.8	27.2	14.4	20.7	3.4	31.7	1	7.2	10	0	0	12.8	62	2	- 68	2	1	0	0	0	0.7	18	8.0	22	27+	13	8	10	4.5	71
NASHVILLE	180	995.3	1017.0	25.6	13.3	19.3	2.9	32.2	1	4.4	11	1	0	13.3	74	32	- 27	24	5	3	0	0	0.4	22	9.4	S	27	13	6	12	5.3	59
OAK RIDGE R	276			23.3	12.2	17.8	2.3	29.4	1	2.8	11	0	0			44	- 23	17	9		0	0			10.7Y		20	10	7	14	6.3	
TEXAS																																
ABILENE	544	953.9	1014.8	24.4	13.3	18.9	- 0.1	29.4	15+	7.2	31+	0	0	12.8	71	62	- 11	18	8	3	0	0	2.6	17	25.9	NE	24	10	7	14	5.7	50
AMARILLO	1098	891.0	1013.8	20.6	7.2	14.0	- 1.8	30.0	15	- 0.6	29	0	1	3.9	56	66	21	39	8	2	0	0	2.5	21	16.5	W	30+	18	5	8	3.8	75
AUSTIN	182	993.6	1015.3	27.2	17.2	22.3	0.8	32.2	2	11.1	11+	1	0	17.2	76	77	5	23	15	3	0	0	0.7	15	13.4	N	3	8	10	13	5.8	44
BROWNSVILLE	6	1013.9	1014.4	28.9	21.1	24.9	0.6	31.7	19+	13.3	11	0	0	20.6	79	79	- 11	51	6	3	0	0	2.0	13	12.5	SE	17	8	14	9	4.7	53
CORPUS CHRISTI	12	1013.5	1014.8	29.4	20.6	24.8	1.2	32.2	3+	12.8	11	3	0	20.6	81	101	30	28	8	2	0	0	2.2	11	12.1	SE	17	10	12	9	5.4	60
DALLAS	147	998.3	1015.6	26.7	16.1	21.5	1.6	32.8	2	8.9	10	2	0	15.0	71	248	180	103	11	3	0	0	1.7	16	13.0	NW	26	7	9	15	6.1	48
DEL RIO	313	978.7	1014.4	26.7	16.7	21.7	- 0.2	30.6	18+	10.6	21	0	0	17.2	78	60	10	20	10	2	0	0	2.4	12	9.8	32	26+	8	4	19	6.7	
EL PASO	1194	882.2	1013.5	23.9	10.0	16.9	- 1.1	28.9	14+	1.7	20	0	0	5.6	51	27	6	14	8	5	0	0	0.4	26	15.6	W	26	15	10	6	4.1	73
FORT WORTH	164	995.6	1015.8	26.7	15.6	21.2	1.2	31.7	2+	7.8	10	0	0	16.1	79	194	128	67	8	3	0	0	1.3	18	14.3	29	26	6	9	16	6.4	
GALVESTON U	2			26.7	22.2	24.3	1.7	29.4	8+	16.1	10	0	0			60	- 12	18	8		0	0			10.7	NE	10					66
HOUSTON INTERCON	29	1012.2	1016.0	27.8	16.7	22.2	1.2	31.7	2	7.2	11	0	0	18.3	83	89	- 6	56	10	5	0	0	1.0	9	9.4	17	2	11	9	11	5.5	55
LUBBOCK	992	903.5	1013.9	23.3	10.0	16.6	0.4	30.6	15	3.9	31	0	0	8.9	65	45	- 5	28	6	3	0	0	1.3	20	13.0	25	26	13	6	12	4.9	
MIDLAND	869	916.4	1014.0	23.9	11.7	17.8	- 1.1	29.4	15	4.4	20	0	0	11.1	72	17	- 25	6	6	1	0	0	1.8	17	11.6	17	29	12	7	12	5.1	
PORT ARTHUR	5	1015.6		27.2	17.2	22.1	0.8	30.6	2+	8.3	11	0	0	17.8	81	55	- 18	28	8	3	0	0	1.0	10	8.0	SE	15+	12	10	9	5.0	59
SAN ANGELO	580	948.2	1014.3	25.6	13.3	19.3	- 0.8	30.0	16	6.1	24+	0	0	13.9	75	53	7	18	6	2	0	0	1.7	19	10.3	19	26	10	7	14	5.9	
SAN ANTONIO	240	987.5	1015.2	28.3	18.3	23.3	1.8	32.2	3+	11.1	24+	3	0	16.7	71	117	54	33	14	2	0	0	0.9	12	9.4	S	18+	7	12	12	6.2	48
VICTORIA	32	1011.2	1015.3	28.9	18.9	23.6	1.1	32.2	3+	11.7	11+	3	0	18.3	78	174	86	110	9	2	0	0	1.6	10	14.3Y	S	16	13	7	11	5.3	
WACO	153	997.6	1015.6	27.2	16.1	21.8	1.0	31.7	3+	7.2	10	0	0	16.1	74	83	18	35	10	2	0	0	1.4	16	10.3	18	19+	9	14	8	5.6	
WICHITA FALLS	303	978.0	1014.3	26.1	13.9	19.9	0.8	32.2	2	6.1	31	1	0	13.9	72	107	34	52	8	3	0	0	1.7	14	18.3	23	26	9	12	10	5.6	
UTAH																																
MILFORD	1533	845.9		15.6	- 1.1	7.2	- 3.2	27.8	10+	-18.9	30	0	19			63	43	22	7		442	330						14	10	7	4.4	
SALT LAKE CITY	1286	871.7	1016.2	14.4	2.8	8.6	- 2.3	24.4	11	- 8.9	30	0	5	1.7	65	82	53	37	12	0	422	203	1.1	16	15.6	NE	29	8	9	14	6.3	58
WENDOVER	1291	871.0	1016.5	15.0	3.9	9.2	- 2.6	24.4	11	- 7.2	30	0	7	- 1.7	51	4	- 8	3	5		10	T						10	9	12	5.6	
VERMONT																																
BURLINGTON	101	1006.8	1019.4	17.2	6.7	12.1	3.4	26.1	2	0.0	13	0	1	9.4	84	55	- 21	30	10	1	0	0	1.4	20	14.3	SW	31	4	7	20	7.4	54
VIRGINIA																																
LYNCHBURG	279			21.7	12.2	17.0	2.4	27.8	3	2.2	8	0	0			188	121	68	15		0	0			11.6	NE	1	10	4	17	6.4	40
NORFOLK	7	1016.6	1017.8	22.2	16.1	19.3	2.6	27.8	5	8.3	11	0	0	15.6	80	257	183	111	17	2	0	0	2.1	4	18.3	S	2	4	6	21	7.9	28
RICHMOND	50	1011.9	1018.3	22.2	13.9	18.1	3.3	28.3	5	5.0	11+	0	0	15.6	88	239	162	83	16	2	0	0	1.2	4	10.3	NE	23	7	3	21	7.5	30
ROANOKE	350	976.6	1018.5	21.7	11.7	16.7	2.2	28.3	3	1.7	8	0	0	12.8	80	171	90	60	16	0	0	0	1.2	35	10.3	30	11+	11	4	16	6.2	
WALLOPS ISLAND	3			22.2	16.7	19.4		25.6	6	8.9	8	0	0			174		46	11		0	0			22.4Y	E	23					
WASHINGTON																																
OLYMPIA	59	1011.5	1018.7	15.0	3.9	9.2	- 1.6	23.9	5+	- 6.7	28	0	8	6.1	85	113	- 22	41	12	0	T	T	1.4	20	10.3	18	19	6	5	20	7.3	
QUILLAYUTE	55	1010.5	1018.2	13.9	5.0	9.3	- 1.4	26.1	8	- 3.9	28	0	6	6.7	84	336	68	86	22	1	T	T	0.7	16	11.2	SE	22	6	6	19	7.1	34
SEATTLE-TACOMA	122	1002.0	1018.5	13.9	7.2	10.6	- 0.8	22.2	4	- 1.1	28	0	2	6.1	77	91	- 11	26	13	0	51	51	1.1	16	11.6	NW	27	3	7	21	7.7	31
SPOKANE	718	933.3	1017.9	12.8	1.1	6.8	- 2.7	25.6	5	-10.6	29	0	12	- 1.1	62	21	- 19	10	7	0	79	76	1.1	19	15.6	W	13	10	6	15	5.9	56
STAMPEDE PASS R	1206	880.1		7.2	1.1	4.4	- 1.4	22.2	9	- 8.3	28	0	17			252	28	82	17		665	305						6	3	22	7.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

OCTOBER 1971

State and Station	Elevation (ground)	Pressure: Station ○	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days Max 32.2 °C or above	Temperature: No. of days Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days 25 mm. or more	Precipitation: No. of days With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers) Speed	Wind: Fastest mile (1.6 kilometers) Direction	Wind: Fastest mile (1.6 kilometers) Date	No. of days (sunrise to sunset) Clear 0.3	Partly cloudy 4.7	Cloudy 8.10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C.	C	C	C.		C				C.	%	Mm.	Mm.	Mm			Mm	Mm	M.p.s.		M.p.s							%
WASHINGTON																																
WALLA WALLA U	289			16.7	5.6	11.1	- 1.7	27.8	4	- 5.6	29+	0	6			32	- 7	9	9		64	51			11.2	W	19	11	5	15	5.8	53
YAKIMA	321	979.7	1018.5	17.2	- 0.6	8.4	- 1.9	28.9	5	-11.7	29	0	17	0.0	62	7	- 8	4	6	0	28	T	1.6	24	11.6	29	26+	9	9	13	5.5	
WEST INDIES																																
SAN JUAN P.R.	4	1012.2	1014.8	31.1	24.4	27.7	1.1	33.3	28+	23.3	19+	6	0	21.1	71	117	- 31	37	23	12	0	0	1.9	11	11.2	SE	25+	1	10	20	7.5	49
WEST VIRGINIA																																
BECKLEY	763	930.9	1018.6	18.9	10.0	14.6	2.6	25.6	4	0.0	8	0	1	11.1	82	76	8	21	14	1	0	0	1.2	15	10.7	30	10	8	7	16	6.6	
CHARLESTON	286	984.1	1018.1	23.3	12.2	17.7	3.6	27.8	30+	3.3	8	0	0	12.2	76	33	- 33	13	7	1	0	0	0.2	18	8.9	25	6	9	8	14	6.4	
ELKINS	594	948.5		20.6	7.8	14.3	3.1	26.7	4+	- 0.6	8	0	2			47	- 30	23	11		0	0						5	9	17	7.1	
HUNTINGTON	252	987.8	1017.8	23.1	12.2	17.7	3.7	28.3	4+	2.2	8	0	0	12.8	77	38	- 9	20	8	1	0	0	0.5	16	9.4	22	11	9	6	16	6.2	
PARKERSBURG U	187			22.8	11.7	17.3	3.4	28.3	30+	2.2	8	0	0			35	- 17	12	6		0	0			8.9	SW	11					55
WISCONSIN																																
GREEN BAY	208	989.5	1015.0	17.2	7.8	12.6	2.9	28.9	2+	- 1.1	12	0	3	8.9	81	51	3	16	11	1	0	0	0.8	21	19.2	SW	30	3	7	21	7.7	32
LA CROSSE	198	990.9	1015.3	18.3	8.3	13.2	2.6	27.2	1	- 0.6	31+	0	2	9.4	80	28	- 28		9	1	0		0.8	19								
MADISON	262	983.7	1015.1	20.0	6.7	13.3	3.3	31.1	1	- 2.2	7	0	5	9.4	80	33	- 23	7	13	2	0	0	1.5	21	17.0	NW	5	6	11	14	6.5	53
MILWAUKEE	205	990.5	1015.7	17.8	8.3	13.1	3.1	30.0	2+	- 0.6	12	0	1	10.0	83	48	- 5	18	10	0	0	0	1.5	23	18.8	SW	30	9	7	15	6.3	58
WYOMING																																
CASPER	1627	836.8	1015.8	13.3	- 1.1	6.0	- 3.1	27.2	10	-19.4	30	0	14	- 1.7	68	44	23	16	10	1	383	305	2.3	24	14.8	21	34	8	7	16	6.5	
CHEYENNE	1867	811.0	1014.9	13.9	0.0	6.8	- 1.8	24.4	11+	-12.2	29	0	11	- 3.3	55	29	8	12	6	2	206	152	2.6	28	21.5	SW	30	12	9	10	4.8	67
LANDER	1696	828.7	1016.6	11.7	- 1.7	5.0	- 3.4	26.1	10	-17.8	31+	0	19	- 2.2	66	91	60	31	11	0	1013	432	0.4	25	11.2	NW	26+	9	6	16	6.3	55
SHERIDAN	1208	878.4	1016.7	13.3	- 1.1	6.0	- 2.8	26.1	9	-17.2	29	0	14	- 1.1	65	80	52	25	14	0	376	229	2.1	32	16.5	NW	2	7	8	16	6.6	46

Data from airport unless otherwise specified U indicates Urban, R indicates Rural, sites

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month

Wind directions under resultant direction are in tens of degrees

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees Those stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1 C or above for Alaskan Stations
Y Peak Gust
And also on an earlier date or dates
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication

Data in this table are obtained by conversion from data in the English Units table

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	28	28	99
HUNTSVILLE	44	44	139
MOBILE	8	8	22
MONTGOMERY	18	18	68
ALASKA			
ANCHORAGE	1008	2162	1908
ANNETTE	648	1362	1344
BARROW	1568	4283	4178
BARTER ISLAND	1652	4264	3979
BETHEL	1050	2443	2367
BETTLES	1573	2967	
BIG DELTA	1261	2470	
COLD BAY	809	2448	2196
FAIRBANKS	1143	2148	2348
GULKANA	1254	2578	
HOMER	866	2203	
JUNEAU	811	1832	1847
KING SALMON	945	2116	2056
KOTZEBUE	1335	2810	2799
MC GRATH	1146	2268	2363
NOME	1140	2767	2764
ST. PAUL ISLAND	835	2853	2618
SHEMYA	741	2493	2337
SUMMIT	1382	3084	
TALKEETNA	1148	2274	2098
UNALAKLEET	1116	2503	
YAKUTAT	799	2138	1875
ARIZONA			
FLAGSTAFF	809	1225	873
PHOENIX	79	79	22
TUCSON	120	120	25
WINSLOW	342	401	251
YUMA	76	76	0
ARKANSAS			
FORT SMITH	26	49	139
LITTLE ROCK	6	15	136
CALIFORNIA			
BAKERSFIELD	163	179	37
BISHOP	391	491	290
BLUE CANYON	522	766	551
EUREKA U	440	1135	1114
FRESNO	209	229	78
LONG BEACH	62	63	52
LOS ANGELES	92	95	133
LOS ANGELES U	94	94	37
MT SHASTA R	535	818	588
OAKLAND	226	374	275
RED BLUFF	210	245	53
SACRAMENTO	191	224	93
SANDBERG R	401	510	232
SAN DIEGO	78	78	58
SAN FRANCISCO	252	453	362
SAN FRANCISCO U	229	659	586
SANTA MARIA	301	509	434
STOCKTON	174	192	77
COLORADO			
ALAMOSA	698	1186	1082
COLORADO SPRINGS	481	804	622
DENVER	479	776	560
GRAND JUNCTION	389	523	343
PUEBLO	371	554	380
CONNECTICUT			
BRIDGEPORT	150	181	373
HARTFORD	214	282	477
DELAWARE			
WILMINGTON	93	118	321
DIST.OF COLUMBIA			
WASHINGTON DULLES	141	177	
WASHINGTON NATIONAL	61	73	250
FLORIDA			
APALACHICOLA U	1	1	16
DAYTONA BEACH	0	0	0
FORT MYERS	0	0	0
JACKSONVILLE	6	6	12
KEY WEST	0	0	0
LAKELAND U	0	0	0
MIAMI	0	0	0
ORLANDO	0	0	0
PENSACOLA	9	9	19
TALLAHASSEE	8	8	28
TAMPA	0	0	0
WEST PALM BEACH	0	0	0
GEORGIA			
ATHENS	33	33	127
ATLANTA	36	36	145
AUGUSTA	18	18	78
COLUMBUS	11	11	87
MACON	9	9	71
ROME	45	45	185
SAVANNAH	10	10	47
IDAHO			
BOISE	492	718	547
LEWISTON	498	731	526
POCATELLO	684	1090	665
ILLINOIS			
CAIRO U	29	38	200
CHICAGO O HARE	154	228	510
CHICAGO MIDWAY	146	209	407
MOLINE	195	309	443
PEORIA	186	293	419
ROCKFORD	209	323	529
SPRINGFIELD	130	205	363
INDIANA			
EVANSVILLE	85	108	286
FORT WAYNE	181	259	492
INDIANAPOLIS	129	182	406
SOUTH BEND	171	286	489
IOWA			
BURLINGTON	181	294	415
DES MOINES	184	292	471
DUBUQUE	266	446	649
SIOUX CITY	283	422	486
WATERLOO	328	551	597
KANSAS			
CONCORDIA	227	329	333
DODGE CITY	238	350	284
GOODLAND	388	592	468
TOPEKA	143	216	327
WICHITA	165	246	262
KENTUCKY			
COVINGTON	128	159	366
LEXINGTON	69	77	293
LOUISVILLE	65	78	302
LOUISIANA			
ALEXANDRIA	16	17	56
BATON ROUGE	11	11	31
LAKE CHARLES	3	3	19
NEW ORLEANS	10	10	19
SHREVEPORT	7	11	47
MAINE			
CARIBOU	569	1043	1211
PORTLAND	381	551	768
MARYLAND			
BALTIMORE	96	120	312
MASSACHUSETTS			
BLUE HILL OBS R	237	320	511
BOSTON	169	208	385
WORCESTER	258	394	637
MICHIGAN			
ALPENA	353	761	1026
DETROIT	148	208	447
DETROIT METRO	213	304	527
FLINT	248	413	593
GRAND RAPIDS	233	366	605
HOUGHTON LAKE	327	675	940
LANSING	234	437	597
MARQUETTE U	350	745	907
MUSKEGON	246	419	560
SAULT STE MARIE	434	1030	1060
MINNESOTA			
DULUTH	531	1048	1142
INTERNATIONAL FALLS	609	1144	1247
MINNEAPOLIS	413	615	747
ROCHESTER	361	591	719
ST CLOUD	466	773	849
MISSISSIPPI			
JACKSON	19	19	59
MERIDIAN	17	17	81
MISSOURI			
COLUMBIA REGIONAL	113	190	305
KANSAS CITY	87	148	259
ST JOSEPH	192	319	351
ST LOUIS	97	144	311
SPRINGFIELD	117	181	268
MONTANA			
BILLINGS	659	996	694
GLASGOW	635	929	956
GREAT FALLS	628	993	882
HAVRE	673	1017	982
HELENA	707	1274	985
KALISPELL	768	1382	1124
MILES CITY	621	877	688
MISSOULA	700	1173	1062
NEBRASKA			
GRAND ISLAND	284	421	495
LINCOLN U	223	316	382
NORFOLK	328	490	517
NORTH PLATTE	472	694	569
OMAHA	228	329	422
SCOTTSBLUFF	537	793	597
VALENTINE	492	732	679
NEVADA			
ELKO	651	1022	829
ELY	760	1151	897
LAS VEGAS	207	211	78
RENO	588	874	824
WINNEMUCCA	625	937	780
NEW HAMPSHIRE			
CONCORD	396	636	738
MT WASHINGTON OBS	780	2448	2806
NEW JERSEY			
ATLANTIC CITY	143	209	290
ATLANTIC CITY U	158	187	259
NEWARK	95	108	315
TRENTON U	109	143	321
NEW MEXICO			
ALBUQUERQUE	341	442	241
CLAYTON	351	564	382
ROSWELL	183	265	220
NEW YORK			
ALBANY	311	485	597
BINGHAMTON	296	570	759
BUFFALO	202	329	637
NEW YORK U	106	120	263
NEW YORK KENNEDY	83	94	284
NEW YORK LA GUARDIA	108	126	250
ROCHESTER	194	318	581
SYRACUSE	256	416	581
NORTH CAROLINA			
ASHEVILLE	129	135	369
CAPE HATTERAS R	6	6	78
CHARLOTTE	72	76	130
GREENSBORO	101	110	225
RALEIGH	61	64	185
WILMINGTON	11	11	74
NORTH DAKOTA			
BISMARCK	608	951	861
FARGO	535	869	858
WILLISTON	674	1004	936
OHIO			
AKRON	202	288	486
CINCINNATI ABBE OB	80	109	302
CLEVELAND	168	253	481
COLUMBUS	181	241	437
DAYTON	97	147	394
MANSFIELD	170	239	401
TOLEDO	197	305	539
YOUNGSTOWN	221	339	557
OKLAHOMA			
OKLAHOMA CITY	88	147	179
TULSA	60	113	176
OREGON			
ASTORIA	420	882	861
BURNS U	647	1127	774
EUGENE	474	726	563
MEACHAM	734	1389	1076
MEDFORD	424	560	450
PENDLETON	428	630	461
PORTLAND	388	549	502
SALEM	440	688	517
SEXTON SUMMIT R	569	1042	776
PENNSYLVANIA			
ALLENTOWN	191	251	443
ERIE	242	426	666
HARRISBURG	146	189	361
PHILADELPHIA	79	96	351
PITTSBURGH	184	232	489
SCRANTON	263	380	585
WILLIAMSPORT	201	266	495
RHODE ISLAND			
BLOCK ISLAND	162	205	401
PROVIDENCE	181	230	484
SOUTH CAROLINA			
CHARLESTON	13	13	59
CHARLESTON U	6	6	34
COLUMBIA	13	13	84
GRNVLLE-SPRTNBRG	74	76	139
SOUTH DAKOTA			
ABERDEEN	504	771	766
HURON	478	729	694
RAPID CITY	578	890	680
SIOUX FALLS	409	627	674
TENNESSEE			
BRISTOL	87	87	287
CHATTANOOGA	45	45	161
KNOXVILLE	53	53	201
MEMPHIS	13	22	148
NASHVILLE	39	39	188
OAK RIDGE R	73	73	231
TEXAS			
ABILENE	44	88	99
AMARILLO	245	366	223
AUSTIN	3	3	31
BROWNSVILLE	0	0	0
CORPUS CHRISTI	0	0	0
DALLAS	5	13	62
DEL RIO	6	15	31
EL PASO	112	143	84
FORT WORTH	7	19	65
GALVESTON U	0	0	0
HOUSTON INTERCON	6	8	25
LUBBOCK	124	207	192
MIDLAND	71	122	87
PORT ARTHUR	6	6	22
SAN ANGELO	33	56	68
SAN ANTONIO	0	1	31
VICTORIA	0	2	6
WACO	5	11	43
WICHITA FALLS	25	62	99
UTAH			
MILFORD	612	836	542
SALT LAKE CITY	535	736	500
WENDOVER	500	686	420
VERMONT			
BURLINGTON	344	536	839
VIRGINIA			
LYNCHBURG	110	123	274
NORFOLK	27	30	136
RICHMOND	69	80	250
ROANOKE	117	129	280
WALLOPS ISLAND	26	31	
WASHINGTON			
OLYMPIA	500	948	759
QUILLAYUTE	493	1125	990
SEATTLE-TACOMA	429	742	671
SPOKANE	641	1021	695
STAMPEDE PASS R	770	1728	1658
WALLA WALLA U	409	583	397
YAKIMA	549	904	606
WEST VIRGINIA			
BECKLEY	212	274	513
CHARLESTON	78	92	317
ELKINS	233	305	569
HUNTINGTON	84	97	320
PARKERSBURG U	96	119	324
WISCONSIN			
GREEN BAY	328	572	736
LA CROSSE	301	478	621
MADISON	293	473	713
MILWAUKEE	308	484	735
WYOMING			
CASPER	681	1069	738
CHEYENNE	633	1059	803
LANDER	738	1116	784
SHERIDAN	683	1075	814

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

OCTOBER 1971

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	165	1730	
HUNTSVILLE	90	1625	
MOBILE	281	2787	
MONTGOMERY	185	2149	
ALASKA			
ANCHORAGE	C	1	
ANNETTE	0	53	
BARROW	C	C	
BARTER ISLAND	C	0	
BETHEL	0	C	
BETTLES	0	83	
BIG DELTA	0	22	
COLD BAY	0	0	
FAIRBANKS	0	89	
GULKANA	0	12	
HOMER	0	1	
JUNEAU	0	0	
KING SALMON	0	5	
KOTZEBUE	0	16	
MC GRATH	0	29	
NOME	0	4	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	3	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	153	
PHOENIX	220	3621	
TUCSON	101	2498	
WINSLOW	4	1416	
YUMA	205	3580	
ARKANSAS			
FORT SMITH	86	1826	
LITTLE ROCK	146	1926	
CALIFORNIA			
BAKERSFIELD	144	2421	
BISHOP	12	1199	
BLUE CANYON	32	502	
EUREKA U	0	2	
FRESNO	89	1770	
LONG BEACH	171	1443	
LOS ANGELES	101	825	
LOS ANGELES U	176	1540	
MT SHASTA R	1	347	
OAKLAND	5	140	
RED BLUFF	117	1847	
SACRAMENTO	82	1274	
SANDBERG R	83	957	
SAN DIEGO	107	865	
SAN FRANCISCO	11	153	
SAN FRANCISCO U	12	108	
SANTA MARIA	20	104	
STOCKTON	90	1548	
COLORADO			
ALAMOSA	0	46	
COLORADO SPRINGS	0	464	
DENVER	0	653	
GRAND JUNCTION	3	1313	
PUEBLO	0	998	
CONNECTICUT			
BRIDGEPORT	9	827	
HARTFORD	11	878	
DELAWARE			
WILMINGTON	34	1157	
DIST.OF COLUMBIA			
WASHINGTON DULLES	35	1045	
WASHINGTON NATIONAL	60	1501	
FLORIDA			
APALACHICOLA U	307	2698	
DAYTONA BEACH	348	2761	
FORT MYERS	438	3312	
JACKSONVILLE	274	2580	
KEY WEST	505	4245	
LAKELAND U	385	3079	
MIAMI	443	3852	
ORLANDO	440	3510	
PENSACOLA	277	2653	
TALLAHASSEE	214	2268	
TAMPA	396	3130	
WEST PALM BEACH	440	3566	
GEORGIA			
ATHENS	105	1709	
ATLANTA	95	1616	
AUGUSTA	146	1925	
COLUMBUS	179	2166	
MACON	205	2409	
ROME	100	1686	
SAVANNAH	248	2467	
HAWAII			
HILO	328	2684	
HONOLULU	408	3556	
KAHULUI	370	3216	
LIHUE	423	3601	
IDAHO			
BOISE	2	911	
LEWISTON	3	847	
POCATELLO	2	396	
ILLINOIS			
CAIRO U	136	1765	
CHICAGO O HARE	59	1015	
CHICAGO MIDWAY	64	1145	
MOLINE	44	1080	
PEORIA	37	1073	
ROCKFORD	35	920	
SPRINGFIELD	69	1302	
INDIANA			
EVANSVILLE	53	1576	
FORT WAYNE	28	830	
INDIANAPOLIS	40	1011	
SOUTH BEND	34	769	
IOWA			
BURLINGTON	34	1105	
DES MOINES	52	1144	
DUBUQUE	30	657	
SIOUX CITY	30	1043	
WATERLOO	21	536	
KANSAS			
CONCORDIA	25	1261	
DODGE CITY	23	1431	
GOODLAND	2	928	
TOPEKA	42	1416	
WICHITA	34	1588	
KENTUCKY			
COVINGTON	25	1137	
LEXINGTON	65	1161	
LOUISVILLE	58	1284	
LOUISIANA			
ALEXANDRIA	171	2199	
BATON ROUGE	236	2626	
LAKE CHARLES	313	2861	
NEW ORLEANS	221	2624	
SHREVEPORT	191	2500	
MAINE			
CARIBOU	3	125	
PORTLAND	1	394	
MARYLAND			
BALTIMORE	36	1202	
MASSACHUSETTS			
BLUE HILL OBS R	6	637	
BOSTON	15	848	
WORCESTER	2	471	
MICHIGAN			
ALPENA	19	238	
DETROIT	26	892	
DETROIT METRO	17	702	
FLINT	25	555	
GRAND RAPIDS	31	672	
HOUGHTON LAKE	17	333	
LANSING	28	572	
MARQUETTE U	4	294	
MUSKEGON	28	505	
SAULT STE MARIE	4	93	
MINNESOTA			
DULUTH	1	164	
INTERNATIONAL FALLS	0	184	
MINNEAPOLIS	3	643	
ROCHESTER	11	542	
ST CLOUD	0	454	
MISSISSIPPI			
JACKSON	181	2263	
MERIDIAN	177	2113	
MISSOURI			
COLUMBIA REGIONAL	58	1382	
KANSAS CITY	64	1723	
ST JOSEPH	33	1233	
ST LOUIS	62	1516	
SPRINGFIELD	45	1464	
MONTANA			
BILLINGS	0	641	
GLASGOW	1	634	
GREAT FALLS	8	557	
HAVRE	0	541	
HELENA	0	210	
KALISPELL	0	227	
MILES CITY	0	874	
MISSOULA	0	381	
NEBRASKA			
GRAND ISLAND	15	1179	
LINCOLN U	38	1336	
NORFOLK	7	894	
NORTH PLATTE	1	634	
OMAHA	42	1272	
SCOTTSBLUFF	0	634	
VALENTINE	2	827	
NEVADA			
ELKO	1	342	
ELY	0	249	
LAS VEGAS	112	2906	
RENO	3	440	
WINNEMUCCA	0	666	
NEW HAMPSHIRE			
CONCORD	8	403	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	17	749	
ATLANTIC CITY U	7	666	
NEWARK	46	1353	
TRENTON U	30	1066	
NEW MEXICO			
ALBUQUERQUE	0	1153	
CLAYTON	0	691	
ROSWELL	17	1594	
NEW YORK			
ALBANY	1	456	
BINGHAMTON	5	346	
BUFFALO	15	508	
NEW YORK U	40	1328	
NEW YORK KENNEDY	45	1262	
NEW YORK LA GUARDIA	32	1132	
ROCHESTER	15	615	
SYRACUSE	4	552	
NORTH CAROLINA			
ASHEVILLE	37	915	
CAPE HATTERAS R	194	1702	
CHARLOTTE	69	1464	
GREENSBORO	47	1172	
RALEIGH	61	1380	
WILMINGTON	199	1996	
NORTH DAKOTA			
BISMARCK	0	423	
FARGO	0	375	
WILLISTON	0	440	
OHIO			
AKRON	13	694	
CINCINNATI ABBE OB	49	1173	
CLEVELAND	19	692	
COLUMBUS	24	771	
DAYTON	39	964	
MANSFIELD	25	705	
TOLEDO	18	680	
YOUNGSTOWN	10	532	
OKLAHOMA			
OKLAHOMA CITY	45	1807	
TULSA	65	1860	
OREGON			
ASTORIA	2	19	
BURNS U	0	414	
EUGENE	0	253	
MEACHAM	0	333	
MEDFORD	2	641	
PENDLETON	13	853	
PORTLAND	3	416	
SALEM	0	299	
SEXTON SUMMIT R	18	314	
PACIFIC AREA			
GUAM TAGUAC R	437	4269	
JOHNSTON	476	4173	
KOROR R	499	5112	
KWAJALEIN	505	4974	
MAJURO	487	4755	
PAGO PAGO	448	4333	
PONAPE R	468	4554	
TRUK MOEN ISLAND	509	4999	
WAKE	518	4744	
YAP R	470	4803	
PENNSYLVANIA			
ALLENTOWN	10	771	
ERIE	3	341	
HARRISBURG	17	1037	
PHILADELPHIA	37	1291	
PITTSBURGH	17	716	
SCRANTON	4	570	
WILLIAMSPORT	15	783	
RHODE ISLAND			
BLOCK ISLAND	2	513	
PROVIDENCE	8	885	
SOUTH CAROLINA			
CHARLESTON	199	2266	
CHARLESTON U	221	2371	
COLUMBIA	168	2189	
GRNVLLE-SPRTNBRG	77	1487	
SOUTH DAKOTA			
ABERDEEN	0	668	
HURON	0	765	
RAPID CITY	0	550	
SIOUX FALLS	2	781	
TENNESSEE			
BRISTOL	44	1143	
CHATTANOOGA	96	1729	
KNOXVILLE	69	1402	
MEMPHIS	154	2048	
NASHVILLE	101	1586	
OAK RIDGE R	47	1292	
TEXAS			
ABILENE	83	2206	
AMARILLO	10	1271	
AUSTIN	229	3034	
BROWNSVILLE	375	3904	
CORPUS CHRISTI	367	3568	
DALLAS	190	2838	
DEL RIO	201	2808	
EL PASO	43	2071	
FORT WORTH	171	2454	
GALVESTON U	340	2885	
HOUSTON INTERCON	229	2722	
LUBBOCK	34	1645	
MIDLAND	47	1828	
PORT ARTHUR	223	2706	
SAN ANGELO	96	2295	
SAN ANTONIO	281	3254	
VICTORIA	303	3234	
WACO	206	2915	
WICHITA FALLS	124	2514	
UTAH			
MILFORD	0	786	
SALT LAKE CITY	0	926	
WENDOVER	0	1183	
VERMONT			
BURLINGTON	4	454	
VIRGINIA			
LYNCHBURG	44	1062	
NORFOLK	87	1490	
RICHMOND	62	1318	
ROANOKE	35	996	
WALLOPS ISLAND	89	1240	
WASHINGTON			
OLYMPIA	0	141	
QUILLAYUTE	0	26	
SEATTLE-TACOMA	0	219	
SPOKANE	3	558	
STAMPEDE PASS R	0	130	
WALLA WALLA U	18	931	
YAKIMA	0	564	
WEST INDIES			
SAN JUAN P.R.	531	4933	
WEST VIRGINIA			
BECKLEY	11	453	
CHARLESTON	49	992	
ELKINS	11	437	
HUNTINGTON	56	986	
PARKERSBURG U	47	1003	
WISCONSIN			
GREEN BAY	15	484	
LA CROSSE	19	643	
MADISON	20	677	
MILWAUKEE	20	516	
WYOMING			
CASPER	0	395	
CHEYENNE	0	276	
LANDER	0	466	
SHERIDAN	0	442	

Data from airport unless otherwise specified
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS	DEATHS	INJURIES	PROPERTY	CROPS
Alabama*																													
Alaska*																													
Arizona	1	1			4							4																	
Arkansas*																													
California*																													
Colorado	2	1		9	6						1	4																	
Connecticut								3																					
Delaware																												4	
Florida	1	1			4																								
Georgia*																													
Hawaii*																													
Idaho												3				3			2	4	4	1	1	3					
Illinois*																													
Indiana	1	1			2			3				2				4													
Iowa	1	1			5			4	4			5	5			4													
Kansas	4	1		7	5			4	4			5	4			4								4					
Kentucky																4													
Louisiana*																													
Maine	1	1			2							3				3												4	
Maryland																												5	
Massachusetts												3				4													
Michigan												4																	
Minnesota												5	5			4													
Mississippi	1	1			3																								3
Missouri*																													
Montana												4								5	5								
Nebraska	3	2			5			4	4			4				3													
Nevada*																													
New Hampshire												3				4													
New Jersey								4	3																				
New Mexico								?	?		3	?																?	
New York										1		4																5	
North Carolina										2		5	5			4												5	7
North Dakota*																													
Ohio	1	1		1	4										1														
Oklahoma	1	1			3			?	?			4																?	
Oregon												4																?	?
Pacific*																													
Pennsylvania																4													
Puerto Rico																												5	
Rhode Island*																													
South Carolina																												5	
South Dakota	3	2			4			5	5											5				?					
Tennessee												?	?															°4	C
Texas	16	4		8	6			5	6		2	5	5													10	7	6	5
Utah												4								4	3								
Vermont												3				3													
U.S. Virgin Is.*																													
Virginia																												4	C
Washington	1	1			4																								
West Virginia*																													
Wisconsin	1	1			3					1		6																	
Wyoming																				5									

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS

OCTOBER 1971

Elmer R. Nelson, Office of Hydrology

Severe flooding occurred along some small streams, tributaries, and the main stem of the Appomattox River in Virginia during October. The flooding along the Appomattox River was rated as a 20-yr. flood at Farmville and as a 40-yr. flood at Mattoax, Va.

Extensive flash flooding occurred at San Diego, Tex., and downstream on San Diego Creek during mid-October. Alice, Tex., was nearly isolated by the high water. Heavy flooding occurred on tributaries of the lower Nueces and major flooding on the extreme lower Nueces.

HUDSON BAY DRAINAGE

Red River of the North Basin - Rainfall amounts in the Red River of the North Basin, during October, ranged from 1 to 4 inches above normal. The heavy rains on the 16th-19th produced heavy runoff. Several tributaries along the lower right bank reached one-half bankfull but all points remained well below flood stage. The above normal rainfall left the soil extremely wet by the end of the month.

ATLANTIC SLOPE DRAINAGE

Heavy rains on the 9th-10th over southeastern Pennsylvania and New Jersey caused moderate rises on streams to or near bankfull stage. Brandywine Creek, near Chadds Ford, Pa., reached bankfull stage shortly after midnight on the 11th. Some minor overflow of small streams was reported in the Philadelphia, Pa., area. The Schuylkill River at Philadelphia and Perkiomen Creek near Graterford, Pa., crested about 2 feet below flood stage.

All reservoirs in New Jersey remained unusually full for this season of the year. Jersey City and Newark reservoir systems were both spilling at the end of October, while Hackensack Water Company's reservoirs were at 96 percent of capacity, Wanaque, 89 percent, and Spruce Run at 71 percent of capacity. New York City's three reservoirs on the upper Delaware Basin showed a decrease in storage of 39 billion gallons during October and at month's end were at 47 percent of capacity.

Minor flooding occurred in the lower James River Basin in Virginia on the 24th-27th. The crest stages on the 25th-26th ranged from 1.5 to 2.5 feet above flood stage except at Richmond's City Locks gage where it was 0.3 foot above flood stage. This flooding was due to heavy rains on the 23d to the 26th ranging from 2 inches in the upper basin to around 4-1/4 inches in the lower basin. Damages were light.

Widespread flooding, some serious, was reported along small streams, tributaries, and the main stem of the Appomattox River in Virginia on the 23d-27th. The U.S. Geological Survey reported that the Appomattox River at Farmville, Va., rose to a stage of around 21 feet and was rated as a 20-yr. flood. At Mattoax, the river reached a level of 32.5 feet and was rated as a 40-yr. flood. These stages were exceeded only by the 1940 flood. The stage at Deep Creek was 19.53 feet or about 12.5 above bankfull stage. It exceeded the 1940 stage of 14.8 feet by 4.7 feet. Buffalo Creek rose to a stage of 12 feet or 7 feet above bankfull stage. This flooding was due to heavy rains (6 to 8 inches) on the 23d-26th. Extensive damage resulted to the peanut crop. One man was electrocuted while attempting to pump water from his house.

There were several periods of flooding on streams in eastern North Carolina during October. The first rise was due to heavy rains associated with Hurricane Ginger. The precipitation ranged from 4 to 8 inches over the lower Roanoke, Tar, and Neuse Basins, and 2 to 3 inches in the headwater areas of the Tar, Neuse, and Cape Fear Rivers. The upper Roanoke Basin averaged around 1 inch with 2 to 3 inches locally. This rain caused the streams to rise moderately and minor overflow began on the Neuse and Cape Fear Rivers on the 3d. Before the rivers had a chance to subside, a line of showers and thundershowers broke out over the mountains and spread eastward causing significant amounts of precipitation across the State. Rainfall averaged 1 to 2 inches over the upper portions of the Cape Fear, Neuse, and Tar Rivers. This rain prolonged the high stages and the minor overflow along the Neuse and Cape Fear Rivers. Additional rainfall amounts of 1 to 2 inches on the 10th produced moderate rises but no additional overflow to that already in progress in the upper Neuse and lower Cape Fear River Basins. Heavy rain between the 16th and 25th caused the Roanoke River to rise 5 feet over its banks at Randolph, Va., and slightly over bankfull at Roanoke, Va., and in the Williamston, N. C., area. Some minor overflow continued on the Neuse River. Moderate rain continued in eastern North Carolina on the 26th causing some of the rain-swollen rivers to rise to the highest levels observed in recent years. Minor overflow continued on the Neuse, Tar, and Roanoke Rivers at the close of the month. Although no damage was reported, investigation into its possibility is being made.

Hurricane Ginger crossed the south coast of North Carolina and moved inland as a tropical storm on October 1. The resulting rainfall on the 1st-2d totalled mostly 2 to 3 inches over southern North Carolina and northern South Carolina. Cheraw, S. C., received 4.32 inches in one 24-hour period. The Lumber River at Lumberton, N. C., rose above flood stage and continued above flood stage the remainder of the month due to additional rainfall. The highest crest reported was 10.2 feet, 1.2 feet above flood stage, on the 4th and 29th. One to 2 inches of rainfall on the 9th-10th followed by 2.5 to 9.25 inches on the 15th-16th caused flooding on the Rocky River at Norwood, N.C., and the Pee Dee and Broad Rivers in South Carolina. The flash flooding resulted from the excessive rainfall during the night of the 15th and early morning of the 16th was severe and caused heavy material damage. The total damage in Cleveland and Gaston Counties in North Carolina was estimated at $262,000. People were evacuated from a few houses in Shelby, N. C., and from 30 mobile homes in Gastonia, N. C. Major damage occurred to rural highways due to road and bridge washouts. Heavy damage occurred in Cherokee and York Counties in South Carolina. Major road damage occurred along Kings Creek. Road crews were out all night barricading roads that were washed out and that had damaged bridges. Some bridges were flooded by 4 feet of water. The 4 to 9.25 inches of rain that occurred in less than 12 hours demolished many retaining walls and flooded many basements. Rainfall ranging from 3 to 6 inches on the 20th-25th and 1 to 3 inches on the 31st caused flooding on the Yadkin River in North Carolina and on several streams in South Carolina.

MISSISSIPPI SYSTEM

Missouri Basin - The only flooding in the Missouri Basin during October was on the Marmaton River near Fort Scott, Kans., on the 21st. This minor overflow was due to 2 to 4 inches of locally heavy rain on

the 20th.

Arkansas Basin - The flooding in the Arkansas Basin during October was due to locally heavy rains. More than 6 inches of rain occurred in the Fourche Maline Basin on the 16th. Heavy rains occurred over a portion of northeastern Oklahoma on the 20th-21st where excessive rains occurred the previous month. Precipitation averaged 3 inches over Pole Cat Creek and in the Neosho Basin above Commerce, Okla., and 5 inches over Caney River and Bird Creek. The Fourche Maline River in east-central Oklahoma reached its highest stage since October 1970. Minor overflows occurred on Mingo and Joe Creeks in Tulsa, Okla. Much of the flooding occurred in rural lowlands so damages were minor except moderate on Bird and Pole Creeks.

Red Basin - Heavy thunderstorms during the night of the 19th-20th caused minor flooding in northeastern Texas and southeastern Oklahoma. Beaver Creek near Electra, Tex., crested 0.8 foot above flood stage on the morning of the 20th. The Sulphur River continued above flood stage at Hagansport, Tex., on the 19th-25th and at Naples, Tex., from October 23 to November 2. The highest crest occurred at Naples, Tex., where it crested 7.7 feet above flood stage on the 26th. The Blue River at Blue, Okla., crested 2 feet above flood stage on the 21st.

WEST GULF OF MEXICO DRAINAGE

Minor flooding occurred in northeastern Texas on Lake Fork Creek on the 22d-23d and on the upper Sabine River between October 2 and November 4. The crests on the Sabine River ranged from 2.3 feet above flood stage at Emory, Tex., on the 21st to 3.5 feet above flood stage at Mineola, Tex., on the 24th. Cattle along the Sabine River were moved to higher ground.

Flash floods in north-central Texas during October caused the loss of four lives and property damage estimated at $150,000 to $200,000. Flash flooding affected many residences that had escaped flooding during similar downpours in previous years. Flash flooding occurred along White Rock Creek on the 3d and in portions of Tarrant, Johnson, and Dallas Counties on the 19th. In Johnson County minor flooding occurred along east and west Buffalo Creeks in Cleburne, Tex. In Dallas, flash flooding closed streets and snarled traffic, but few structures, if any were affected.

The East Fork of the Trinity River overflowed near Crandall, Tex., on the 20th-22d. It crested 3.1 feet above flood stage on the 20th. Minor overflow occurred on Elm Fork at Carrollton, Tex., on the 19th-20th and on Chambers Creek near Corsicana, Tex., on the 21st-23d. The Trinity River overflowed in the Roosevelt Height section in the south portion of Dallas, Tex., on the 19th-22d. This area is unprotected by a levee system. Water rose a few inches into several homes according to Civil Defense. From Dallas to Rosser, the main stem of the Trinity was 6 feet or more above flood stage. Floodwaters moved downstream below Rosser, with flood stage being reached at Trinidad on the 21st and at Long Lake, Tex., on the 26th. The Trinity was back within its banks at all points by November 1. Damages along the Trinity River were estimated at $896,000 by the Corps of Engineers.

Locally heavy rains caused minor flooding on the Navidad River near Ganado, Tex., on the 20th. The heaviest rainfall reported was 5.55 inches. No damage was reported.

Intermittent heavy rains from the 3d to the 9th caused flooding in the Nueces Basin below Crystal City, Tex. Rainfall accumulations reached 5 to 6.5 inches near Cotulla, Tex., and 3 to 4 inches elsewhere along the middle Nueces. Brief minor flooding occurred on the 4th and on the upper Frio, the extreme upper Nueces, and tributary streams above Uvalde, Tex., and Turkey Creek. Precipitation in this area averaged about 1 inch above Crystal City, Tex., and 1 to 2 inches along the extreme upper Nueces above Uvalde, Tex., and Turkey Creek. Near simultaneous rises occurred along the middle Frio, the lower Atascosa, and the middle Nueces with minor flooding. Lake Corpus Christi was full before the rains, and water from upstream flowed through unretarded to crests at Mathis on the 13th and Calallen, Tex., on the 14th with extensive flooding along the extreme lower Nueces. Heavy rains on the 16th caused brief flash flooding of some streets and homes in Corpus Christi near midday. Heavy rains ranging from 15 to 20 inches near Clegg, Tex., during the night of the 16th caused extensive flash flooding at San Diego, Tex. Two hundred families were flooded out of their homes and one drowning was reported. Extensive flooding moved downstream on San Diego Creek, nearly isolating Alice, Tex., on the 17th. Heavy flooding occurred on Spring and Ramirena Creeks, tributaries to the lower Nueces, south of George West. Considerable damage resulted to roads and a railroad, including bridge washouts. U. S. Highway 281 was closed south of George West for about one week. The water ran through Lake Corpus Christi causing major flooding on the extreme lower Nueces. Sharp crests occurred at Mathis on the 18th and at Calallen on the 19th. New rises began on the Nueces near Tilden, Tex., on the 18th and near Three Rivers, Tex., on the 19th with extensive flooding on the 21st. This water caused another rise with extensive flooding below Lake Corpus Christi beginning on the 21st and 22d. Heavy rains of 2 to 4 inches on the 19th-20th caused considerable flooding on the lower Frio for several days beginning on the 20th.

Minor flooding occurred on the Rio Grande at Presidio, Tex., on the 8th. This flooding was due to heavy rains on the 4th-8th ranging from 2.5 to near 5 inches. Heavier amounts apparently fell in the adjacent areas of Chihuahua, Mex. An airplane pilot observed that much of the river was out of its banks for at least 50 miles northwest of Presideo, Tex. Mexican Army pilots indicated that much of the desert of Chihuahua next to the Rio Grande was like a lake. The low sections of the road leading from Presidio to the Big Bend National Park were temporarily closed due to the high water. No damage was reported.

GULF OF CALIFORNIA DRAINAGE

Colorado Basin - Flooding continued on the Little Colorado River in northeastern Arizona from September 29 to October 1. The damage from the flooding was estimated at $1.4 million.

Heavy rains of up to 3 inches on the 24th in the headwaters of the San Francisco and Gila Rivers in Arizona and New Mexico resulted in minor flooding from the 25th through the 27th. The damage was estimated at less than $5,000.

PUERTO RICO

Heavy showers caused some minor flooding, interrupting field operations and traffic in the San Juan, Arecibo, Aguadilla, and Mayaguez districts on the 12th, 14th, and 15th. The heaviest showers occurred in the northwest

area around Coloso where 8.08 inches were recorded for the week ending October 15. Of this total, 3.18 inches of precipitation occurred on the 11th.

Some local flooding occurred in Mayaguez on the 26th when the Yaguez River overflowed its banks. The Quintana and the Arturo Gigante streets of the Balboa section and the Morel Campos and the Concordia streets of the Playa section were flooded. Some 40 persons, including children, were left homeless and had to be moved to safe shelter. The Rexach Construction Co., now channelizing the river, lost thousands of dollars in equipment that was being used near the river. There was no loss of life, but unofficial estimates by the Civil Defense estimated the damage near $250,000.

FLOOD STAGE DATA

(All dates in October unless otherwise specified)

River and station	Flood stage	Above flood stages -dates From-	To-	Crest* Stage	Date
	Ft			*Ft*	
ATLANTIC SLOPE DRAINAGE					
[illegible] Creek					
Chadds Ford, Pa.	9	11	11	9.0	11
[illegible]					
Palmyra, Va.	17	25	26	18.4	25
[illegible]					
Columbia, Va.	18	24	26	E 20.5	26
State Farm, Va.	12	24	25	E 13.5	25
Richmond (Westham), Va.	12	24	27	13.9	26
Richmond (City Locks), Va.	9	25	26	9.3	26
Roanoke:					
Randolph, Va.	21	24	27	25.75	25
Williamston, N. C.	10	14	17	10.2	15-16
		25 Nov.	28	11.25	Nov.10-22
Fishing Creek:					
Enfield, N. C.	14	25	29	15.5	27
Tar					
Rocky Mount, N. C.	9	24	28	10.3	25
Tarboro, N. C.	19	27 Nov.	2	23.1	30
Greenville, N. C.	13	5	8	13.6	6
		26 Nov.	3	16.3	31
Neuse:					
Neuse, N. C.	11	12	14	15.2	13
		25	30	18.45	28
Smithfield, N. C.	13	3	5	13.8	4
		7	9	13.75	9
		11	15	15.3	15
		24 Nov.	2	17.05 Nov.	1
Goldsboro, N. C.	14	27 Nov.	7	16.4	31
Kinston, N. C.	14	31 Nov.	7	15.0 Nov.	3
Cape Fear:					
Moncure, N. C.	20	25	25	22.0	25
Fayetteville, N. C.	35	26	27	38.6	26
Wm. O. Huske L&D, nr. Tarheel, N. C.	42	3	4	43.0	3
		11	13	45.5	12
		24	29	53.0	26
Lock No. 2, Elizabethtown, N. C.	20	4	4	20.9	4
		12	14	23.1	12
		25	30	28.5	27
Yadkin:					
Yadkin College, N. C.	18	24	26	21.6	26
Rocky:					
Norwood, N. C.	15	16	17	16.9	16
Little Pee Dee:					
Galivants Ferry, S. C.	9	28 Nov.	1	9.0	Oct. 28 -Nov. 1
Lumber:					
Lumberton, N. C.	9	3 Nov.	10	#10.2	4
				# 9.9	12
				# 9.7	20
				#10.2	29
				#10.3 Nov.	3
Pee Dee:					
Cheraw, S. C.	30	17	17	#30.7	17
		25	28	#37.7	26
Peedee, S. C.	19	14	14	#19.0	14
		19 Nov.	10	22.9 Nov.	1
Reedy:					
Greenville, S. C.	9	31	31	# 9.2	31
Broad					
Gaffney, S. C.	10	16	16	#13.5	16
Blair, S. C.	14	16	18	#22.5	17
		24	26	#19.0	25

River and station	Flood stage	Above flood stages -dates From-	To-	Crest* Stage	Date
	Ft.			*Ft*	
MISSISSIPPI SYSTEM					
Missouri Basin					
Marmaton:					
Fort Scott, Kans.	38	21	21	# 38.4	21
Arkansas Basin					
Pole Cat Creek:					
Sapulpa, Okla.	21	20	21	26.3	20
Caney:					
Ramona, Okla	27	21	21	27.2	21
Bird Creek:					
Sperry, Okla.	21	20	22	27.45	21
Owasso, Okla.	24.5	20	22	30.75	22
Neosho:					
Oswego, Kans.	17	21	22	19.2	22
Commerce, Okla.	15	21	23	16.6	22
Deep Fork:					
Beggs, Okla.	18	20	24	20.6	22
Fourche Maline:					
Red Oak, Okla.	15	16	17	16.8	16
Red Basin					
Beaver Creek:					
Electra, Tex.	24	20	20	# 24.75	20
Blue:					
Blue, Okla.	21	20	21	23.0	21
Sulphur:					
Hagansport, Tex.	44	19	25	47.0	21
Naples, Tex.	22	23	Nov. 2	29.7	26
WEST GULF OF MEXICO DRAINAGE					
Lake Fork Creek:					
Quitman, Tex.	16	22	23	16.4	23
Sabine:					
Emory, Tex.	12	20	30	14.3	21
Mineola, Tex.	14	22	Nov. 4	17.5	24
Elm Fork:					
Carrollton, Tex.	6	19	20	7.0	20
East Fork:					
Crandall, Tex.	14	20	22	17.1	20
Chambers Creek:					
Corsicana, Tex.	18	21	23	E 22.0	U
Trinity:					
Dallas, Tex.	30	19	22	37.2	20
Rosser, Tex.	26	20	24	31.8	21-22
Trinidad, Tex.	28	21	28	39.8	22
				38.0	24
Long Lake, Tex.	35	26	Nov. 1	40.1	30
Navidad:					
Ganado, Tex.	21	20	20	22.5	20
Turkey Creek:					
Crystal City, Tex.	8	7	11	9.0	9
		20	22	9.6	21
Atascosa:					
Whitsett, Tex.	20	7	8	24.1	7
Derby 2 S, Tex.	6	6	7	8.0	6
		21	23	8.6	22
Tilden, Tex.	12	7	14	21.6	8
		20	28	22.9	22
Callihan, Tex.	12	7	14	24.4	10
		21	28	25.8	23

FLOOD STAGE DATA

Continued

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
	Ft.			*Ft.*	
WEST GULF OF MEXICO DRAINAGE (Continued)					
Nueces:					
Cotulla, Tex.	15	7	11	18.1	8
Tilden 11 S, Tex.	11	7	Nov. 6	24.0	9
				23.0	19
Three Rivers 2 S, Tex.	25	8	1	41.3	11
				41.9	21
Mathis 3 SW, Tex.	15	8	Nov. 5	32.15	13
				40.5	18
				33.2	23

River and station	Flood stage	Above flood stages -dates From–	To–	Crest * Stage	Date
	Ft			*Ft*	
WEST GULF OF MEXICO DRAINAGE (Continued)					
Nueces (Continued):					
Callallen, Tex.		8		13.1	
				10.9	
Rio Grande:					
Presidio, Tex.	13	8	8	17.4	8

* Provisional

\# Highest stage observed

E Estimated

U Unknown

RAWINSONDE DATA

Average monthly values

ALBANY, N. Y. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	8.9	7.7	18	1.1
1000	31	174	10.5	7.9	17	1.2
950	31	602	11.4	5.7	21	2.0
900	31	1,054	10.4	2.6	25	3.3
850	31	1,529	9.1	-1.9	26	5.0
800	31	2,030	7.0	-6.8	27	6.0
750	31	2,558	4.8	-10.5	27	6.8
700	31	3,118	2.3	-14.7	27	7.6
650	31	3,713	-.5	-17.6	26	9.3
600	31	4,349	-4.0	-21.1	26	10.8
550	31	5,030	-8.0	-25.7	27	10.9
500	31	5,764	-12.5	-30.0	27	13.1
450	31	6,561	-17.8	-35.4	27	14.5
400	31	7,431	-24.2	-40.9	28	15.0
350	31	8,394	-31.3	-46.1	27	17.8
300	31	9,464	-39.6	-50.5	27	19.1
250	31	10,687	-48.8		27	21.1
200	31	12,125	-56.9		27	21.8
175	31	12,964	-60.0		27	20.5
150	31	13,921	-62.2		28	19.3
125	31	15,042	-64.3		28	15.7
100	31	16,402	-65.2		28	12.5
80	31	17,769	-62.7		28	7.7
70	30	18,596	-61.4		29	5.9
60	30	19,555	-60.6		29	4.9
50	30	20,693	-59.3		31	4.7
40	30	22,094	-58.4		31	4.8
30	29	23,916	-56.1		31	4.8
25	28	25,082	-54.8		29	6.5
20	28	26,514	-53.6		28	9.5
15	26	28,369	-51.2		28	11.7
10	19	30,981	-48.6		27	15.0
7						
5						

ALBUQUERQUE, N. MEX. — 838 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	7.3	.3	09	1.1
1000	31	142				
950	31	577				
900	31	1,030				
850	31	1,506				
800	31	2,0[illegible]	8.9	-2.9	2[illegible]	3.0
750	31	2,540	5.7	-5.7	23	4.2
700	31	3,101	2.4	-9.4	24	5.5
650	31	3,696	-.9	-13.9	24	6.3
600	31	4,331	-4.7	-18.4	24	8.1
550	31	5,010	-9.1	-24.1	24	10.5
500	31	5,741	-13.5	-30.1	24	13.2
450	31	6,534	-18.8	-35.2	23	14.0
400	31	7,401	-25.2	-40.4	23	15.7
350	31	8,360	-32.4	-46.3	23	16.3
300	31	9,426	-40.6	-51.8	23	18.0
250	31	10,647	-48.2		23	21.5
200	30	12,090	-54.9		24	20.4
175	30	12,937	-58.3		24	20.4
150	30	13,900	-61.5		24	19.1
125	30	15,021	-64.6		24	16.8
100	30	16,378	-66.3		25	10.6
80	30	17,734	-64.8		24	5.1
70	28	18,554	-6[illegible].9		24	2.6
60	28	19,508	-61.0		23	.9
50	28	20,645	-59.3		14	1.4
40	28	22,048	-57.8		09	1.8
30	28	23,875	-55.0		06	1.8
25	28	25,043	-54.0		03	1.5
20	27	26,484	-52.4		28	2.6
15	26	28,346	-51.0		28	7.6
10	22	30,997	-48.5		28	10.8

AMARILLO, TEXAS — 891 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	9.6	4.2	24	2.0
1000	31	126				
950	31	561				
900	31	1,014				
850	31	1,493	12.7	1.8	25	4.8
800	31	2,001	11.2	-1.9	24	5.9
750	31	2,537	8.3	-4.9	23	6.2
700	31	3,104	5.1	-7.9	23	6.4
650	31	3,705	1.6	-11.3	24	7.1
600	31	4,345	-2.2	-16.7	24	8.2
550	31	5,031	-6.4	-21.4	24	10.6
500	31	5,769	-11.9	-26.0	24	11.4
450	31	6,566	-17.7	-32.4	24	12.5
400	31	7,437	-24.0	-38.1	24	15.0
350	31	8,401	-31.1	-43.8	24	17.1
300	31	9,472	-39.5	-50.4	24	21.1
250	31	10,697	-47.8		24	25.4
200	31	12,144	-55.8		24	27.1
175	31	12,986	-59.7		24	25.3
150	29	13,941	-63.2		24	22.7
125	29	15,052	-67.1		25	20.1
100	29	16,393	-68.5		25	13.6
80	26	17,739	-65.8		23	5.9
70	26	18,555	-63.5		22	3.5
60	26	19,506	-61.6		19	2.0
50	26	20,641	-59.8		14	.9
40	25	22,038	-56.2		09	.9
30	22	23,861	-55.4		11	.9
25	22	25,029	-53.6		27	.1
20	22	26,470	-52.2		28	2.3
15	21	28,340	-50.2		27	7.5
10	15	30,988	-48.3		27	13.4

* ANCHORAGE, ALASKA — 1000 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	.0	-3.1	02	.9
1000	31	44			11	1.4
950	31	455	-.5	-5.5	04	1.2
900	31	886	-2.4	-7.3	03	.7
850	31	1,338	-5.2	-9.7	14	1.2
800	31	1,812	-8.0	-12.5	18	2.5
750	31	2,311	-10.8	-16.0	19	3.0
700	31	2,839	-13.8	-19.7	21	4.6
650	30	3,402	-17.1	-22.7	22	5.2
600	30	3,998	-20.7	-25.3	23	7.2
550	30	4,637	-24.6	-29.6	24	7.9
500	3	5,324	-29.3	-34.4	24	8.7
450	30	6,069	-34.4	-38.0	24	10.5
400	30	6,884	-39.5	-41.1	24	13.2
350	30	7,789	-45.2		25	15.9
300	30	8,803	-50.5		25	19.2
250	30	9,986	-51.8		25	21.3
200	30	11,440	-50.1		25	20.9
175	30	12,313	-49.9		25	19.5
150	30	13,320	-50.4		25	17.9
125	30	14,510	-50.5		25	16.2
100	30	15,963	-51.4		25	15.0
80	28	17,406	-51.5		25	14.2
70	26	18,272	-51.4		25	13.4
60	26	19,271	-52.1		25	12.7
50	25	20,454	-52.7		25	13.3
40	25	21,892	-53.0		26	12.9
30	22	23,754	-52.8		26	13.0
25	16	24,913	-52.6		27	12.8
20	12	26,348	-52.0			
15	5	28,257	-51.2			

* ANNETTE, ALASKA — 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	5.7	4.1	15	2.1
1000	31	104			16	2.7
950	31	523	3.3	1.0	17	5.5
900	31	960	.9	-2.7	18	6.3
850	31	1,417	-1.7	-5.7	21	7.1
800	31	1,898	-4.1	-8.7	22	7.5
750	31	2,405	-6.9	-11.7	23	8.7
700	31	2,940	-10.1	-16.2	24	8.6
650	31	3,509	-13.0	-20.7	24	10.3
600	31	4,116	-16.2	-23.9	25	12.2
550	31	4,766	-20.1	-28.0	25	14.4
500	31	5,406	-24.9	-32.7	25	16.4
450	31	6,224	-30.0	-37.1	26	17.8
400	31	7,054	-35.4	-41.4	26	19.8
350	31	7,975	-41.3	-41.7	27	20.5
300	31	9,006	-47.1		27	21.9
250	31	10,201	-50.9		28	23.1
200	30	11,646	-53.1		29	21.5
175	30	12,507	-53.4		28	21.5
150	30	13,497	-54.6		28	20.3
125	30	14,663	-55.2		28	15.5
100	30	16,086	-55.4		28	13.8
80	29	17,508	-55.0		27	11.4
70	28	18,357	-55.3		27	10.1
60	27	19,336	-55.8		27	8.7
50	27	20,496	-56.1		28	8.9
40	23	21,917	-56.4		28	7.3
30	21	23,733	-56.6		29	6.3
25	20	24,890	-55.9		30	6.6
20	17	26,295	-54.9		30	7.5
15	16	28,142	-53.4		31	6.3
10	13	30,773	-52.8			
7	10	33,116	-50.6			
5	6	35,332	-48.5			

ATHENS, GEORGIA — 989 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	15.1	13.3	02	1.5
1000	31	148				
950	31	585	17.1	12.6	05	2.9
900	3	1,046	15.2	9.7	07	2.5
850	31	1,529	12.9	5.5	06	.8
800	31	2,037	10.9	1.6	32	.8
750	31	2,574	8.5	-3.9	29	2.4
700	31	3,142	5.8	-8.4	29	3.1
650	31	3,744	2.4	-13.0	28	3.4
600	31	4,387	-1.2	-18.9	27	4.0
550	31	5,076	-5.2	-23.0	28	4.4
500	31	5,817	-10.0	-27.6	27	5.3
450	31	6,622	-15.3	-31.6	27	5.7
400	31	7,508	-21.7	-36.3	27	7.0
350	31	8,473	-29.0	-42.8	28	8.4
300	31	9,554	-37.3	-49.7	28	10.0
250	31	10,788	-46.9		28	12.2
200	31	12,234	-56.6		29	13.9
175	31	13,072	-60.8		29	14.1
150	31	14,022	-64.7		28	12.1
125	31	15,124	-68.7		29	10.6
100	30	16,450	-70.2		28	6.6
80	30	17,782	-67.8		31	1.4
70	30	18,590	-65.4		33	.7
60	30	19,533	-63.4		07	1.5
50	30	20,661	-60.5		08	3.1
40	29	22,058	-58.2		07	3.0
30	29	23,886	-54.2		07	1.7
25	27	25,065	-52.2		03	1.4
20	27	26,517	-49.9		28	1.2
15	25	28,402	-48.1		27	4.9
10	22	31,101	-45.6		27	12.6
7						

* BARROW, ALASKA — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	27	8	-8.1	-9.6	11	1.2
1000	27	61			12	1.7
950	27	460	-8.9	-11.7	17	.9
900	27	877	-11.1	-14.4	24	1.5
850	27	1,314	-13.0	-17.9	25	2.2
800	27	1,775	-14.8	-20.9	24	2.3
750	27	2,262	-16.9	-23.3	24	2.6
700	27	2,777	-19.6	-27.0	24	3.4
650	27	3,324	-22.9	-30.5	24	4.8
600	27	3,906	-26.6	-33.1	24	5.6
550	27	4,529	-30.7	-37.4	24	6.7
500	27	5,200	-35.1	-42.6	23	7.5
450	27	5,927	-39.8	-42.1	23	8.7
400	26	6,721	-45.3		23	9.8
350	26	7,605	-50.7		23	11.5
300	26	8,594	-55.4		23	13.0
250	26	9,760	-53.5		23	12.9
200	25	11,208	-50.4		24	11.5
175	25	12,079	-50.4		24	11.8
150	25	13,085	-50.6		24	12.4
125	25	14,273	-50.8		24	11.9
100	25	15,725	-51.5		24	13.0
80	25	17,171	-52.4		25	13.6
70	25	18,033	-53.0		25	13.8
60	24	19,028	-53.5		25	14.3
50	24	20,199	-54.2		26	14.4
40	23	21,634	-55.0		25	15.7
30	15	23,473	-55.6		25	14.6
25	8	24,643	-55.1			

BARTER IS., ALASKA — 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	16	15	-12.2	-14.9	22	1.6
1000	16	50			20	1.1
950	16	450	-6.5	-12.4	26	2.1
900	16	872	-7.2	-14.7	27	3.4
850	16	1,316	-9.1	-15.2	26	2.9
800	16	1,784	-11.3	-18.3	26	3.4
750	16	2,277	-13.5	-20.6	26	4.1
700	16	2,799	-16.0	-24.3	26	4.6
650	16	3,354	-18.9	-28.0	26	6.1
600	16	3,946	-22.8	-31.2	26	7.7
550	16	4,579	-26.8	-35.7	26	8.9
500	16	5,261	-31.2	-40.5	26	9.5
450	16	5,999	-36.7	-44.5	25	10.4
400	16	6,805	-42.5		25	13.3
350	16	7,697	-48.6		25	14.4
300	16	8,694	-54.5		25	18.3
250	16	9,857	-55.2		25	16.4
200	16	11,293	-51.4		25	15.9
175	16	12,162	-51.1		25	14.6
150	16	13,165	-50.7		25	14.8
125	16	14,352	-51.1		25	14.5
100	16	15,801	-51.8		25	14.6
80	16	17,246	-52.2		26	15.3
70	16	18,110	-52.7		26	16.0
60	16	19,104	-53.3		26	15.7
50	15	20,266	-53.9		27	16.9
40	14	21,699	-54.5		26	17.8
30	14	23,538	-55.2		27	20.5
25	12	24,709	-55.5		27	20.4
20	11	26,127	-56.5			
15	8	27,968	-57.4			

BETHEL, ALASKA — 1002 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	39	-1.0	-2.3	26	1.8
1000	31	50			23	2.8
950	31	459	-2.3	-4.9	28	3.7
900	31	887	-5.0	-7.0	28	4.5
850	31	1,334	-7.5	-11.1	28	5.7
800	31	1,805	-9.8	-15.5	28	6.6
750	31	2,301	-12.1	-19.1	28	6.8
700	31	2,826	-15.0	-21.4	27	7.5
650	31	3,383	-18.3	-25.2	27	7.6
600	31	3,976	-21.9	-29.0	27	8.0
550	31	4,611	-25.9	-34.4	27	9.0
500	31	5,295	-30.3	-40.1	27	11.4
450	31	6,037	-35.3	-44.7	27	12.5
400	31	6,848	-40.9	-45.8	27	14.2
350	31	7,748	-46.4		27	15.8
300	31	8,758	-51.2		27	19.1
250	31	9,937	-52.2		26	21.6
200	31	11,390	-49.6		26	19.5
175	31	12,264	-49.9		26	18.3
150	31	13,272	-50.2		26	17.9
125	30	14,459	-50.5		25	17.1
100	29	15,908	-50.2		25	15.0
80	29	17,363	-50.9		25	14.2
70	29	18,231	-51.6		25	13.9
60	29	19,232	-51.6		25	14.5
50	28	20,419	-52.1		26	14.0
40	27	21,865	-52.3		26	13.1
30	24	23,734	-52.8		26	13.5
25	24	24,913	-52.3		26	14.1
20	21	26,358	-52.6		26	15.1
15	13	28,242	-52.4		27	14.[illegible]

* BISMARCK, N. DAK. — 954 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	503	4.4	1.9	32	1.4
1000	31	113				
950	31	534			31	1.3
900	31	976	5.7	-1.0	31	3.4
850	31	1,442	4.0	-4.9	29	4.5
800	31	1,935	2.5	-8.2	29	5.9
750	31	2,454	.5	-10.9	28	7.3
700	31	3,006	-2.0	-12.7	27	8.5
650	31	3,592	-4.8	-15.2	27	9.2
600	31	4,219	-8.0	-18.8	27	10.9
550	31	4,890	-12.2	-22.8	27	11.6
500	31	5,612	-17.0	-26.9	27	13.9
450	31	6,394	-22.4	-32.1	27	14.0
400	31	7,248	-28.9	-38.5	26	14.8
350	31	8,192	-36.1	-44.4	26	16.2
300	31	9,242	-44.0		26	18.2
250	31	10,444	-51.4		26	20.3
200	31	11,874	-56.5		26	22.3
175	31	12,720	-57.5		26	21.4
150	31	13,693	-58.1		26	17.9
125	31	14,841	-58.8		26	15.1
100	31	16,239	-59.6		26	11.5
80	31	17,634	-59.7		26	7.9
70	30	18,471	-59.2		26	6.6
60	30	19,438	-59.0		26	5.5
50	30	20,584	-58.3		27	5.3
40	30	21,988	-58.3		27	5.0
30	29	23,797	-57.8		27	5.1
25	28	24,954	-56.8		29	4.6
20	26	26,376	-55.8		28	4.5
15	19	28,218	-54.0		28	6.4
10	16	30,850	-50.5		29	9.0
7	7	33,243	-45.6			

BOISE, IDAHO — 916 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	871	5.6	-.3	14	1.1
1000	31	147				
950	31	572				
900	31	1,018	7.9	-.9	10	.2
850	31	1,489	6.8	-4.0	34	1.5
800	31	1,985	4.4	-6.3	31	2.3
750	31	2,507	1.3	-9.0	30	3.3
700	31	3,060	-1.6	-14.9	30	3.5
650	31	3,646	-5.1	-17.4	29	4.1
600	31	4,271	-8.9	-19.3	29	4.9
550	31	4,940	-12.8	-24.3	29	5.6
500	31	5,660	-17.5	-28.9	29	5.9
450	31	6,441	-22.9	-33.9	29	7.2
400	31	7,294	-28.9	-39.7	28	9.4
350	30	8,238	-36.1	-45.7	28	10.9
300	30	9,288	-43.8	-53.0	28	11.9
250	30	10,491	-51.8		28	13.4
200	30	11,924	-56.1		29	11.2
175	30	12,770	-57.6		29	10.8
150	30	13,741	-58.5		29	10.9
125	29	14,891	-60.3		28	8.4
100	29	16,280	-60.9		27	7.4
80	29	17,669	-60.2		27	5.3
70	29	18,503	-59.8		26	4.3
60	28	19,471	-59.6		25	4.1
50	28	20,615	-58.7		26	3.8
40	28	22,019	-57.8		26	3.9
30	27	23,843	-56.7		27	5.3
25	26	24,995	-56.0		27	5.8
20	25	26,421	-55.0		28	5.9
15	24	28,266	-53.4		29	5.2
10	6	30,832	-50.8			
7						
5						

BOOTHVILLE, LA. — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1	21.7	19.3	03	1.5
1000	30	130	22.5	18.2	04	2.2
950	30	575	19.5	14.8	05	2.6
900	30	1,039	16.7	9.8	08	1.9
850	30	1,525	14.7	4.3	11	1.3
800	30	2,037	13.0	.0	13	.3
750	30	2,577	10.8	-4.8	24	.7
700	30	3,149	7.9	-8.4	28	1.0
650	30	3,756	4.3	-11.2	30	2.0
600	30	4,403	.5	-15.1	28	2.8
550	30	5,097	-3.3	-19.6	28	5.2
500	30	5,844	-8.0	-23.4	29	5.4
450	30	6,655	-13.3	-28.7	28	6.4
400	30	7,540	-19.9	-33.2	29	8.0
350	30	8,520	-27.0	-40.3	28	10.3
300	30	9,609	-35.5	-49.1	28	12.4
250	30	10,853	-45.1		29	16.0
200	30	12,312	-55.1		29	17.5
175	29	13,153	-60.8		29	16.4
150	29	14,097	-67.0		28	13.4
125	29	15,181	-72.9		28	11.3
100	28	16,482	-74.3		29	5.5
80	26	17,788	-72.2		04	1.5
70	26	18,582	-67.5		09	2.4
60	25	19,519	-64.5		09	4.0
50	24	20,646	-60.4		09	4.6
40	24	22,045	-57.9		08	4.2
30	23	23,877	-53.4		07	3.5
25	21	25,056	-51.7		07	4.3
20	21	26,514	-48.7		10	3.0
15	20	28,423	-45.6		35	1.1
10	8	31,163	-41.5			

* BROWNSVILLE, TEXAS — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	7	21.8	19.6	12	.8
1000	31	123	23.9	20.0	13	2.3
950	31	572	21.1	17.5	14	6.0
900	31	1,039	18.2	13.8	16	5.9
850	31	1,527	15.8	7.3	17	5.0
800	31	2,041	14.0	2.5	17	3.9
750	31	2,584	11.9	-2.7	18	2.4
700	31	3,158	8.9	-6.6	21	1.8
650	31	3,768	5.6	-11.7	23	1.4
600	31	4,418	1.6	-16.3	25	2.1
550	31	5,113	-2.5	-21.6	25	3.4
500	31	5,863	-7.2	-26.9	24	4.5
450	31	6,676	-12.2	-31.2	26	6.6
400	31	7,566	-18.5	-36.7	26	7.5
350	31	8,551	-25.7	-41.2	26	9.0
300	31	9,647	-33.9	-46.9	25	11.6
250	31	10,898	-43.9		26	13.8
200	31	12,359	-55.5		27	16.8
175	31	13,198	-62.0		27	15.1
150	31	14,135	-69.0		27	12.9
125	31	15,208	-75.2		26	9.3
100	30	16,492	-77.4		25	4.2
80	27	17,782	-72.8		20	.2
70	27	18,574	-68.6		08	3.7
60	27	19,508	-64.7		10	5.1
50	27	20,629	-61.8		10	5.3
40	26	22,023	-56.6		08	5.9
30	25	23,848	-54.5		08	8.0
25	25	25,022	-52.2		09	7.9
20	25	26,479	-48.5		09	7.7
15	2[illegible]	28,385	-45.1		08	4.5
10	18	31,121	-41.0		07	2.1
7	17	33,554	-36.9			
5	5	35,878	-37.2			

BUFFALO, N. Y. — 993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	11.6	9.3	19	2.1
1000	31	156				
950	31	589	13.9	7.2	23	4.7
900	31	1,043	11.6	3.0	24	5.2
850	31	1,520	9.5	-2.7	24	5.8
800	31	2,021	7.3	-5.2	25	6.6
750	31	2,549	4.6	-8.7	24	7.7
700	31	3,109	2.0	-12.9	25	8.8
650	31	3,704	-.8	-16.9	25	9.5
600	31	4,339	-4.0	-21.1	25	10.1
550	31	5,020	-8.2	-25.6	26	11.1
500	31	5,753	-13.0	-28.9	26	12.2
450	31	6,548	-18.6	-32.1	26	13.0
400	31	7,415	-25.1	-38.4	25	14.1
350	31	8,374	-32.2	-44.5	26	15.9
300	31	9,441	-40.4	-50.6	26	17.0
250	31	10,661	-49.0		26	19.8
200	31	12,099	-56.7		26	20.4
175	31	12,941	-59.3		26	19.6
150	31	13,902	-61.2		27	18.3
125	31	15,026	-64.3		27	15.9
100	31	16,387	-64.9		27	12.5
80	31	17,754	-62.6		27	8.9
70	31	18,581	-60.8		28	7.6
60	31	19,542	-59.9		28	5.5
50	30	20,686	-58.9		29	4.9
40	30	22,089	-58.1		30	4.7
30	26	23,906	-56.8		29	5.3
25	25	25,065	-55.5		29	6.5
20	23	26,491	-54.1		28	7.8
15	17	28,312	-52.8		27	10.0
10	10	30,968	-48.4			

CAPE HATTERAS, N. C. — 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	20.0	17.7	06	1.6
1000	31	145	20.9	17.3	07	2.0
950	31	588	18.5	14.0	11	1.7
900	31	1,051	15.8	11.1	14	1.9
850	31	1,535	13.1	6.8	18	2.5
800	31	2,043	10.8	3.5	21	3.1
750	31	2,579	8.6	-3.4	23	3.5
700	31	3,148	6.3	-7.0	23	4.1
650	31	3,752	3.1	-11.9	23	5.0
600	31	4,397	-.6	-15.7	23	5.6
550	31	5,087	-4.6	-19.7	24	6.6
500	31	5,830	-9.4	-23.4	24	7.0
450	31	6,636	-14.8	-29.6	24	7.5
400	31	7,518	-20.7	-36.3	24	8.1
350	31	8,494	-27.8	-42.4	24	9.2
300	31	9,581	-36.2	-49.2	24	9.5
250	31	10,821	-45.7		25	11.3
200	31	12,273	-55.7		25	12.4
175	30	13,115	-60.6		25	12.7
150	29	14,063	-64.5		27	11.5
125	29	15,169	-67.7		27	9.6
100	28	16,507	-68.9		27	5.9
80	26	17,850	-66.5		30	2.5
70	26	18,664	-64.1		36	1.1
60	25	19,612	-62.2		05	2.8
50	25	20,747	-59.7		06	3.5
40	25	22,151	-56.4		06	2.8
30	24	23,994	-5[illegible].4		03	1.0
25	23	25,176	-50.8		27	1.7
20	21	26,637	-48.8		27	4.7
15	19	28,544	-47.3		28	7.7
10	15	31,254	-43.9		26	11.6
7	5	33,682	-41.1			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

OCTOBER 1971

Standard pressure surface (mb)	CARIBOU, MAINE 996 MB					CHARLESTON, S. C. 1015 MB					CHATHAM, MASS. 1019 MB					DAYTON, OHIO 983 MB				
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point
SURFACE	31	191	-4.9	2.6	24	.7	31	13	18.6	17.2	36	2.0	31	16	12.8	10.9	06	1.8	31	299	11.9	10.3
1000	31	456			01	.9	31	137	19.7	17.1	02	2.2	31	170	13.0	8.9	27	2.8	31	133		
950	31	577	-3.8	2.0	28	4.3	31	580	18.6	14.6	04	2.1	31	601	11.7	6.3	09	3.3	31	586	14.4	9.7
900	31	1,019	-4.8	-1.3	28	6.3	31	1,043	18.4	10.0	04	.8	31	1,052	14.4	1.3	27	1.4	31	1,042	12.7	6.0
850	31	1,465	-8.3	-4.3	28	8.8	31	1,528	13.7	7.7	29	.9	31	1,527	8.8	-4.3	28	1.9	31	1,520	10.2	.6
800	31	1,978	-3.9	-8.1	28	10.8	31	2,038	10.8	3.4	27	1.7	31	2,028	4.6	-8.2	27	4.9	31	2,024	8.6	-5.6
750	31	2,499	-3.0	-11.0	28	10.3	31	2,575	9.2	-1.9	27	3.8	31	2,557	4.4	-10.8	27	5.9	31	2,570	10.1	-8.3
700	31	3,051	-1.0	-13.6	28	13.9	31	3,144	8.4	-6.9	27	3.6	31	3,118	1.4	-13.1	27	7.0	31	3,123	9.2	-1.7
650	31	3,646	-3.8	-16.0	28	15.2	31	3,749	3.2	-11.0	27	4.2	31	3,714	-.4	-17.3	27	8.2	31	3,730	4.4	-9.1
600	31	4,268	-6.9	-19.6	28	16.3	31	4,394	-.3	-14.9	27	5.2	31	4,350	-3.6	-20.7	27	9.1	31	4,377	.0	-12.9
550	31	4,942	-11.0	-24.4	28	17.8	31	5,045	-4.4	-19.6	27	5.3	31	5,033	-7.7	-23.2	27	10.1	31	5,088	-4.6	-17.7
500	31	5,668	-16.9	-29.3	28	20.0	31	5,829	-9.4	-24.5	28	5.5	31	5,768	-12.1	-27.2	28	11.9	31	5,811	-9.2	-24.2
450	31	6,494	-21.1	-33.5	28	21.5	31	6,635	-14.5	-28.9	27	5.3	31	6,565	-17.7	-32.1	26	13.7	30	6,619	-14.5	-30.1
400	31	7,313	-27.0	-39.1	27	23.6	31	7,517	-23.7	-34.9	26	6.6	31	7,436	-24.9	-38.3	26	15.3	30	7,501	-20.7	-36.9
350	31	8,266	-33.9	-44.5	27	26.7	31	8,493	-28.1	-40.9	26	7.3	31	8,441	-30.7	-43.6	26	17.2	30	8,477	-27.8	-41.2
300	31	9,325	-41.6	-48.8	27	29.3	31	9,579	-36.2	-49.8	27	8.8	31	9,474	-38.8	-49.6	26	17.8	30	9,564	-35.9	-50.8
250	30	10,538	-49.8		27	30.9	31	10,818	-45.9		27	9.6	31	10,700	-48.4		26	21.2	30	10,808	-44.7	
200	30	11,973	-56.9		28	30.1	31	12,271	-55.9		28	11.5	31	12,137	-57.9		27	23.7	30	12,269	-54.6	
175	29	12,822	-59.0		28	28.0	31	13,111	-60.9		27	12.4	31	12,972	-61.3		27	21.5	29	13,112	-59.8	
150	28	13,794	-61.1		28	25.7	31	14,099	-65.4		28	12.0	31	13,934	-64.8		28	18.7	29	14,061	-65.7	
125	27	14,919	-61.9		29	21.6	30	15,158	-69.0		28	8.7	31	15,036	-65.8		28	15.7	29	15,158	-70.1	
100	27	16,295	-61.9		29	16.8	31	16,443	-71.0		28	4.8	31	16,387	-66.6		28	12.4	29	16,473	-73.3	
80	24	17,684	-60.5		29	12.0	30	17,813	-68.1		31	1.8	31	17,748	-61.5		29	7.3	29	17,791	-69.2	
70	24	18,520	-60.6		29	10.0	31	18,619	-66.3		05	.8	31	18,572	-62.2		28	5.8	29	18,596	-65.9	
60	24	19,480	-59.6		30	9.7	29	19,559	-63.5		07	3.3	31	19,528	-60.8		29	4.9	29	19,539	-63.1	
50	24	20,627	-59.6		30	8.7	28	20,638	-60.5		08	3.3	30	20,665	-59.2		31	4.4	29	20,669	-60.1	
40	23	22,025	-58.8		30	6.9	27	22,090	-57.3		07	3.2	30	22,067	-58.2		30	4.9	27	22,068	-57.8	
30	23	23,837	-57.8		30	6.6	25	23,925	-53.7		05	2.0	30	23,887	-56.1		29	5.9	26	23,894	-54.2	
25	23	24,998	-56.7		29	7.1	23	25,099	-51.7		10	.6	27	25,044	-54.8		29	7.3	26	25,068	-52.4	
20	23	26,411	-54.7		29	8.1	19	26,556	-49.4		27	1.1	27	26,479	-52.4		28	9.0	24	26,517	-49.8	
15	19	28,249	-52.4		28	9.1	14	28,488	-47.0		26	6.0	26	28,350	-50.4		27	12.9	20	28,397	-47.1	
10	14	30,905	-49.4		26	11.2	11	31,152	-44.9				20	31,017	-47.4		27	16.2	10	31,094	-44.0	
7	9	33,274	-45.6				6	33,521	-42.3				16	33,425	-43.2		26	16.0				
5													9	35,706	-39.8							
4													5	37,269	-38.0							

Standard pressure surface (mb)	DEL RIO, TEXAS 979 MB					DENVER, COLO. 837 MB					DODGE CITY, KANS. 924 MB					EL PASO, TEXAS 882 MB				
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point
SURFACE	31	314	18.6	17.0	10	2.0	31	1,611	3.9	-1.6	18	1.6	31	791	9.2	4.1	24	1.3	31	1,193	12.4	5.2
1000	31	126					31	139					31	124					31	126		
950	31	569	18.5	15.4	15	3.6	31	568					31	535					31	566		
900	31	1,032	16.7	12.7	17	5.5	31	1,016					31	1,007	12.6	3.0	24	2.6	31	1,025		
850	31	1,519	14.6	9.0	17	4.4	31	1,485					31	1,488	13.0	-1.1	24	5.7	31	1,507	13.4	3.6
800	31	2,030	12.3	6.7	20	4.5	31	1,993	7.1	-5.4	24	1.9	31	1,996	11.1	-4.1	25	5.8	31	2,016	10.7	2.0
750	31	2,555	9.0	4.3	25	5.1	31	2,512	5.3	-8.8	26	3.2	31	2,531	7.7	-7.2	24	7.4	31	2,552	7.8	-.4
700	31	3,117	3.1	-11.5	25	5.6	31	3,142	7.1	-3.7	25	5.5	31	3,073	3.1	-12.5	26	5.1	31	3,096	4.6	-11.1
650	31	3,715	.7	-15.8	25	6.4	31	3,748	3.8	-8.6	25	6.5	31	3,667	-1.2	-15.5	27	5.9	31	3,697	1.3	-13.9
600	31	4,353	-2.9	-21.2	26	7.3	31	4,394	.0	-12.9	24	7.3	31	4,300	-5.4	-19.6	27	7.3	31	4,336	-2.6	-18.9
550	31	5,037	-7.1	-25.4	24	8.1	30	5,086	-4.2	-18.8	25	7.9	31	4,978	-9.2	-25.8	26	10.4	31	5,021	-7.0	-23.7
500	31	5,773	-12.1	-30.2	25	9.1	29	5,830	-9.0	-25.2	24	10.7	31	5,708	-14.2	-30.8	25	10.4	31	5,757	-12.2	-29.4
450	31	6,571	-17.5	-33.6	26	10.5	28	6,636	-14.3	-30.8	24	13.1	31	6,499	-20.1	-35.3	25	10.6	31	6,553	-18.1	-32.9
400	31	7,442	-24.0	-39.2	26	11.7	28	7,519	-20.5	-36.0	24	15.3	30	7,366	-26.5	-41.1	24	12.0	31	7,422	-24.7	-37.8
350	31	8,405	-31.2	-45.1	26	12.9	28	8,496	-27.5	-42.3	24	18.5	30	8,319	-33.7	-47.5	24	14.8	31	8,387	-32.2	-44.6
300	31	9,476	-39.4	-51.2	26	14.8	28	9,584	-35.9	-50.8	24	23.1	30	9,379	-42.0		24	16.5	31	9,448	-40.4	-51.1
250	31	10,701	-48.4		26	16.9	28	10,827	-45.1		24	27.2	30	10,591	-50.2		24	17.4	31	10,669	-48.4	
200	31	12,142	-56.2		27	17.7	26	12,284	-55.3		25	29.7	30	12,025	-56.6		24	19.9	29	12,114	-56.4	
175	31	12,985	-59.2		27	17.1	27	13,125	-61.2		25	27.4	30	12,867	-59.3		24	19.7	29	12,954	-59.9	
150	31	13,943	-62.3		27	17.4	27	14,069	-67.0		25	23.3	30	13,830	-60.6		24	17.5	27	13,909	-62.9	
125	31	15,060	-65.7		27	14.5	27	15,154	-72.2		25	16.9	30	14,961	-62.2		25	12.8	26	15,027	-65.8	
100	30	16,406	-66.8		26	11.1	26	16,457	-74.1		25	9.7	30	16,335	-63.1		26	8.0	21	16,374	-66.3	
80	30	17,760	-64.3		27	6.8	24	17,766	-71.5		23	2.5	30	17,708	-62.7		26	3.7	17	17,726	-64.4	
70	29	18,583	-62.6		26	4.0	24	18,566	-66.7		17	1.1	30	18,534	-61.1		25	2.7	15	18,547	-62.1	
60	28	19,539	-61.0		27	2.9	23	19,506	-63.5		11	2.0	30	19,494	-60.2		23	1.4	13	19,500	-60.9	
50	28	20,677	-59.6		31	1.7	23	20,634	-60.8		10	2.8	30	20,636	-58.9		27	1.1	12	20,641	-59.3	
40	18	22,077	-58.3		34	1.6	23	22,031	-58.1		09	4.2	30	22,040	-57.7		27	1.1	12	22,045	-57.3	
30	28	23,898	-55.9		30	2.9	22	23,866	-54.8		08	4.5	28	23,857	-56.2		29	2.0	11	23,874	-55.1	
25	28	25,054	-54.7		29	3.9	22	25,032	-52.9		08	4.1	26	25,009	-54.1		29	4.1	10	25,045	-54.2	
20	28	26,482	-52.7		28	5.6	21	26,488	-49.7		08	3.8	26	26,433	-53.0		29	6.2	10	26,480	-53.0	
15	19	28,383	-51.0		27	7.0	19	28,373	-46.7		09	1.7	17	28,307	-52.3		27	9.6	9	28,399	-51.5	
10	14	31,016	-47.4		26	18.0	13	31,105	-43.4		30	3.2	11	30,922	-49.3							
7							9	33,508	-40.7													

Standard pressure surface (mb)	ELY, NEV. 808 MB					EMPALME, MEXICO 1010 MB					FAIRBANKS, ALASKA 989 MB					FLINT, MICH. 989 MB					FORT WORTH, TEXAS 994 MB				
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	1,908	-1.3	-5.5	20	2.7	30	12	19.6	12.8	33	1.8	31	135	-2.7	-8.3	32	.9	31	236	11.0	8.9	19	1.2	31	186	17.0	14.3	19	1.4
1000	31	179					30	98	21.6	12.0	32	1.7	31	48					31	143					31	131				
950	31	601					30	545	21.6	9.7	33	1.6	31	454	-4.0	-7.3	15	.8	31	574	13.1	7.5	23	4.9	31	571	17.9	12.5	21	4.5
900	31	1,042					30	1,012	18.9	7.6	23	1.3	31	879	-5.7	-8.2	21	2.5	31	1,028	11.0	4.7	25	4.4	31	1,033	15.9	9.8	22	5.5
850	31	1,505					30	1,499	15.6	5.1	20	3.4	31	1,326	-7.4	-10.0	23	4.8	31	1,503	8.8	-.2	26	4.5	31	1,518	13.5	4.8	23	4.9
800	31	1,992			20	1.5	30	2,012	12.8	1.7	20	5.6	31	1,797	-9.4	-12.8	23	6.0	31	2,003	6.8	-5.1	29	6.0	31	2,027	11.6	-.5	22	4.9
750	31	2,516	2.7	-6.4	20	.3	30	2,552	10.1	-3.3	21	6.5	31	2,293	-12.3	-15.2	23	7.0	31	2,532	4.4	-9.3	26	7.6	31	2,565	9.7	-4.7	23	5.7
700	31	3,071	-.1	-10.4	30	1.5	30	3,122	6.7	-8.7	22	7.2	31	2,817	-15.4	-19.7	23	7.5	31	3,098	1.6	-13.5	28	9.2	31	3,135	6.6	-7.6	23	6.2
650	31	3,662	-3.4	-14.0	31	2.5	30	3,726	3.4	-13.6	23	8.8	31	3,376	-18.6	-22.9	23	7.1	31	3,694	-1.2	-18.9	29	10.3	31	3,739	3.4	-13.1	24	6.7
600	31	4,298	-7.2	-18.1	28	3.8	30	4,371	-.3	-18.6	23	9.5	31	3,996	-22.3	-27.1	23	7.7	31	4,318	-4.6	-22.2	29	11.8	31	4,384	-.4	-19.2	24	6.7
550	31	4,963	-11.2	-23.4	27	4.7	30	5,041	-4.8	-23.7	24	10.4	31	4,661	-26.2	-31.9	23	8.4	31	4,998	-8.7	-25.7	25	12.6	31	5,075	-4.6	-22.4	25	8.2
500	31	5,688	-16.3	-29.3	26	4.9	29	5,803	-9.8	-27.9	25	12.3	31	5,284	-30.8	-37.0	23	8.9	31	5,729	-13.7	-30.8	25	13.9	31	5,817	-9.9	-27.2	25	9.4
450	31	6,472	-22.1	-33.9	25	5.2	29	6,607	-15.3	-33.3	25	14.3	31	6,024	-35.9	-40.5	23	9.2	31	6,522	-19.0	-35.4	25	15.3	31	6,622	-15.1	-32.6	25	11.2
400	31	7,326	-28.7	-39.8	24	4.5	28	7,483	-22.0	-38.3	25	16.4	31	6,832	-41.9	-42.1	23	9.6	31	7,388	-25.3	-38.8	25	17.3	31	7,502	-21.0	-36.9	25	13.6
350	31	8,272	-35.6	-46.5	24	4.2	28	8,456	-28.5	-44.0	24	20.6	31	7,729	-47.5		23	8.7	31	8,346	-32.4	-45.1	25	18.5	31	8,478	-28.2	-43.2	25	17.6
300	31	9,326	-42.7		27	4.7	28	9,540	-36.4	-51.1	24	24.3	31	8,731	-53.1		23	9.8	31	9,412	-40.7	-50.7	25	20.8	31	9,565	-36.5	-50.4	26	20.5
250	31	10,537	-49.9		28	6.8	28	10,781	-45.1		25	27.2	31	9,901	-53.9		24	13.9	31	10,631	-48.8		26	22.8	31	10,805	-45.5		26	25.8
200	31	11,976	-55.8		28	7.8	27	12,240	-54.7		25	32.5	31	11,345	-51.1		25	15.1	31	12,083	-55.8		26	23.1	31	12,258	-55.7		26	29.9
175	31	12,822	-57.9		27	8.7	26	13,087	-59.8		25	32.1	31	12,215	-50.4		25	15.1	30	12,928	-58.4		26	22.4	31	13,097	-60.2		26	30.8
150	31	13,792	-59.0		27	9.2	26	14,037	-65.1		25	26.6	31	13,221	-50.5		25	15.5	29	13,895	-60.6		27	20.8	31	14,047	-65.2		26	24.2
125	31	14,931	-60.9		27	7.5	25	15,137	-69.3		25	21.4	31	14,416	-50.4		25	15.1	29	15,022	-63.6		26	15.3	31	15,142	-69.4		26	20.2
100	30	16,317	-62.4		27	5.7	25	16,457	-72.1		25	12.6	31	15,864	-51.1		25	15.4	29	16,387	-64.1		28	12.6	31	16,467	-71.2		27	11.9
80	30	17,697	-61.5		24	3.7	24	17,774	-69.7		23	4.9	31	17,311	-52.0		25	14.9	27	17,760	-66.2		27	8.4	31	17,793	-68.4		23	5.6
70	30	18,527	-60.6		24	3.2	24	18,579	-69.9		21	2.4	31	18,176	-52.4		28	14.7	28	18,588	-62.6		27	6.3	31	18,601	-65.4		22	2.2
60	30	19,486	-60.0		24	2.2	25	19,517	-69.3		16	1.7	31	19,172	-52.9		26	15.3	26	19,555	-59.8		28	4.3	31	19,546	-62.6		18	1.7
50	30	20,631	-58.6		24	1.8	25	20,646	-60.6		12	3.0	31	20,347	-53.4		26	15.6	25	20,694	-59.1		29	3.7	31	20,681	-59.7		12	1.8
40	30	22,040	-56.9		24	1.3	25	22,047	-57.4		11	3.7	31	21,782	-53.7		24	15.2	24	22,091	-58.3		30	3.5	31	22,080	-57.5		08	1.9
30	29	23,869	-55.6		27	3.2	25	23,877	-54.2		08	4.8	24	23,638	-53.9		27	16.6	23	23,910	-54.7		32	4.4	31	23,913	-55.4		08	2.1
25	29	25,032	-55.4		27	4.9	23	25,050	-53.0		08	3.4	24	24,809	-54.0		27	16.6	22	25,071	-55.6		33	5.4	31	25,058	-51.9		10	.7
20	28	26,456	-53.8		27	4.9	22	26,491	-50.3		11	1.9	24	26,228	-54.5		27	18.8	19	26,504	-54.6		29	6.8	31	26,549	-49.5		23	1.1
15	27	28,303	-53.0		27	8.1	21	28,379	-46.7		08	2.2	21	28,066	-54.3		28	11.1	16	28,368	-50.1		28	9.8	31	28,448	-47.7			
10	21	30,956	-49.6		28	12.2	16	31,085	-44.0		29	6.8	9	30,677	-53.9				6	31,067	-48.1				7	31,180	-44.4			
7	7	33,252	-48.7				8	33,552	-41.4																					

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	GLASGOW, MONT. 934 MB						GRAND JUNCTION, COLO. 852 MB						* GREAT FALLS, MONT. 888 MB						GREEN BAY, WIS. 990 MB						GREENSBORO, N. C. 986 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	3.	696	2.8	-2.4	01	1.2	31	1,472	6.7	-.1	13	2.0	3	1,118	3.9	-2.3	29	3.7	31	210	10.2	7.9	21	.8	3	275	14.0	13.0	01	1.6
1000	31	147					31	131					3	139					31	123					3	154				
950	31	557					31	554					31	564					31	551	10.7	7.2	24	4.1	3	590	15.2	12.3	02	3.2
900	3.	998	5.4	-2.5	31	3.9	3.	1,016					31	1,007					31	1,003	10.2	4.9	25	6.2	31	1,048	13.6	9.7	04	2.9
850	3.	1,463	3.7	-5.8	31	6.0	31	1,499			13	2.8	3.	1,475	5.2	-5.8	28	5.6	31	1,477	8.0	2.4	25	7.2	31	1,529	11.4	6.3	36	1.4
800	31	1,954	1.7	-8.7	31	6.8	31	1,990	7.3	-3.3	15	2.6	3.	1,967	2.2	-8.4	27	5.6	31	1,976	5.8	-1.9	24	8.3	31	2,035	9.9	1.9	29	1.6
750	31	2,472	-.8	-10.7	31	7.7	31	2,518	4.4	-5.7	20	2.7	31	2,486	-.6	-10.5	29	6.0	31	2,502	3.2	-6.4	25	10.3	31	2,569	7.9	-2.6	27	2.2
700	31	3,020	-3.9	-13.3	29	8.7	31	3,076	.6	-7.9	23	3.5	31	3,034	-3.6	-13.4	28	6.9	31	3,059	.6	-11.7	25	10.4	31	3,136	5.3	-7.5	27	2.8
650	31	3,602	-6.4	-16.3	29	9.1	3	3,647	-2.9	-12.1	22	5.6	31	3,617	-6.2	-17.5	29	8.5	3.	3,651	-2.7	-15.5	25	10.9	31	3,739	2.4	-13.1	28	2.9
600	31	4,225	-9.3	-20.1	29	10.3	31	4,297	-6.6	-16.6	23	6.6	31	4,240	-9.3	-21.5	29	9.5	31	4,281	-6.2	-21.0	25	12.7	31	4,381	-1.2	-17.0	28	3.5
550	31	4,893	-13.3	-25.0	29	12.5	31	4,973	-10.1	-22.2	23	7.2	31	4,908	-13.1	-25.4	28	10.6	31	4,957	-10.2	-26.1	25	13.9	31	5,070	-5.1	-21.8	28	4.8
500	31	5,612	-18.0	-29.5	28	13.0	31	5,701	-15.1	-29.3	24	8.1	31	5,627	-18.0	-30.2	27	11.5	31	5,685	-15.1	-31.0	25	15.5	31	5,812	-9.8	-25.7	28	5.8
450	3.	6,391	-23.5	-33.9	27	14.7	31	6,489	-20.5	-34.4	25	9.1	3	6,406	-23.4	-33.5	27	11.9	31	6,473	-20.3	-35.7	26	17.7	31	6,617	-15.4	-30.5	27	6.8
400	31	7,242	-29.8	-40.4	27	16.9	31	7,349	-27.3	-39.3	25	10.2	29	7,258	-30.0	-38.8	26	14.4	31	7,335	-26.7	-41.1	26	19.8	31	7,495	-21.8	-36.6	27	8.2
350	31	8,183	-36.8	-45.4	27	18.7	31	8,299	-34.8	-45.6	25	10.8	29	8,198	-37.0	-44.5	26	15.4	31	8,287	-33.8	-45.3	26	21.8	31	8,467	-29.1	-43.2	26	9.1
300	31	9,229	-45.0		27	21.4	31	9,355	-42.2	-53.3	25	13.5	29	9,244	-44.5		26	17.6	31	9,347	-41.8	-49.2	26	23.9	31	9,548	-37.4	-51.3	26	11.0
250	3.	10,428	-51.9		27	19.1	31	10,570	-49.6		25	13.2	26	10,444	-52.0		27	17.1	31	10,562	-49.4		26	26.5	31	10,782	-46.7		26	12.9
200	31	11,859	-55.9		26	18.7	31	12,011	-55.0		24	14.1	26	11,874	-56.5		28	18.1	31	12,003	-55.7		26	25.1	31	12,230	-56.4		27	13.4
175	30	12,707	-56.1		24	16.8	31	12,859	-57.7		24	14.3	28	12,721	-56.6		28	15.8	31	12,848	-58.3		26	24.7	31	13,070	-60.3		27	13.3
150	30	13,686	-56.6		26	15.3	31	13,828	-59.3		24	13.8	28	13,697	-57.6		28	13.4	31	13,814	-59.9		26	22.5	31	14,022	-64.1		27	12.6
125	30	14,841	-57.5		26	14.0	30	14,963	-61.3		24	10.4	28	14,848	-57.7		27	11.9	31	14,946	-62.5		26	17.5	31	15,127	-67.7		27	10.7
100	30	16,258	-57.7		26	11.9	29	16,347	-63.1		24	7.2	27	16,246	-57.8		26	9.7	31	16,318	-63.0		26	13.9	31	16,466	-68.6		27	6.6
80	30	17,657	-57.9		26	9.6	27	17,726	-61.4		26	3.0	26	17,649	-57.2		26	7.4	31	17,697	-61.2		24	9.4	31	17,808	-66.5		28	2.8
70	29	18,499	-57.9		26	8.0	25	18,563	-61.2		26	1.5	25	18,493	-57.5		26	7.5	31	18,528	-60.1		27	6.7	31	18,621	-64.3		27	1.3
60	28	19,465	-57.9		26	8.1	25	19,523	-59.9		25	1.3	25	19,466	-57.8		26	7.0	31	19,492	-59.4		27	6.0	31	19,570	-62.2		04	.7
50	27	20,611	-57.7		27	6.0	25	20,666	-58.4		23	1.1	25	20,618	-57.5		25	6.1	31	20,635	-58.7		28	4.5	31	20,702	-60.4		06	2.5
40	26	22,023	-57.5		26	5.4	23	22,072	-57.2		24	.6	23	22,033	-57.0		27	5.4	31	22,037	-58.5		28	4.5	31	22,101	-57.8		07	2.9
30	26	23,843	-57.1		27	3.4	21	23,904	-54.9		28	1.6	21	23,864	-56.4		27	4.9	30	23,851	-57.3		29	5.3	30	23,927	-54.2		01	1.6
25	24	25,006	-56.3		28	3.6	19	25,079	-54.2		31	2.6	19	25,024	-55.7		27	4.8	30	25,006	-56.4		28	7.0	30	25,101	-52.5		32	1.8
20	25	26,417	-55.4		29	3.9	18	26,517	-53.9		29	5.0	18	26,456	-54.7		29	4.4	27	26,413	-55.8		28	7.3	29	26,550	-50.5		28	4.3
15	23	28,257	-54.4		30	4.0	15	28,377	-52.3		28	8.9	15	28,306	-53.4		30	4.5	27	28,252	-54.1		28	9.5	26	28,424	-49.0		27	9.5
10	16	30,898	-52.6		29	4.5	8	31,048	-48.7				8	30,909	-50.7				21	30,880	-50.5		28	11.3	22	31,097	-46.6		27	16.3

Standard pressure surface (mb)	GUADALUPE IS., MEXICO 1012 MB						* GUAM, MARIANA IS. 999 MB						HILO, HAWAII 1016 MB						HUNTINGTON W. VA. 989 MB						* INTERNATIONAL FALLS, MINN. 970 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	28	23	17.5	14.5	34	4.3	31	111	24.8	23.3	09	2.7	31	10	21.1	17.6	26	2.0	31	246	13.3	11.7	14	.4	31	359	5.0	3.5	23	1.2
1000	28	123	17.2	11.8	34	4.3	31	100			08	2.8	31	144	22.2	18.2	26	.9	31	154					31	103				
950	28	561	17.2	2.1	33	2.9	31	553	23.6	20.4	09	8.1	31	535	19.2	16.2	09	2.2	31	589	15.4	10.8	21	1.4	31	525	5.9	3.6	22	2.3
900	28	1,020	15.4	-3.9	32	2.3	31	1,025	21.0	15.6	10	7.7	31	1,053	16.0	13.2	09	3.8	31	1,047	13.7	8.3	24	2.0	31	967	4.7	1.3	25	4.2
850	28	1,501	13.2	-8.2	31	2.7	31	1,518	18.2	11.8	10	7.1	31	1,537	12.7	9.9	09	4.0	31	1,527	11.0	4.9	26	3.0	31	1,432	2.6	-3.5	27	4.8
800	28	2,009	11.3	-10.7	31	3.3	31	2,036	15.4	8.3	10	6.9	31	2,045	10.5	5.4	08	4.1	31	2,032	9.3	-1.5	25	3.6	31	1,922	1.5	-7.2	26	6.4
750	28	2,544	9.0	-14.0	30	3.9	31	2,581	12.6	3.3	09	7.1	31	2,582	8.8	-3.6	09	4.4	31	2,565	6.9	-5.2	25	4.1	31	2,440	-.4	-10.1	26	8.4
700	28	3,111	5.8	-16.6	30	3.5	31	3,158	9.4	-1.3	09	7.7	31	3,152	7.8	-12.9	09	3.9	31	3,129	3.9	-10.2	25	4.9	31	2,989	-3.2	-13.0	26	9.4
650	27	3,718	2.7	-20.3	30	3.6	31	3,769	6.1	-6.3	09	8.0	31	3,760	5.2	-17.8	08	2.6	31	3,729	1.2	-15.2	25	6.0	31	3,573	-5.6	-16.3	26	11.1
600	27	4,361	-1.0	-24.5	30	4.4	31	4,421	2.1	-9.4	09	8.0	31	4,409	1.7	-20.9	08	2.2	31	4,368	-2.2	-20.2	26	7.1	31	4,198	-8.7	-20.8	24	12.3
550	27	5,050	-5.2	-27.6	30	6.2	31	5,118	-2.0	-13.7	09	7.9	31	5,104	-2.6	-24.7	06	1.1	31	5,054	-6.1	-25.0	26	7.4	31	4,867	-12.7	-25.1	27	14.3
500	27	5,791	-10.2	-31.8	29	7.9	31	5,876	-6.3	-18.5	08	7.9	31	5,852	-8.1	-28.3	33	.2	31	5,793	-10.8	-29.3	26	8.5	31	5,588	-17.3	-30.7	27	15.2
450	27	6,594	-16.0	-36.2	29	8.5	31	6,687	-11.2	-24.2	07	7.4	31	6,662	-13.7	-31.8	25	1.9	31	6,595	-16.3	-34.6	26	9.7	31	6,370	-22.7	-34.9	26	17.0
400	27	7,470	-22.5	-41.4	29	9.5	31	7,581	-17.1	-30.5	07	6.2	31	7,546	-20.2	-36.1	25	4.3	31	7,470	-22.9	-39.8	26	11.2	31	7,222	-29.3	-40.6	27	18.5
350	27	8,439	-29.5	-47.3	27	12.8	31	8,571	-23.9	-37.2	06	4.7	31	8,524	-27.6	-40.5	25	6.2	31	8,438	-30.1	-45.8	26	12.1	31	8,165	-36.6	-45.9	27	19.9
300	27	9,518	-37.7	-53.5	27	15.9	31	9,676	-32.3	-43.9	36	2.8	31	9,611	-36.2	-48.5	24	10.1	31	9,514	-38.3	-51.2	26	12.7	31	9,213	-44.0	-49.2	26	21.1
250	27	10,752	-46.5		27	20.3	31	10,936	-42.4		29	4.4	31	10,856	-46.1		26	14.3	31	10,743	-47.5		27	14.8	31	10,416	-51.2		26	24.5
200	27	12,205	-54.9		26	21.5	31	12,404	-54.9		29	6.2	31	12,297	-57.4		26	17.7	31	12,189	-55.9		27	17.2	31	11,854	-55.9		26	23.0
175	27	13,051	-59.1				30	13,244	-61.5		29	5.1	31	13,130	-63.8		26	17.1	31	13,032	-59.0		27	15.8	31	12,705	-55.9		26	22.1
150	26	14,009	-63.1		26	17.7	30	14,183	-68.7		29	5.3	31	14,067	-68.0		26	14.7	31	13,992	-62.6		27	13.9	31	13,683	-57.1		26	19.4
125	23	15,120	-67.2		25	17.0	29	15,259	-74.3		36	2.9	31	15,154	-71.1		26	9.6	29	15,103	-65.5		27	12.1	31	14,833	-58.7		26	15.0
100	23	16,454	-70.0				28	16,538	-79.0		07	7.7	31	16,467	-73.2		26	7.1	29	16,453	-67.4		27	9.0	30	16,228	-59.3		27	12.1
80	21	17,788	-67.6				27	17,820	-74.6		08	9.0	30	17,772	-72.6		08	.6	29	17,807	-64.7		27	4.9	29	17,628	-58.8		27	8.9
70	21	18,598	-64.7				26	18,603	-70.9		09	7.5	30	18,563	-69.2		08	3.2	29	18,626	-62.6		27	3.4	29	18,468	-58.4		27	7.2
60	20	19,552	-62.4				25	19,526	-67.2		08	6.5	29	19,490	-65.8		09	6.1	29	19,582	-60.5		28	1.4	28	19,438	-58.4		27	7.1
50	19	20,695	-59.2				24	20,638	-63.0		10	5.9	29	20,607	-62.7		09	7.3	29	20,722	-59.2		02	.9	27	20,581	-58.5		27	6.6
40	19	22,104	-56.6				24	22,023	-59.7		10	5.9	27	21,994	-59.5		10	8.6	29	22,128	-57.1		01	1.1	27	21,985	-58.4		27	6.3
30	19	23,942	-53.5				24	23,839	-55.6		09	7.1	27	23,815	-55.1		09	9.6	27	23,953	-54.5		31	1.6	27	23,796	-58.0		28	5.3
25	19	25,118	-52.0				22	25,016	-52.1		09	8.3	26	24,984	-52.7		09	11.9	26	25,125	-52.7		30	1.6	26	24,945	-57.1		28	4.8
20	17	26,573	-48.7				21	26,470	-49.0		08	12.3	26	26,437	-49.6		09	12.6	26	26,571	-51.3		28	5.8	24	26,362	-56.0		29	6.1
15	16	28,482	-45.7				19	28,371	-45.6		08	17.1	23	28,333	-46.5		09	13.3	26	28,448	-49.4		27	10.1	26	28,230	-54.6		29	6.2
10	5	31,174	-43.7				16	31,110	-39.5		09	21.2	21	31,052	-41.8		09	13.1	16	31,116	-46.7		26	14.3	14	30,810	-51.9		28	9.6
7							9	33,550	-36.6				11	33,492	-37.1										12	33,104	-49.6		28	14.3

Standard pressure surface (mb)	JACKSON, MISS. 1006 MB						JOHN F. KENNEDY INT. AP NY 1020 MB						JOHNSTON IS., PACIFIC AREA 1013 MB						KEY WEST, FLA. 1013 MB						KING SALMON, ALASKA 1003 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	100	15.6	15.0	23	.2	31	5	15.1	11.7	02	1.8	31	0	26.3	22.4	09	6.5	30	3	25.5	22.8	10	1.4	31	15	-.1	-3.1	29	1.0
1000	31	147	17.2	14.9	18	.4	31	167	14.3	11.0	04	2.7	31	120	25.2	21.3	09	6.8	30	120	26.0	23.4	09	1.8	31	38			28	.9
950	31	588	18.3	12.7	17	.8	31	601	13.6	8.1	06	2.0	31	570	21.5	19.2	09	7.5	30	572	22.7	20.4	11	2.1	31	449	-1.2	-4.8	30	2.8
900	31	1,050	15.6	9.4	17	.6	31	1,055	12.2	4.4	10	.3	31	1,038	18.5	14.9	09	7.2	30	1,042	19.7	16.4	13	2.3	31	878	-3.5	-6.9	29	2.9
850	31	1,534	13.4	4.0	19	.6	31	1,533	10.4	.9	26	1.4	31	1,527	15.6	11.3	09	6.2	30	1,533	16.4	12.3	14	2.3	31	1,328	-5.5	-10.1	27	3.9
800	31	2,043	11.6	.8	22	1.7	31	2,036	8.2	-4.8	25	2.7	31	2,040	13.2	7.5	09	5.2	30	2,048	13.8	7.6	15	2.5	31	1,803	-7.6	-13.3	27	5.0
750	31	2,591	9.4	-2.6	24	2.1	31	2,567	6.1	-11.2	26	4.2	31	2,582	10.9	.3	10	3.9	30	2,590	11.1	3.0	17	2.3	31	2,303	-10.4	-16.6	27	6.0
700	31	3,158	6.3	-7.1	25	3.5	31	3,136	3.6	-13.6	26	5.4	31	3,155	8.8	-5.7	10	3.4	30	3,164	8.2	-.6	17	1.6	31	2,831	-13.5	-19.9	27	7.8
650	31	3,755	3.4	-12.6	26	4.0	31	3,728	.7	-16.0	26	5.8	31	3,765	5.5	-11.7	09	2.5	30	3,771	5.2	-5.8	18	1.0	31	3,391	-16.8	-23.4	27	8.5
600	31	4,400	-.3	-16.1	27	4.9	31	4,367	-2.6	-19.2	26	7.2	31	4,414	1.3	-16.1	10	1.9	30	4,423	1.5	-10.3	23	.3	31	3,988	-20.3	-28.5	27	9.2
550	31	5,090	-4.6	-20.5	27	5.6	31	5,053	-6.3	-22.7	26	8.0	31	5,109	-3.0	-19.6	11	1.4	30	5,117	-2.6	-13.0	23	.3	31	4,628	-24.1	-33.3	27	10.5
500	31	5,834	-9.3	-24.9	27	7.0	31	5,791	-11.2	-27.4	27	9.4	31	5,857	-7.7	-26.1	12	.5	30	5,868	-7.4	-17.9	36	.7	31	5,317	-28.5	-37.2	27	11.3
450	31	6,640	-14.6	-30.5	27	9.0	31	6,592	-16.4	-32.2	26	10.4	31	6,668	-13.4	-28.9	35	.6	30	6,688	-12.5	-27.4	33	2.1	31	6,045	-33.3	-40.8	27	12.8
400	31	7,522	-20.8	-35.8	27	10.4	31	7,467	-22.7	-37.9	27	12.0	31	7,554	-19.5	-36.7	29	2.0	30	7,570	-18.7	-33.1	32	3.8	31	6,883	-38.4	-43.8	27	16.1
350	31	8,497	-28.2	-42.2	27	13.6	31	8,435	-30.1	-44.1	27	14.2	31	8,535	-26.5	-42.6	27	4.3	30	8,554	-26.0	-38.7	39	4.8	31	7,794	-43.7		27	19.6
300	31	9,582	-36.3	-49.5	27	17.0	31	9,511	-38.4	-50.2	26	17.3	31	9,627	-34.9	-50.2	27	8.4	30	9,647	-35.1	-48.1	32	5.7	31	8,815	-49.1		27	21.0
250	31	10,822	-45.6		27	20.2	31	10,739	-47.9		26	20.0	31	10,873	-44.9		26	13.7	30	10,893	-44.9		32	7.3	31	10,003	-51.2		26	19.2
200	31	12,277	-55.6		28	22.3	31	12,180	-56.8		26	20.3	31	12,327	-56.6		26	17.0	30	12,347	-56.2		31	8.0	31	11,458	-50.1		26	19.1
175	31	13,118	-60.7		27	21.5	31	13,028	-59.9		26	19.4	30	13,164	-62.7		26	16.1	30	13,185	-62.0		31	8.9	31	12,330	-50.4		26	18.5
150	29	14,060	-66.3		27	19.8	29	13,983	-63.2		27	17.5	30	14,101	-68.5		27	13.1	30	14,125	-67.5		31	8.9	31	13,335	-50.7		26	18.6
125	28	15,150	-70.2		27	15.4	28	15,098	-66.1		27	14.1	28	15,180	-72.9		27	8.9	30	15,210	-72.2		32	5.8	30	14,518	-51.3		26	17.3
100	25	16,463	-71.9		27	8.0	28	16,447	-67.0		28	11.0	28	16,483	-73.7		27	3.1	30	16,515	-74.2		01	3.2	29	15,973	-51.0		26	14.5
80	24	17,790	-68.8		26	3.0	27	17,809	-63.8		28	6.2	28	17,787	-73.0		08	1.5	29	17,826	-70.8		07	4.1	27	17,427	-51.5		25	13.7
70	23	18,594	-65.8		21	.3	26	18,635	-62.2		30	5.2	28	18,574	-70.9		09	3.8	29	18,625	-67.2		07	4.8	27	18,293	-52.2		25	13.1
60	23	19,538	-63.1		10	2.2	25	19,593	-61.0		30	4.5	26	19,500	-66.5		09	4.7	29	19,562	-63.9		08	5.5	27	19,290	-52.8		25	11.8
50	23	20,668	-60.1		09	3.3	25	20,738	-59.7		32	3.2	26	20,613	-63.2		09	6.8	29	20,688	-60.5		08	6.7	27	20,466	-52.5		26	11.5
40	23	22,067	-57.9		08	3.9	23	22,134	-58.0		33	3.3	24	21,994	-60.5		10	7.8	29	22,090	-57.2		08	8.4	24	21,908	-52.9		26	11.8
30	22	23,897	-53.9		06	2.7	23	23,960	-55.3		31	3.8	24	23,807	-55.4		09	9.6	29	23,928	-53.0		09	9.1	22	23,753	-53.6		27	10.6
25	22	25,073	-52.0		08	2.4	23	25,129	-53.3		29	6.2	21	24,980	-53.3		09	11.1	28	25,113	-50.3		08	8.7	19	24,919	-52.6		27	10.8
20	21	26,536	-49.5		13	.5	19	26,572	-51.6		28	7.7	21	26,428	-50.0		09	13.5	24	26,581	-46.9		09	7.8	12	26,352	-52.8		27	13.2
15	19	28,425	-47.1		26	3.2	17	28,456	-49.6		27	11.2	19	28,321	-46.5		09	16.5	19	28,497	-43.5		09	7.1	5	28,190	-51.4			
10	16	31,102	-45.6		28	7.6	12	31,149	-46.8				16	31,053	-41.9		09	18.5	15	31,241	-38.7		10	7.3						
7													6	33,521	-38.5				8	33,700	-37.1									

See reference note at end of table

RAWINSONDE DATA

Average monthly values

+ KOROR, CAROLINE IS. 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	[illegible]	27.5	24.5	10	.6
1000	31	85	28.7	22.7	11	.8
950	31	538	23.6	19.6	13	1.6
900	31	1,010	[illegible]	16.[illegible]	14	.7
850	31	1,503	18.1	12.4	14	.6
800	31	[illegible]	15.5	9.[illegible]	24	1.2
750	31	2,557	1[illegible].4	5.9	21	.2
700	31	3,142	9.0	2.1	[illegible]	.4
650	31	3,764	5.8	-.7	10	1.1
600	31	4,405	[illegible]	-4.5	11	1.4
550	31	5,133	-1.8	-8.5	09	2.5
500	31	5,857	-5.8	-13.9	09	3.4
450	31	6,676	-10.2	-20.5	09	4.3
400	31	7,574	-15.8	-25.8	09	3.5
350	31	8,572	-22.4	-33.6	09	3.0
300	31	9,692	-30.8	-42.7	07	2.8
250	31	10,949	-4[illegible].2		04	3.5
200	31	[illegible]	-53.9		01	4.3
175	31	13,257	-6[illegible].0		01	5.6
150	31	[illegible],206	-69.1		01	5.3
125	31	15,277	-7[illegible].1		03	4.9
100	31	16,546	-80.7		07	10.0
80	31	17,825	-73.8		09	9.7
70	31	18,6[illegible]3	-69.6		09	6.3
60	31	19,543	-65.5		07	3.1
50	30	20,661	-62.4		05	.8
40	28	22,050	-59.1		26	.7
30	27	23,869	-55.8		04	1.7
25	26	25,038	-53.5		10	3.7
20	25	26,483	-49.8		11	5.5
15	22	28,384	-45.5		10	9.9
10	15	31,108	-42.9		09	16.8
7	6	33,541	-39.0			
5						

KOTZEBUE, ALASKA 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	5	-5.9	-8.0	08	4.6
1000	31	38			08	4.1
950	31	432	-6.4	-9.9	12	4.2
900	31	854	-8.2	-11.5	16	2.8
850	30	1,296	-10.1	-13.8	20	2.5
800	31	1,762	-12.1	-16.4	21	2.8
750	31	2,254	-14.7	-19.1	21	3.4
700	30	2,773	-17.8	-21.6	22	3.6
650	30	3,324	-21.2	-26.2	23	4.6
600	31	3,918	-25.1	-30.4	22	5.1
550	30	4,537	-29.4	-35.0	22	5.9
500	30	5,211	-33.8	-39.3	22	7.0
450	30	5,942	-38.7	-42.3	22	8.0
400	30	6,741	-44.6		22	9.4
350	29	7,624	-50.0		22	11.3
300	29	8,618	-53.8		22	12.5
250	28	9,792	-52.4		23	12.2
200	28	11,245	-49.9		24	12.8
175	28	12,119	-49.6		24	12.5
150	29	13,127	-50.0		25	12.4
125	28	14,318	-50.4		25	13.2
100	26	15,766	-50.9		25	14.0
80	23	17,211	-50.9		25	14.1
70	21	18,076	-51.4		25	15.6
60	21	19,078	-51.7		25	15.4
50	2[illegible]	20,257	-52.1		25	16.4
40	2[illegible]	21,700	-52.8		25	15.6
30	19	23,550	-53.3		26	19.2
25	17	24,726	-53.6		26	20.1
20	15	26,157	-53.8		26	22.7
15	9	28,028	-53.3			

KWAJALEIN, MARSHALL IS. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	4	26.4	23.8	10	3.3
1000	31	97	25.8	23.2	10	4.1
950	31	548	21.6	20.5	09	6.0
900	31	1,018	19.7	16.9	10	6.9
850	31	1,510	17.2	13.9	10	7.2
800	31	2,027	14.6	10.9	10	7.3
750	31	2,571	12.1	7.4	09	7.3
700	31	3,147	9.2	2.6	09	6.5
650	31	3,759	5.6	-1.6	09	5.9
600	31	4,410	1.8	-4.1	09	5.1
550	31	5,107	-2.1	-9.5	08	4.5
500	31	5,859	-6.4	-13.4	08	3.2
450	31	6,676	-11.4	-18.4	08	2.9
400	31	7,570	-17.1	-24.5	08	1.4
350	31	8,589	-24.0	-31.1	23	.4
300	31	9,655	-32.5	-39.7	24	3.9
250	31	10,922	-43.0	-49.9	26	6.7
200	31	12,396	-55.5	-62.1	27	8.4
175	30	13,223	-62.3		27	9.2
150	30	14,159	-69.4		28	11.1
125	28	15,227	-76.0		29	9.1
100	26	16,500	-79.3		29	.4
80	26	17,779	-74.4		10	3.9
70	25	18,565	-70.9		08	3.8
60	25	19,485	-67.5		06	1.8
50	25	20,593	-63.8		13	1.0
40	25	21,976	-60.2		18	.4
30	25	23,785	-56.4		09	1.9
25	25	24,948	-54.2		10	4.0
20	23	26,389	-51.4		08	7.0
15	2[illegible]	28,275	-47.3		09	12.7
10	20	30,989	-42.6		09	20.8
7	15	33,432	-37.7		09	27.8
5	8	35,811	-33.1			

LAKE CHARLES, LA. 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	5	19.2	18.0	09	1.4
1000	31	138	[illegible]	[illegible]	[illegible]	1.6
950	31	592	18.9	13.3	15	2.9
900	31	1,045	15.9	10.1	17	1.7
850	31	1,529	13.6	4.[illegible]	20	1.5
800	31	2,038	11.9	-1.1	21	2.0
750	31	2,578	[illegible].3	-6.0	27	2.2
700	31	3,149	7.2	-8.6	23	2.7
650	31	3,754	3.9	-12.7	25	2.9
600	31	4,401	.6	-17.0	26	4.0
550	31	5,094	-3.8	-20.4	27	5.5
500	31	5,839	-8.7	-25.0	26	7.2
450	31	6,648	-14.0	-30.3	26	9.5
400	31	7,531	-20.4	-36.6	26	11.3
350	31	8,509	-27.3	-42.5	27	13.2
300	31	9,598	-35.3	-48.8	27	16.0
250	31	10,841	-45.2		28	19.5
200	30	12,299	-55.6		28	20.3
175	30	13,139	-61.0		28	20.0
150	30	14,084	-66.6		27	16.2
125	29	15,174	-71.6		27	12.5
100	28	16,482	-73.6		27	5.8
80	26	17,797	-70.8		22	1.0
70	26	18,596	-67.1		10	2.2
60	25	19,531	-63.7		10	3.3
50	25	20,661	-60.1		09	3.7
40	24	22,068	-57.6		08	3.5
30	24	23,893	-54.0		07	3.9
25	24	25,069	-52.0		08	4.1
20	23	26,522	-49.1		10	2.5
15	21	28,422	-46.5		32	1.0
10	17	31,140	-43.0		27	7.6

LANDER, WYO. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	1,69[illegible]	[illegible]	-3.2	27	1.0
1000	31	[illegible]				
950	31	578				
900	31	[illegible]				
850	31	1,48[illegible]				
800	31	1,97[illegible]	4.3	-4.8	33	.9
750	31	2,5[illegible]3	2.0	-7.6	34	2.0
700	31	3,05[illegible]	-.7	-10.9	29	3.1
650	31	3,646	-3.6	-14.4	28	4.7
600	31	4,275	-7.0	-18.5	27	6.3
550	31	4,949	-1[illegible].8	-2[illegible].7	27	7.7
500	31	5,67[illegible]	-15.7	-2[illegible].6	27	8.6
450	31	6,4[illegible]	-2[illegible]	-33.2	26	9.0
400	31	7,319	-27.8	-39.6	26	9.1
350	31	8,25[illegible]	-3[illegible].6	-45.7	26	10.[illegible]
300	31	9,31[illegible]	-44.0		26	13.0
250	31	10,519	-51.6		27	13.4
200	31	11,949	-57.0		26	14.7
175	31	12,792	-58.2		26	14.4
150	30	13,755	-58.9		25	14.3
125	30	14,898	-59.6		25	11.0
100	29	16,291	-61.3		25	8.4
80	29	17,680	-60.7		25	5.9
70	29	18,51[illegible]	-61.0		25	4.6
60	29	19,475	-59.8		25	3.9
50	29	20,617	-58.5		24	3.7
40	29	22,022	-58.0		26	2.8
30	29	23,839	-56.9		26	4.1
25	28	24,999	-56.7		27	4.8
20	25	26,420	-55.6		29	6.3
15	22	28,264	-54.2		29	6.9
10	19	30,881	-50.3			

* LIHUE KAUAI, HAWAII 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	36	24.5	20.1	07	4.0
1000	31	153	23.4	19.0	08	4.9
950	31	600	19.8	17.2	08	6.2
900	31	1,065	16.5	13.9	09	6.2
850	31	1,550	13.2	10.3	09	5.9
800	31	2,058	10.7	4.5	09	6.3
750	31	2,595	9.8	-6.2	09	6.0
700	31	3,167	8.1	-12.2	09	4.3
650	31	3,775	4.8	-14.9	09	2.6
600	31	4,423	.8	-18.3	09	2.0
550	31	5,116	-3.6	-21.9	09	1.3
500	31	5,861	-8.8	-25.5	13	.6
450	31	6,668	-14.7	-30.0	21	1.1
400	31	7,549	-21.4	-36.4	24	2.4
350	31	8,522	-28.7	-41.2	25	4.7
300	31	9,603	-37.2	-49.7	25	7.7
250	31	10,838	-47.0		26	10.0
200	31	12,281	-57.6		26	11.3
175	31	13,114	-62.7		26	10.6
150	31	14,053	-67.2		26	8.0
125	31	15,144	-70.4		26	6.5
100	31	16,461	-72.7		26	3.7
80	30	17,777	-71.1		08	.5
70	30	18,572	-68.5		08	3.6
60	29	19,506	-65.8		09	5.9
50	29	20,623	-62.2		10	7.3
40	27	22,015	-58.9		09	8.2
30	27	23,836	-54.9		09	9.9
25	25	25,018	-52.4		09	10.7
20	25	26,464	-49.4		09	12.3
15	19	28,359	-46.8		09	13.2
10	16	31,088	-41.9		10	13.0
7	[illegible]	33,535	-38.6			

LITTLE ROCK, ARK. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	79	15.3	13.1	22	.5
1000	31	138	16.9	12.8	24	.6
950	31	578	18.1	10.9	22	2.8
900	31	1,040	15.5	8.4	23	3.7
850	31	1,523	13.1	4.1	23	4.4
800	31	2,031	10.5	.5	23	4.8
750	31	2,566	8.1	-4.9	24	5.4
700	31	3,133	5.1	-9.8	24	6.3
650	31	3,735	2.2	-13.4	25	5.8
600	31	4,377	-1.3	-18.8	26	6.2
550	31	5,065	-5.4	-23.2	25	7.8
500	31	5,806	-10.4	-28.2	25	8.4
450	31	6,609	-15.9	-32.5	25	9.5
400	31	7,485	-22.5	-38.3	25	11.0
350	31	8,455	-29.3	-43.3	26	14.1
300	31	9,535	-37.4	-48.5	26	17.7
250	31	10,770	-46.4		27	21.6
200	31	12,220	-55.8		27	25.3
175	31	13,062	-60.2		27	23.6
150	31	14,014	-64.6		27	19.4
125	31	15,115	-69.1		26	16.1
100	31	16,442	-70.3		26	9.6
80	31	17,775	-67.6		25	4.4
70	31	18,585	-65.0		22	1.5
60	31	19,531	-62.5		14	1.7
50	31	20,663	-60.0		10	2.4
40	30	22,065	-57.8		09	2.0
30	30	23,893	-54.7		03	1.8
25	28	25,058	-52.1		35	.8
20	27	26,511	-49.8		27	3.5
15	26	28,400	-48.6		27	7.5
10	20	31,076	-46.2		28	12.0

MCGRATH, ALASKA 993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	29	103	-2.3	-3.5	29	.7
1000	29	45				
950	29	452	-3.8	-5.8	23	2.2
900	29	878	-5.6	-7.0	21	3.4
850	29	1,325	-7.7	-9.6	22	4.8
800	29	1,795	-10.0	-11.9	23	6.2
750	29	2,290	-12.5	-15.5	23	6.3
700	29	2,814	-15.5	-19.8	24	7.1
650	29	3,370	-18.7	-23.0	24	7.9
600	29	3,963	-22.6	-27.5	24	8.5
550	29	4,596	-26.8	-32.3	24	8.9
500	29	5,277	-31.5	-37.6	24	8.9
450	29	6,015	-36.5	-41.8	24	9.8
400	29	6,823	-41.9	-43.6	24	11.8
350	29	7,719	-47.5		25	13.8
300	29	8,725	-51.2		25	15.3
250	29	9,907	-51.9		25	17.0
200	29	11,352	-49.4		25	16.0
175	29	12,237	-49.5		25	16.0
150	29	13,247	-49.4		25	15.3
125	29	14,441	-50.0		25	15.3
100	29	15,898	-50.3		25	16.0
80	28	17,352	-51.4		25	14.9
70	28	18,219	-51.6		25	15.9
60	28	19,219	-51.8		26	15.8
50	27	20,397	-52.7		26	17.0
40	27	21,836	-53.4		26	15.4
30	26	23,689	-53.0		26	16.9
25	25	24,867	-53.0		26	17.0
20	24	26,298	-53.6		27	18.2
15	14	28,151	-52.7		27	18.8

+ MAJURO, MARSHALL IS. 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	29	3	27.9	23.9	09	3.7
1000	29	103	26.3	20.1	10	4.2
950	29	555	23.1	18.2	10	5.7
900	29	1,025	20.3	14.7	11	6.3
850	29	1,518	17.4	11.2	10	6.6
800	29	2,034	15.1	7.9	10	6.9
750	29	2,580	12.8	3.1	09	7.1
700	29	3,157	9.9	-.8	10	7.0
650	29	3,769	6.5	-4.0	10	6.8
600	29	4,421	2.6	-8.2	10	6.2
550	29	5,121	-1.1	-12.5	10	5.1
500	29	5,875	-5.4	-18.2	09	3.4
450	29	6,695	-10.2	-23.1	08	1.4
400	29	7,593	-15.8	-28.6	07	.7
350	29	8,590	-22.6	-36.5	28	.8
300	29	9,700	-31.0	-44.6	26	2.4
250	29	10,966	-41.4	-52.6	27	4.8
200	29	12,440	-53.8		28	8.5
175	29	13,286	-60.3		28	11.2
150	29	14,229	-67.7		28	12.6
125	29	15,310	-74.0		29	9.3
100	29	16,595	-77.2		34	1.2
80	29	17,894	-71.5		09	3.7
70	29	18,690	-68.4		09	2.2
60	29	19,623	-64.8		24	.9
50	28	20,745	-61.4		26	2.4
40	28	22,141	-58.2		30	1.6
30	27	23,972	-53.6		13	1.7
25	26	25,153	-50.6		11	2.2
20	25	26,622	-48.2		08	4.7
15	24	28,534	-44.7		10	9.7
10	21	31,282	-39.3		09	19.3
7	1[illegible]	33,711	-34.7			

* MEDFORD, OREG. 972 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	401	5.7	2.7	01	1.6
1000	31	165				
950	31	588	7.6	3.0	33	.8
900	31	1,034	7.6	.3	24	.6
850	31	1,504	6.1	-3.2	30	.3
800	31	2,000	4.3	-7.9	32	1.7
750	31	2,523	1.9	-10.6	32	3.2
700	31	3,076	-1.2	-14.5	31	4.3
650	31	3,664	-4.1	-18.1	31	5.7
600	31	4,291	-7.6	-22.0	31	7.6
550	31	4,963	-11.5	-25.1	31	9.4
500	31	5,688	-16.0	-29.0	31	10.3
450	31	6,474	-21.2	-34.1	31	11.9
400	31	7,333	-27.5	-39.9	31	13.0
350	31	8,283	-34.7	-45.6	31	14.2
300	31	9,338	-43.0	-52.3	31	15.1
250	31	10,544	-51.3		31	14.3
200	31	11,973	-57.0		31	14.1
175	31	12,815	-58.7		31	14.1
150	30	13,773	-60.0		30	14.0
125	30	14,906	-61.5		30	12.7
100	30	16,287	-62.1		30	9.3
80	28	17,667	-61.0		29	4.6
70	28	18,498	-60.7		29	3.9
60	28	19,460	-59.7		27	3.1
50	27	20,602	-58.2		27	2.8
40	27	22,007	-57.7		28	2.9
30	25	23,828	-56.7		27	4.1
25	24	24,986	-55.7		28	4.9
20	21	26,420	-54.0		29	3.8
15	18	28,289	-52.1		30	4.3
10	12	30,946	-49.9		28	6.7
7	9	33,292	-47.0			

MERIDA, MEXICO 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	11	20.9	20.5	08	.6
1000	31	112	23.6	21.6	08	2.1
950	31	560	21.5	18.5	09	3.5
900	31	1,029	19.2	14.1	09	2.8
850	31	1,519	16.4	10.4	10	1.9
800	31	2,033	13.6	7.6	10	1.4
750	31	2,576	11.8	.6	09	1.7
700	31	3,151	9.0	-3.8	08	2.2
650	31	3,762	6.1	-8.8	05	2.5
600	31	4,413	2.3	-11.1	05	3.4
550	31	5,111	-1.8	-16.3	03	3.0
500	31	5,863	-6.1	-22.6	02	4.0
450	31	6,680	-11.2	-27.5	02	3.5
400	31	7,573	-17.4	-33.4	01	4.1
350	31	8,563	-24.6	-40.4	01	3.3
300	31	9,663	-33.2	-48.5	36	4.1
250	31	10,918	-43.2		34	5.4
200	31	12,383	-54.7		34	6.2
175	31	13,227	-60.8		34	6.7
150	29	14,172	-67.7		34	6.5
125	28	15,231	-73.7		35	5.1
100	29	16,539	-77.0		02	3.9
80	28	17,836	-71.1		06	5.2
70	28	18,632	-68.0		09	5.4
60	28	19,566	-64.8		09	6.7
50	26	20,697	-61.5		09	7.4
40	24	22,083	-57.6		08	9.3
30	24	23,918	-52.2		08	10.7
25	24	25,103	-50.5		08	11.5
20	23	26,572	-47.7		09	12.6
15	19	28,488	-43.5		08	12.8
10	[illegible]	31,[illegible]38	-39.2			

MIAMI, FLA. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	4	23.7	21.8	36	1.3
1000	31	125	24.7	22.0	07	.8
950	31	575	22.0	19.3	13	2.7
900	31	1,044	19.2	15.5	15	2.8
850	31	1,534	16.0	12.0	16	2.6
800	31	2,048	13.2	8.9	17	2.5
750	31	2,589	10.5	4.5	16	2.1
700	31	3,161	7.4	.1	17	1.9
650	31	3,769	4.3	-4.4	18	1.2
600	31	4,416	.7	-9.8	21	1.0
550	31	5,110	-3.1	-14.9	27	.8
500	31	5,859	-7.7	-21.2	28	1.7
450	31	6,671	-12.8	-27.5	30	2.3
400	31	7,558	-19.0	-32.8	29	3.5
350	31	8,542	-26.2	-39.3	30	4.1
300	31	9,635	-34.7	-47.0	31	5.7
250	31	10,882	-44.4		31	7.7
200	31	12,339	-55.6		30	8.5
175	31	13,179	-61.2		30	8.7
150	31	14,123	-66.8		30	9.5
125	31	15,213	-71.2		32	6.3
100	31	16,522	-74.0		35	2.6
80	31	17,830	-71.0		06	3.9
70	31	18,629	-66.9		08	4.5
60	30	19,569	-63.9		08	5.1
50	30	20,696	-60.7		09	5.9
40	28	22,096	-57.6		09	7.7
30	28	23,934	-52.6		09	7.9
25	26	25,118	-50.3		08	8.1
20	23	26,583	-47.4		09	8.1
15	17	28,512	-43.7		09	6.4
10	12	31,280	-38.6		10	5.4

MIDLAND, TEXAS 916 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	874	13.3	11.4	18	1.9
1000	31	127				
950	31	565				
900	31	1,024	15.4	11.1	19	3.3
850	31	1,509	14.8	6.3	21	4.7
800	31	2,020	12.5	2.0	23	3.9
750	31	2,560	9.6	-2.8	24	4.3
700	31	3,128	5.9	-5.8	24	5.0
650	31	3,732	2.7	-10.5	24	5.8
600	31	4,375	-1.2	-15.1	24	6.7
550	31	5,064	-5.2	-22.8	24	8.4
500	31	5,805	-10.2	-27.6	24	10.3
450	31	6,609	-15.7	-30.2	24	13.3
400	31	7,486	-22.0	-36.2	24	15.7
350	31	8,457	-29.5	-42.2	24	19.1
300	31	9,536	-37.6	-50.0	24	24.3
250	30	10,774	-46.4		24	30.0
200	30	12,226	-55.4		24	33.8
175	30	13,068	-60.3		24	33.6
150	29	14,019	-65.0		24	27.3
125	26	15,120	-69.3		24	21.7
100	23	16,440	-71.8		24	12.3
80	15	17,759	-67.9		23	3.9
70	15	18,567	-65.5		20	2.0
60	15	19,510	-63.0		13	2.5
50	15	20,640	-59.9		11	3.4
40	14	22,042	-57.7		07	3.1
30	14	23,869	-55.0		08	3.3
25	14	25,038	-53.2		09	2.9
20	14	26,484	-50.8		05	.8
15	1[illegible]	28,401	-48.3			

MONTERREY, MEXICO 963 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	28	423	19.6	19.0	05	.2
1000	28	125				
950	28	569	19.8	18.3	06	.7
900	28	1,035	17.9	15.0	12	1.8
850	28	1,524	16.0	10.3	13	3.4
800	28	2,039	14.8	5.9	14	2.3
750	28	2,584	12.2	1.7	19	1.8
700	28	3,159	8.7	-1.6	24	2.3
650	28	3,768	4.9	-5.0	25	2.6
600	28	4,417	1.2	-11.0	23	4.1
550	28	5,112	-3.0	-16.7	23	5.7
500	28	5,861	-7.2	-24.0	23	6.4
450	28	6,674	-12.4	-29.1	23	8.8
400	28	7,565	-18.3	-33.9	23	10.4
350	28	8,550	-25.6	-41.3	23	11.6
300	28	9,646	-34.1	-49.8	24	12.9
250	28	10,897	-44.0		24	14.5
200	28	12,357	-55.5		25	17.5
175	27	13,196	-61.6		25	17.6
150	27	14,135	-68.3		25	15.3
125	26	15,213	-73.9		25	10.8
100	23	16,506	-76.5		25	4.9
80	23	17,804	-71.6		19	1.1
70	23	18,602	-67.1		09	3.3
60	23	19,540	-63.9		09	5.3
50	23	20,666	-60.9		09	5.5
40	23	22,062	-58.1		08	6.7
30	2[illegible]	23,890	-54.4		08	8.0
25	2[illegible]	25,065	-51.6		08	8.1
20	2[illegible]	26,526	-48.2		08	7.4
15	2[illegible]	28,437	-45.3		07	5.7
10	8	31,162	-41.1			

MONETT, MO. 965 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant wind Direction	Resultant wind Speed
SURFACE	31	438	13.0	10.8	16	1.6
1000	31	139				
950	31	573	15.4	9.8	20	2.7
900	31	1,032	14.3	6.1	23	6.6
850	31	1,513	11.9	2.2	24	6.7
800	31	2,019	9.5	-1.7	24	6.6
750	31	2,553	7.1	-6.6	24	7.1
700	31	3,117	4.2	-11.0	25	8.0
650	31	3,717	1.6	-15.1	25	8.3
600	31	4,358	-1.9	-19.7	25	9.0
550	31	5,044	-6.6	-23.9	25	9.7
500	31	5,781	-11.5	-29.5	25	11.3
450	31	6,581	-17.1	-33.8	25	12.2
400	31	7,453	-23.3	-38.0	25	14.3
350	30	8,422	-30.3	-43.9	25	16.0
300	30	9,497	-38.4	-49.3	25	19.3
250	30	10,727	-47.2		25	21.1
200	30	12,175	-55.5		26	23.8
175	30	13,018	-59.7		26	22.8
150	30	13,974	-63.4		26	22.8
125	27	15,080	-67.3		26	18.0
100	29	16,419	-68.3		25	11.9
80	28	17,764	-66.6		24	7.4
70	28	18,579	-63.5		23	4.3
60	28	19,538	-61.6		23	1.9
50	27	20,668	-59.9		19	1.1
40	26	22,070	-58.2		09	1.0
30	24	23,891	-55.4		08	2.5
25	2[illegible]	25,062	-54.0		35	.7
20	2[illegible]	26,497	[illegible]		28	2.4
15	1[illegible]	28,381	-5[illegible].2		28	2.4
10	17	31,052	-4[illegible].3		27	1[illegible].8

See reference note at end of table

RAWINSONDE DATA

Average monthly values

MONTGOMERY, ALA. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	57	16.0	14.7	36	.5
1000	31	146	18.0	15.1	05	1.4
950	31	598	18.2	12.8	06	2.4
900	31	1,050	15.9	9.9	04	1.3
850	31	1,534	13.9	5.5	01	.6
800	31	2,045	12.0	.8	29	.9
750	31	2,563	9.8	-3.5	28	1.8
700	31	3,153	6.8	-9.1	28	2.6
650	31	3,759	3.6	-12.6	28	4.0
600	31	4,404	-.3	-16.4	28	4.3
550	31	5,094	-4.3	-20.6	28	5.0
500	31	5,839	-9.0	-26.1	28	5.8
450	31	6,646	-14.4	-30.2	28	7.2
400	31	7,528	-20.7	-34.7	27	8.9
350	31	8,505	-27.7	-42.0	28	10.4
300	31	9,592	-35.8	-49.7	28	13.5
250	31	10,835	-45.2		28	16.7
200	31	12,291	-55.5		29	19.4
175	31	13,133	-60.0		29	18.1
150	31	14,083	-65.3		29	15.7
125	31	15,181	-69.7		29	10.9
100	31	16,503	-71.1		30	5.5
80	30	17,830	-68.6		28	.8
70	30	18,636	-65.9		08	1.2
60	30	19,579	-63.0		09	3.1
50	30	20,710	-60.1		09	3.6
40	30	22,113	-56.9		09	3.7
30	29	23,950	-53.2		07	3.1
25	28	25,130	-51.2		08	2.9
20	27	26,589	-48.7		26	.4
15	26	28,498	-46.1		27	2.2
10	18	31,231	-43.7		27	7.7
7						

NASHVILLE, TENN. 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	180	15.0	13.1	11	.5
1000	31	149				
950	31	587	16.9	11.6	22	2.2
900	31	1,047	14.9	9.3	24	2.9
850	31	1,529	12.1	5.1	26	3.1
800	31	2,035	9.4	.7	27	3.1
750	31	2,568	6.8	-4.6	26	4.3
700	31	3,133	4.2	-11.1	26	4.7
650	31	3,733	1.5	-16.5	26	5.6
600	30	4,372	-1.7	-21.5	27	6.5
550	30	5,060	-5.7	-26.6	27	7.3
500	30	5,799	-10.7	-31.4	27	8.0
450	30	6,601	-16.2	-35.8	26	8.7
400	30	7,476	-22.8	-41.1	26	9.8
350	30	8,444	-30.1	-45.6	26	10.3
300	30	9,521	-38.1	-51.8	27	13.5
250	30	10,751	-47.2		27	17.3
200	29	12,200	-56.1		28	19.1
175	29	13,042	-59.8		27	18.2
150	29	13,995	-64.1		27	17.2
125	29	15,101	-67.8		27	12.8
100	29	16,435	-69.2		27	8.3
80	29	17,772	-67.1		26	4.2
70	29	18,585	-64.3		26	2.6
60	29	19,533	-62.2		31	.2
50	29	20,665	-60.3		09	2.1
40	29	22,064	-58.2		07	2.1
30	29	23,890	-54.7		04	1.4
25	27	25,058	-52.9		30	1.1
20	26	26,512	-50.6		27	3.9
15	22	28,389	-49.6		27	8.4
10	21	31,064	-46.8		27	15.2
7	9	33,405	-43.4			

+ NOME, ALASKA 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	30	5	-2.3	-5.9	18	.9
1000	30	29			24	1.1
950	30	437	-3.6	-6.3	25	1.7
900	30	862	-6.1	-9.3	25	2.8
850	30	1,307	-8.6	-12.3	25	3.0
800	30	1,775	-11.1	-15.5	25	3.2
750	30	2,269	-13.9	-18.7	25	4.4
700	30	2,790	-16.9	-22.6	27	5.6
650	30	3,343	-20.3	-26.9	27	6.4
600	30	3,931	-24.1	-30.6	26	7.3
550	29	4,559	-28.1	-35.4	26	7.5
500	29	5,237	-32.8	-39.9	26	9.0
450	29	5,971	-37.6	-44.2	26	10.1
400	29	6,775	-43.0		26	12.0
350	29	7,668	-48.2		25	13.2
300	29	8,669	-52.6		25	14.7
250	29	9,848	-51.9		25	14.1
200	29	11,302	-49.7		25	13.7
175	28	12,181	-49.4		25	13.0
150	28	13,190	-49.8		25	14.4
125	28	14,383	-49.6		25	13.1
100	28	15,842	-50.3		25	14.1
80	28	17,296	-51.2		25	14.9
70	28	18,163	-51.7		25	15.9
60	28	19,164	-51.7		25	16.1
50	28	20,345	-52.2		25	15.6
40	28	21,787	-52.7		25	16.5
30	28	23,644	-52.7		25	17.9
25	27	24,826	-52.9		26	18.0
20	25	26,272	-52.7		26	19.4
15	22	28,128	-52.8		26	19.4
10	18	30,756	-51.7		27	22.7
7	11	33,090	-50.4			

NORTH PLATTE, NEBR. 917 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	847	4.2	1.3	02	.6
1000	31	134				
950	31	558				
900	31	1,001	8.1	1.6	20	.1
850	31	1,475	8.7	-.9	27	2.4
800	31	1,976	7.4	-4.1	26	3.8
750	31	2,505	5.3	-6.7	25	5.9
700	31	3,046	2.6	-11.5	26	7.7
650	31	3,662	-1.0	-15.7	26	8.9
600	31	4,295	-5.0	-20.0	25	9.8
550	31	4,974	-9.2	-25.0	25	11.1
500	31	5,705	-14.1	-30.1	25	13.5
450	31	6,496	-19.8	-35.3	25	14.7
400	31	7,359	-26.0	-40.5	25	15.5
350	31	8,315	-33.3	-45.4	24	15.8
300	31	9,376	-41.8	-52.2	25	16.9
250	31	10,589	-50.0		25	18.2
200	31	12,026	-56.0		25	20.4
175	31	12,869	-58.9		25	20.2
150	31	13,833	-60.6		25	19.5
125	31	14,962	-62.8		25	15.3
100	31	16,334	-63.6		25	10.1
80	30	17,711	-62.0		25	6.3
70	30	18,540	-60.6		25	4.1
60	29	19,499	-59.6		25	3.4
50	29	20,643	-58.9		24	3.3
40	29	22,047	-57.7		26	1.4
30	27	23,875	-56.3		27	3.5
25	27	25,034	-55.9		27	4.7
20	24	26,463	-54.5		27	7.5
15	22	28,312	-52.6		27	9.7
10	17	30,951	-49.9		27	13.5
7	6	33,291	-46.0			

OAKLAND, CALIF. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	6	10.3	6.8	28	.4
1000	31	135	11.7	5.4	33	.6
950	31	566	14.2	-.6	34	2.2
900	31	1,022	13.1	-5.1	34	3.0
850	31	1,499	10.3	-7.7	33	3.0
800	31	2,001	7.9	-11.5	33	3.4
750	31	2,530	5.3	-16.6	33	5.0
700	31	3,091	2.4	-18.0	33	5.9
650	31	3,686	-.9	-21.0	32	6.6
600	31	4,320	-4.8	-24.4	32	7.7
550	30	4,998	-9.3	-27.5	32	8.5
500	30	5,728	-14.2	-31.4	32	9.5
450	30	6,518	-20.1	-35.9	32	10.5
400	30	7,380	-26.5	-42.2	32	11.1
350	30	8,334	-33.7	-48.4	32	11.4
300	30	9,394	-41.7	-54.4	32	12.2
250	30	10,606	-50.6		32	13.7
200	30	12,038	-57.0		31	13.9
175	30	12,881	-58.4		31	14.4
150	30	13,845	-60.5		31	13.3
125	30	14,975	-62.8		30	11.5
100	29	16,345	-63.8		30	9.6
80	29	17,714	-63.0		31	5.0
70	28	18,543	-61.5		30	3.1
60	28	19,501	-60.4		31	2.0
50	28	20,641	-58.9		31	.8
40	28	22,045	-57.1		29	.4
30	28	23,880	-54.7		24	1.3
25	26	25,056	-54.1		27	2.9
20	25	26,490	-53.2		27	5.9
15	22	28,347	-52.2		28	8.5
10	14	31,021	-48.5		27	10.3

OMAHA, NEBR. 967 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	403	9.4	6.6	26	.7
1000	31	121				
950	31	549	11.0	5.8	26	1.0
900	31	1,002	11.6	4.0	24	3.7
850	31	1,479	10.0	1.2	25	5.6
800	31	1,982	8.4	-2.9	25	6.8
750	31	2,513	5.8	-6.1	25	8.2
700	31	3,074	2.6	-9.8	24	9.7
650	31	3,671	-.1	-13.4	25	9.7
600	31	4,308	-3.7	-18.4	25	10.0
550	31	4,989	-8.0	-22.4	25	11.0
500	31	5,723	-13.3	-27.2	25	11.9
450	31	6,516	-18.7	-32.4	25	12.6
400	31	7,383	-25.1	-37.9	25	13.9
350	31	8,342	-32.3	-44.1	24	17.4
300	31	9,408	-40.8	-45.8	25	18.2
250	31	10,625	-49.5		25	21.9
200	30	12,063	-55.7		25	25.5
175	30	12,907	-58.6		25	23.5
150	30	13,870	-61.0		25	20.9
125	29	14,993	-63.1		25	16.5
100	26	16,364	-63.8		25	12.4
80	23	17,742	-62.6		26	7.1
70	22	18,572	-60.8		25	4.8
60	20	19,540	-59.7		27	2.8
50	19	20,678	-58.9		28	1.5
40	19	22,081	-57.9		27	.9
30	18	23,896	-56.4		29	3.4
25	18	25,057	-55.3		29	4.2
20	17	26,479	-54.3		28	6.4
15	16	28,329	-52.7		28	8.9
10	9	31,015	-48.9			
7						
5						
4						

+ PAGO PAGO, AMERICAN SAMOA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	5	28.7	23.5	09	4.6
1000	31	117	26.5	19.4	09	5.3
950	31	568	22.8	17.0	08	7.1
900	31	1,037	19.5	13.3	07	6.3
850	31	1,527	16.5	9.1	07	6.2
800	31	2,042	14.3	5.0	07	5.3
750	31	2,585	11.7	.2	08	4.0
700	31	3,160	8.9	-5.9	08	3.5
650	31	3,769	5.7	-10.5	09	3.3
600	31	4,420	2.3	-15.6	10	2.4
550	31	5,118	-1.2	-20.5	13	1.1
500	31	5,871	-5.8	-24.5	14	.8
450	31	6,689	-11.1	-28.5	19	.8
400	31	7,582	-17.2	-34.0	27	2.8
350	31	8,572	-24.4	-40.8	27	4.7
300	31	9,673	-33.0	-48.8	26	7.8
250	31	10,928	-43.3		25	10.8
200	31	12,393	-54.6		25	14.0
175	31	13,236	-60.6		25	13.1
150	31	14,181	-66.8		25	11.1
125	31	15,266	-73.3		25	8.8
100	31	16,559	-75.6		25	5.4
80	31	17,858	-72.4		26	3.0
70	31	18,651	-68.7		27	3.2
60	31	19,582	-65.3		27	3.2
50	31	20,708	-62.2		29	3.0
40	31	22,098	-58.7		30	2.7
30	31	23,914	-54.6		33	1.3
25	30	25,092	-51.5		34	.9
20	27	26,551	-48.2		07	1.1
15	24	28,472	-42.9		06	2.2
10	12	31,237	-37.5			

*** PEORIA, ILL. 992 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	200	11.4	9.4	18	1.2
1000	31	136				
950	31	569	14.6	8.5	24	4.0
900	31	1,025	12.4	5.4	25	4.8
850	31	1,503	10.3	.9	25	5.7
800	31	2,006	8.0	-3.9	24	6.8
750	31	2,536	5.3	-7.5	24	7.9
700	31	3,097	2.7	-11.5	25	7.8
650	31	3,694	.1	-16.4	25	8.6
600	31	4,331	-3.6	-19.1	25	9.4
550	31	5,014	-7.7	-24.1	25	10.8
500	31	5,748	-12.4	-30.4	26	11.9
450	31	6,545	-17.9	-34.2	25	13.2
400	31	7,414	-24.6	-39.4	25	14.9
350	31	8,375	-31.7	-45.0	25	16.6
300	31	9,443	-40.0	-49.8	26	19.1
250	31	10,664	-48.9		26	21.6
200	31	12,104	-56.2		26	22.6
175	31	12,947	-59.0		26	21.4
150	31	13,906	-62.4		26	20.8
125	31	15,024	-65.0		26	16.8
100	31	16,378	-66.1		26	11.6
80	30	17,739	-63.7		26	7.5
70	29	18,562	-61.8		25	4.3
60	29	19,520	-60.6		26	2.6
50	28	20,660	-59.2		25	1.4
40	28	22,061	-58.4		30	1.5
30	28	23,878	-56.7		29	2.0
25	27	25,038	-54.9		28	3.9
20	27	26,471	-53.2		28	6.3
15	25	28,327	-51.8		27	10.1
10	19	30,954	-48.7		27	16.6
7	14	33,294	-45.8		27	20.8
5	7	35,468	-43.1			

*** PITTSBURGH, PA. 976 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	359	11.1	9.6	18	.7
1000	31	158				
950	31	589	13.1	9.1	20	1.8
900	31	1,043	11.8	6.5	23	3.0
850	31	1,520	9.7	1.3	25	4.1
800	31	2,022	8.0	-6.8	25	4.2
750	31	2,552	5.5	-8.5	24	5.6
700	31	3,113	2.7	-11.5	24	7.0
650	31	3,710	-.3	-15.0	24	7.3
600	31	4,346	-3.8	-19.6	25	7.4
550	31	5,028	-7.6	-24.3	25	7.8
500	31	5,764	-12.2	-28.9	25	9.2
450	31	6,561	-17.8	-34.4	25	10.9
400	31	7,431	-24.1	-39.4	25	11.3
350	31	8,393	-31.3	-45.6	25	13.2
300	31	9,464	-39.7	-51.3	25	14.7
250	31	10,686	-48.8		25	16.1
200	31	12,125	-56.9		26	18.1
175	29	12,966	-59.3		27	17.8
150	29	13,924	-62.7		27	16.1
125	29	15,040	-65.4		27	12.8
100	28	16,386	-66.7		27	9.9
80	28	17,745	-63.8		27	6.4
70	28	18,567	-62.1		28	4.8
60	28	19,524	-60.6		29	3.0
50	28	20,663	-59.4		29	2.7
40	27	22,063	-58.2		30	2.8
30	27	23,882	-56.0		30	3.9
25	27	25,045	-54.8		29	.6
20	25	26,477	-53.1		28	8.1
15	23	28,344	-51.1		27	11.3
10	21	30,993	-48.3		27	15.5
7	20	33,365	-44.0		27	18.7
5	13	35,717	-39.7			
4	6	37,346	-37.5			

+ PONAPE, CAROLINE IS. 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	39	28.3	24.0	09	1.7
1000	31	83	26.8	20.5	09	2.0
950	31	535	23.6	17.9	10	4.9
900	31	1,006	20.6	14.8	10	5.3
850	31	1,499	17.7	11.3	10	6.0
800	31	2,016	15.1	7.8	10	5.3
750	31	2,560	12.2	4.2	10	5.2
700	31	3,136	9.1	.1	10	5.8
650	31	3,747	5.9	-3.8	10	5.7
600	31	4,399	2.2	-8.0	10	5.3
550	31	5,097	-1.5	-12.6	10	4.6
500	31	5,851	-5.6	-16.6	10	3.7
450	31	6,670	-10.3	-22.6	10	3.0
400	31	7,568	-15.7	-29.7	09	2.0
350	31	8,564	-22.6	-36.5	05	1.0
300	31	9,674	-30.9	-45.3	30	1.0
250	31	10,941	-41.3	-52.9	30	4.3
200	31	12,415	-53.8		28	7.2
175	31	13,260	-60.4		28	8.2
150	31	14,204	-67.8		28	8.2
125	31	15,283	-74.7		28	6.0
100	31	16,558	-79.8		06	2.3
80	31	17,842	-73.2		09	6.3
70	31	18,632	-69.2		09	3.8
60	30	19,561	-66.3		30	.4
50	29	20,677	-62.5		30	1.9
40	29	22,067	-58.6		30	1.8
30	27	23,895	-54.9		11	.9
25	24	25,066	-53.2		11	3.3
20	24	26,518	-49.4		12	5.4
15	19	28,405	-46.4		10	8.6
10	15	31,131	-41.2		10	16.5
7	7	33,577	-36.6			

PORTLAND, MAINE 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	20	8.0	5.5	33	.7
1000	31	171	10.7	6.1	01	.8
950	31	600	10.9	3.5	29	1.6
900	31	1,049	9.1	.8	27	3.6
850	31	1,522	8.0	-3.4	28	5.5
800	31	2,022	6.8	-8.6	27	6.9
750	31	2,550	4.6	-11.6	27	8.4
700	31	3,109	1.6	-14.0	27	10.0
650	31	3,703	-1.3	-16.8	28	11.7
600	31	4,337	-4.8	-20.9	28	13.2
550	31	5,016	-8.7	-24.5	27	13.8
500	31	5,748	-13.3	-28.4	27	15.3
450	31	6,542	-18.6	-33.4	27	16.4
400	31	7,410	-24.7	-38.7	27	18.6
350	31	8,371	-31.7	-44.5	27	20.7
300	31	9,441	-39.5	-52.0	27	23.3
250	31	10,666	-48.1		27	24.9
200	30	12,109	-56.8		28	23.2
175	30	12,950	-59.5		28	23.4
150	30	13,908	-62.1		28	21.7
125	30	15,032	-63.6		28	18.7
100	30	16,400	-63.5		29	13.4
80	30	17,776	-61.5		29	8.5
70	30	18,608	-60.0		29	7.1
60	30	19,572	-59.3		29	6.9
50	30	20,717	-58.3		30	5.6
40	30	22,124	-57.6		30	5.6
30	29	23,949	-55.4		29	6.2
25	29	25,115	-53.9		29	7.4
20	28	26,553	-52.2		28	8.7
15	25	28,426	-49.9		27	12.0
10	16	31,099	-46.8		27	15.6
7						
5						

*** QUILLAYUTE, WASH. 1011 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	58	7.6	5.7	12	.8
1000	31	147	8.3	5.9	15	1.1
950	31	572	7.5	3.4	19	3.8
900	31	1,016	5.2	.1	22	4.4
850	31	1,481	2.9	-4.2	24	5.6
800	31	1,971	1.2	-8.0	25	7.0
750	31	2,488	-1.1	-11.8	25	8.5
700	31	3,036	-4.2	-14.9	25	10.0
650	31	3,617	-7.1	-16.8	26	11.2
600	31	4,237	-10.6	-20.5	26	11.4
550	31	4,902	-14.4	-25.0	27	13.6
500	31	5,618	-18.9	-28.1	28	15.1
450	31	6,395	-24.3	-32.6	28	16.9
400	31	7,244	-30.1	-37.4	28	18.7
350	31	8,184	-36.8	-43.8	29	20.0
300	31	9,232	-44.1		29	19.9
250	31	10,436	-51.3		29	19.7
200	31	11,866	-56.4		29	19.3
175	31	12,712	-57.4		28	17.1
150	31	13,686	-58.1		29	16.3
125	30	14,830	-59.4		29	13.9
100	30	16,226	-59.5		29	10.4
80	29	17,621	-59.5		28	7.8
70	28	18,463	-58.9		29	5.8
60	26	19,439	-59.1		29	4.3
50	23	20,596	-58.4		29	3.9
40	23	22,002	-57.8		29	3.0
30	20	23,838	-56.9		31	2.8
25	20	24,995	-56.2		31	2.1
20	20	26,417	-55.0		31	2.2
15	16	28,270	-52.6		33	3.0
10	11	30,904	-50.4		33	4.2
7	5	33,197	-48.0			

RAPID CITY, S. DAK. 904 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	966	4.4	-.6	33	2.9
1000	31	130				
950	31	554				
900	31	998			33	2.6
850	31	1,468	6.5	-3.7	31	5.1
800	31	1,964	4.0	-6.3	31	6.1
750	31	2,486	1.7	-7.5	29	5.8
700	31	3,040	-.5	-10.7	27	6.8
650	31	3,631	-3.0	-13.4	27	8.7
600	31	4,261	-6.6	-17.6	26	9.5
550	31	4,935	-11.0	-21.5	26	9.9
500	31	5,660	-15.9	-26.7	25	10.4
450	31	6,446	-21.3	-33.3	25	11.4
400	31	7,303	-28.1	-39.8	26	12.4
350	31	8,250	-35.2	-46.1	26	13.0
300	31	9,305	-43.1		25	15.0
250	31	10,511	-51.4		26	16.0
200	31	11,942	-56.8		26	18.0
175	31	12,785	-58.7		25	17.4
150	31	13,751	-59.4		25	16.5
125	30	14,888	-60.0		25	13.3
100	30	16,274	-61.9		25	9.5
80	29	17,662	-61.0		25	6.9
70	28	18,489	-60.5		26	5.2
60	28	19,450	-60.0		27	4.3
50	28	20,592	-58.9		25	3.1
40	27	21,993	-58.2		26	4.1
30	25	23,801	-58.1		27	4.7
25	25	24,952	-57.1		27	5.1
20	22	26,369	-56.2		28	5.9
15	16	28,219	-53.7		26	6.5
10	11	30,867	-51.1			

ST CLOUD, MINN. 977 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	316	7.2	5.0	22	.6
1000	31	119				
950	31	543	7.9	5.0	22	.9
900	31	989	7.5	1.8	26	3.6
850	31	1,460	6.5	-2.6	26	5.7
800	31	1,957	5.0	-5.5	26	7.8
750	31	2,482	2.8	-7.8	27	8.6
700	31	3,037	.0	-13.2	27	9.5
650	31	3,628	-3.0	-17.2	27	11.2
600	31	4,250	-6.4	-20.5	26	12.7
550	31	4,933	-10.5	-24.6	26	14.1
500	31	5,659	-15.5	-29.6	25	15.6
450	31	6,446	-21.1	-35.5	25	16.7
400	31	7,305	-27.6	-39.9	25	18.4
350	31	8,254	-34.6	-44.0	26	21.5
300	31	9,311	-42.4	-47.2	25	22.7
250	31	10,520	-50.5		26	25.3
200	31	11,955	-56.3		26	25.1
175	31	12,801	-57.5		26	24.6
150	31	13,770	-59.3		26	22.0
125	31	14,907	-60.9		26	16.0
100	31	16,292	-61.1		26	11.0
80	30	17,680	-60.3		26	7.9
70	30	18,516	-59.3		26	6.6
60	30	19,492	-59.0		26	5.7
50	30	20,626	-58.9		27	4.3
40	28	22,033	-58.3		28	4.4
30	27	23,848	-58.0		29	5.3
25	26	25,001	-57.1		29	5.4
20	23	26,418	-56.0		29	5.5
15	22	28,264	-53.9		29	6.7
10	15	30,841	-51.1			

*** ST PAUL IS., ALASKA 1009 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M/S
SURFACE	31	10	3.0	1.4	27	4.0
1000	31	64			28	4.7
950	31	498	.1	-2.3	27	7.1
900	31	929	-3.3	-4.6	27	7.5
850	31	1,379	-6.2	-8.2	27	8.4
800	31	1,851	-8.6	-13.9	28	8.3
750	31	2,350	-10.9	-18.9	28	8.7
700	31	2,877	-13.5	-22.8	28	9.2
650	31	3,438	-16.2	-26.7	28	10.6
600	31	4,037	-19.5	-30.2	28	11.4
550	31	4,678	-23.5	-33.7	28	12.1
500	31	5,369	-28.1	-37.6	29	12.5
450	31	6,117	-33.0	-41.9	28	12.5
400	31	6,937	-38.0	-44.0	28	14.3
350	31	7,848	-43.8	-43.9	29	16.3
300	31	8,868	-49.4		28	15.7
250	31	10,054	-52.2		29	16.4
200	31	11,502	-50.7		26	18.0
175	31	12,373	-50.5		27	15.9
150	31	13,378	-50.7		26	13.4
125	31	14,566	-50.8		26	13.4
100	31	16,020	-50.9		26	12.3
80	31	17,471	-51.3		25	11.6
70	31	18,339	-51.2		25	11.4
60	31	19,341	-51.5		25	12.0
50	31	20,524	-51.5		26	11.9
40	31	21,973	-51.6		26	10.4
30	31	23,841	-51.5		26	10.4
25	28	25,028	-51.4		27	10.3
20	28	26,480	-50.7		26	9.9
15	27	28,355	-50.5		27	9.6
10	25	31,012	-49.0		28	10.1
7	22	33,360	-46.9		29	12.5
5	15	35,598	-46.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALEM, ILL. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	134	12.5	10.4	18	.9
1000	31	134				
950	31	575	16.0	8.1	24	3.7
900	31	1,034	13.9	4.8	25	4.9
850	31	1,514	11.3	[illegible]	25	5.3
800	31	2,016	8.8	-4.5	25	5.5
750	31	2,550	6.3	-9.5	25	6.4
700	31	3,112	3.7	-13.6	25	7.2
650	31	3,711	.9	-19.1	25	7.3
600	31	4,350	-2.5	-24.7	25	7.7
550	31	5,035	-6.5	-27.9	25	8.3
500	31	5,772	-11.4	-32.2	25	9.4
450	31	6,572	-17.0	-36.8	25	11.0
400	31	7,444	-23.4	-40.9	26	12.5
350	31	8,410	-30.7	-46.6	26	14.2
300	31	9,483	-39.1	-52.1	26	16.6
250	31	10,708	-48.1		26	19.3
200	31	12,149	-56.5		27	21.1
175	31	12,991	-59.3		26	19.8
150	31	14,949	-62.9		26	18.6
125	31	15,061	-66.3		27	16.1
100	31	16,475	-67.3		26	10.7
80	31	17,757	-64.7		26	6.9
70	31	18,578	-62.6		25	3.7
60	31	19,532	-61.2		25	1.8
50	31	20,669	-59.5		26	.6
40	29	22,071	-57.8		04	.9
30	28	23,900	-55.5		33	1.6
25	28	25,067	-53.8		29	3.1
20	26	26,513	-51.8		29	4.5
15	25	28,391	-50.7		27	9.8
10	12	31,029	-47.5		27	18.7
7						

SALEM, OREG. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	51	6.9	5.6	19	1.1
1000	31	158	8.7	6.6	23	.8
950	31	583	8.8	3.9	22	1.3
900	31	1,030	7.5	-.5	22	2.3
850	31	1,499	5.7	-4.1	25	3.8
800	31	1,993	3.4	-7.5	26	4.4
750	31	2,515	1.2	-11.1	28	5.4
700	31	3,067	-1.9	-15.3	29	6.4
650	31	3,653	-5.3	-19.8	29	7.7
600	31	4,277	-8.9	-23.3	29	8.5
550	31	4,946	-12.7	-25.8	30	9.9
500	31	5,667	-17.3	-29.7	30	11.6
450	31	6,449	-22.5	-31.9	30	12.6
400	31	7,303	-28.8	-37.5	29	14.2
350	31	8,248	-35.5	-43.6	30	16.1
300	31	9,302	-43.1		30	17.8
250	31	10,512	-51.0		29	16.7
200	31	11,942	-57.1		28	16.4
175	31	12,785	-58.4		29	16.2
150	31	13,752	-59.2		29	14.4
125	29	14,896	-60.7		29	12.6
100	29	16,283	-61.0		29	9.1
80	29	17,678	-60.3		29	5.7
70	27	18,509	-59.6		28	5.5
60	26	19,476	-58.9		28	4.6
50	26	20,621	-58.9		28	3.3
40	23	22,023	-57.9		27	3.1
30	18	23,851	-57.2		27	4.1
25	17	25,010	-56.4		27	3.6
20	14	26,455	-54.3		29	3.6
15	11	28,305	-53.0		29	3.6
10	6	30,976	-49.5			
7						

SALT LAKE CITY, UTAH — 8[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	1,288	[illegible]	[illegible]	[illegible]	3.3
1000	31	144				
950	31	572				
900	31	1,020				
850	31	1,490	7.9	-.8	18	3.6
800	31	1,989	6.0	-4.5	19	3.0
750	30	2,515	4.0	-7.5	22	[illegible]
700	31	3,071	-.4	-11.5	26	3.9
650	31	3,660	-3.6	-15.7	27	3.9
600	30	4,298	-7.3	-19.7	28	4.8
550	31	4,961	-11.3	-24.1	27	5.6
500	30	5,685	-16.2	-28.4	26	6.9
450	30	6,470	-21.7	-33.5	25	8.1
400	30	7,326	-28.2	-39.7	28	7.3
350	30	8,273	-35.6	-45.6	26	8.1
300	30	9,325	-43.1		26	8.4
250	30	10,533	-50.5		27	8.2
200	31	11,970	-56.0		27	9.4
175	31	12,816	-57.6		27	9.3
150	30	13,786	-59.0		26	8.7
125	30	14,925	-60.9		25	9.1
100	30	16,312	-61.0		25	7.1
80	30	17,699	-61.1		24	4.8
70	30	18,530	-60.1		25	3.8
60	30	19,494	-59.5		25	2.9
50	30	20,637	-58.6		26	2.1
40	30	22,044	-57.1		25	2.2
30	30	23,871	-56.1		26	4.1
25	30	25,032	-55.5		28	5.4
20	29	26,460	-54.5		28	6.1
15	28	28,304	-53.3		28	7.3
10	10	30,903	-51.0			
7						

[illegible], CALIF. — [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	[illegible]	[illegible]	[illegible]	[illegible]	.4
1000	31	[illegible]				.8
950	31	556	[illegible]	[illegible]	[illegible]	.4
900	31	[illegible]	[illegible]	[illegible]	[illegible]	.2
850	31	1,496	[illegible]	-6.[illegible]	31	2.1
800	31	1,996	[illegible]	-9.[illegible]	[illegible]	[illegible]
750	31	2,528	6.4	-12.6	31	[illegible]
700	31	3,090	3.0	-14.[illegible]	[illegible]	4.[illegible]
650	31	3,684	-.3	-18.[illegible]	[illegible]	5.[illegible]
600	31	4,319	-3.9	-21.6	30	6.4
550	31	5,001	-8.[illegible]	-26.4	29	7.4
500	31	5,734	-13.3	-30.5	30	8.5
450	31	6,527	-19.0	-36.7	29	9.6
400	31	7,392	-26.0	-42.3	28	9.9
350	31	8,347	-33.5	-47.6	27	11.0
300	31	9,408	-4[illegible]	-5[illegible]	27	13.1
250	31	10,625	-48.8		27	18.1
200	31	12,070	-55.2		26	19.5
175	31	12,918	-57.8		26	20.5
150	30	13,883	-60.8		26	19.2
125	30	15,008	-64.3		27	17.3
100	30	16,368	-66.0		28	12.0
80	29	17,725	-65.5		26	4.2
70	29	18,542	-63.3		25	3.1
60	29	19,493	-61.5		26	.8
50	26	20,631	-59.2		11	2.1
40	24	22,037	-57.1		10	2.5
30	25	23,868	-54.5		09	2.7
25	26	25,041	-52.9		10	2.1
20	26	26,487	-51.3		04	.5
15	25	26,368	-49.5		27	3.7
10	21	31,043	-47.4		28	9.6
7	7	33,471	-43.1			

SAN JUAN, P.R. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	[illegible]	24.3	20.8	16	1.8
1000	31	127	24.6	20.9	11	2.8
950	31	571	22.0	18.2	10	5.6
900	31	1,045	19.1	14.4	10	6.1
850	31	1,535	16.2	10.7	10	[illegible]
800	31	2,049	13.6	[illegible]	[illegible]	5.5
750	31	2,591	10.8	2.5	10	4.7
700	31	3,163	7.6	-1.5	11	[illegible]
650	31	3,770	[illegible]	-4.4	12	3.1
600	31	4,418	.3	-8.[illegible]	12	[illegible]
550	31	5,110	-3.8	-12.[illegible]	13	1.9
500	31	5,857	-6.4	-1[illegible]	12	[illegible]
450	31	6,667	-13.4	-23.[illegible]	08	.8
400	31	7,553	-19.3	-30.[illegible]	[illegible]	.4
350	31	8,536	-26.3	-38.6	33	.6
300	31	9,628	-34.9	-4[illegible]	29	[illegible]
250	31	10,872	-45.3		27	4.0
200	31	12,326	-56.4		28	6.9
175	31	13,162	-62.1		28	7.5
150	30	14,102	-68.0		30	6.5
125	30	15,182	-73.5		30	5.0
100	29	16,478	-75.6		3[illegible]	[illegible]
80	29	17,779	-72.0		08	[illegible]
70	29	18,572	-68.3		06	3.3
60	27	19,501	-65.0		07	5.2
50	26	20,622	-61.6		07	7.4
40	25	22,011	-58.6		09	9.[illegible]
30	25	23,843	-53.6		09	11.2
25	24	25,018	-51.4		09	11.8
20	2[illegible]	26,476	-48.7		09	1[illegible]
15	17	28,396	-43.6		09	14.9
10	11	31,147	-39.7			
7						

*** SAULT STE MARIE, MICH.** — 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	221	8.8	6.7	08	1.1
1000	31	124				
950	31	550	9.0	5.4	21	2.4
900	31	998	8.4	4.4	24	5.7
850	31	1,469	6.3	.7	25	7.2
800	31	1,965	[illegible]	-3.9	25	9.0
750	31	2,488	1.6	-7.0	25	11.1
700	31	3,042	-1.2	-9.8	25	12.0
650	31	3,630	-4.0	-14.5	26	13.1
600	31	4,258	-7.4	-17.5	26	15.2
550	31	4,931	-11.0	-22.4	26	16.4
500	31	5,657	-15.5	-27.7	26	17.1
450	31	6,443	-21.2	-33.7	26	18.2
400	31	7,302	-27.6	-39.4	26	21.0
350	31	8,252	-34.4	-45.1	26	23.8
300	31	9,309	-42.2	-48.9	26	24.1
250	31	10,521	-50.0		26	24.6
200	29	11,955	-55.5		26	26.9
175	29	12,802	-57.3		26	26.2
150	29	13,773	-59.0		26	22.9
125	29	14,910	-61.2		26	19.6
100	29	16,293	-61.2		26	14.4
80	29	17,681	-60.0		27	9.9
70	29	18,517	-59.2		27	8.1
60	29	19,484	-58.9		27	6.7
50	29	20,638	-58.3		28	6.5
40	29	22,035	-58.1		29	5.4
30	29	23,852	-57.0		29	5.7
25	29	25,008	-56.3		29	6.5
20	29	26,430	-55.0		29	7.9
15	27	28,285	-53.0		28	8.8
10	16	30,909	-5[illegible].0		27	10.1
7	11	33,261	-46.9			

*** SHEMYA, ALASKA** — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	22	38	4.7	.5	24	5.4
1000	22	112			25	6.7
950	22	528	1.1	-1.6	26	8.2
900	22	961	-2.0	-4.4	26	8.4
850	22	1,413	-4.5	-9.8	27	8.6
800	22	1,890	-5.5	-16.5	27	9.8
750	22	2,394	-7.7	-18.7	27	10.6
700	22	2,928	-10.5	-22.2	27	11.1
650	22	3,495	-13.4	-25.7	27	12.6
600	22	4,101	-16.8	-28.6	28	13.7
550	22	4,749	-21.1	-31.7	27	15.7
500	22	5,445	-25.9	-37.1	27	16.4
450	22	6,200	-31.2	-41.6	27	17.1
400	22	7,025	-36.9	-46.6	27	18.3
350	22	7,941	-42.6	-45.7	27	19.2
300	22	8,964	-49.2		28	22.2
250	22	10,149	-52.8		27	24.5
200	21	11,576	-53.2		27	26.3
175	21	12,438	-52.6		27	25.3
150	21	13,433	-52.9		27	23.2
125	21	14,608	-53.3		27	22.0
100	21	16,045	-53.6		26	17.9
80	21	17,480	-53.6		26	16.7
70	20	18,339	-53.4		26	15.6
60	20	19,332	-53.3		26	14.1
50	20	20,507	-52.9		25	12.2
40	20	21,948	-52.8		25	10.9
30	17	23,813	-52.2		25	10.9
25	14	24,993	-51.9		26	8.8
20	14	26,440	-52.0		25	6.8
15	13	28,294	-51.5		25	7.7
10	11	30,955	-48.8			
7	8	33,352	-45.8			

*** SHREVEPORT, LA.** — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	79	16.6	14.6	19	.5
1000	31	138	17.7	15.0	19	.9
950	31	579	18.0	13.0	20	3.8
900	31	1,041	15.6	9.7	21	3.7
850	31	1,524	13.1	4.2	22	3.6
800	31	2,033	11.1	-.3	23	3.9
750	31	2,569	8.9	-4.4	24	4.3
700	31	3,137	5.7	-8.8	24	4.6
650	31	3,740	2.4	-12.4	24	5.0
600	31	4,383	-1.1	-15.4	25	6.5
550	31	5,072	-5.3	-19.5	26	8.2
500	31	5,814	-9.9	-25.1	25	9.3
450	31	6,618	-15.3	-30.5	26	9.9
400	31	7,497	-21.6	-36.0	26	13.4
350	31	8,470	-28.4	-42.6	26	16.4
300	31	9,554	-36.6	-49.6	26	20.1
250	31	10,792	-46.0		27	23.4
200	31	12,243	-56.0		27	26.2
175	31	13,083	-61.3		27	24.4
150	31	14,027	-66.3		27	20.0
125	31	15,119	-70.9		26	14.5
100	31	16,432	-72.5		25	8.7
80	31	17,748	-69.9		23	2.6
70	31	18,551	-66.3		19	1.0
60	31	19,491	-63.6		11	2.5
50	31	20,619	-60.5		10	3.3
40	31	22,016	-58.2		09	2.7
30	27	23,844	-54.4		05	2.2
25	26	25,019	-52.6		06	2.1
20	24	26,472	-50.1		15	.2
15	18	28,381	-47.3		29	1.4
10	13	31,080	-45.2		29	9.1
7	6	33,442	-42.5			

SPOKANE, WASH. — 933 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	720	3.1	-1.3	20	1.3
1000	31	151				
950	31	571				
900	31	1,014	6.3	-.1	21	2.0
850	31	1,481	4.4	-3.7	24	2.9
800	31	1,973	1.9	-6.0	25	4.5
750	31	2,491	-.7	-8.4	27	5.5
700	31	3,048	-3.4	-12.2	27	6.5
650	31	3,623	-6.8	-16.0	28	7.9
600	31	4,244	-10.3	-19.6	28	9.3
550	31	4,909	-14.4	-23.6	28	10.7
500	31	5,625	-19.1	-27.9	28	11.8
450	31	6,402	-24.1	-32.5	28	12.6
400	31	7,250	-30.4	-37.0	28	13.9
350	31	8,190	-37.0	-42.3	28	14.6
300	31	9,237	-44.4		29	16.2
250	31	10,438	-51.7		29	17.7
200	31	11,878	-55.6		28	16.3
175	31	12,720	-56.1		28	16.0
150	30	13,705	-57.5		29	13.1
125	30	14,855	-58.4		29	11.1
100	30	16,256	-59.0		28	8.9
80	30	17,658	-58.1		27	7.2
70	30	18,500	-57.9		27	5.6
60	30	19,473	-57.8		27	4.8
50	30	20,623	-57.7		26	4.5
40	28	22,027	-57.4		28	2.5
30	27	23,853	-56.2		28	3.0
25	26	25,018	-55.5		28	3.3
20	23	26,441	-54.4		31	2.6
15	21	28,302	-53.4		32	3.3
10	13	30,963	-50.5			
7						

*** SWAN ISLAND, W. I.** — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	10	26.1	23.1	10	3.2
1000	31	104	25.9	23.1	11	3.5
950	30	555	22.7	20.8	11	4.3
900	31	1,026	19.9	16.2	12	4.2
850	30	1,517	16.7	12.7	12	3.8
800	30	2,032	14.0	9.5	13	3.2
750	30	2,575	11.2	5.3	13	3.4
700	30	3,149	8.3	.0	14	3.0
650	31	3,759	5.0	-4.0	12	2.4
600	30	4,408	1.6	-8.7	12	2.3
550	30	5,105	-2.0	-13.9	07	[illegible]
500	30	5,857	-6.4	-18.7	05	2.9
450	30	6,673	-11.3	-24.2	05	3.4
400	31	7,567	-17.0	-30.2	03	4.1
350	30	8,559	-24.1	-37.5	02	4.4
300	30	9,661	-32.6	-45.0	01	4.2
250	31	10,918	-43.0		01	4.8
200	30	12,382	-55.4		35	5.2
175	31	13,221	-62.1		35	5.7
150	30	14,157	-69.2		35	5.6
125	28	15,229	-75.1		36	5.8
100	27	16,515	-77.0		03	4.0
80	27	17,809	-72.4		07	3.9
70	27	18,602	-68.7		08	4.4
60	27	19,531	-65.6		08	6.0
50	27	20,649	-62.4		09	6.3
40	27	22,040	-58.2		08	8.0
30	27	23,872	-53.3		09	10.5
25	26	25,053	-50.7		09	11.4
20	25	26,516	-47.7		09	13.2
15	23	28,431	-44.0		09	16.3
10	18	31,198	-39.4		10	19.2
7	10	33,651	-35.5			

TAMPA, FLA. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	8	21.2	19.8	07	2.2
1000	31	130	22.0	19.5	09	2.3
950	31	576	20.7	17.[illegible]	10	2.2
900	31	1,043	18.0	13.8	13	1.5
850	31	1,531	15.1	10.5	18	1.7
800	31	2,043	12.7	5.4	20	1.8
750	31	2,584	10.3	-.[illegible]	20	1.4
700	31	3,155	7.7	-5.2	20	.5
650	31	3,763	4.3	-9.9	30	.5
600	31	4,410	.6	-14.5	30	1.5
550	31	5,103	-3.5	-21.4	30	2.6
500	31	5,849	-8.4	-24.9	29	3.8
450	31	6,658	-13.8	-29.3	28	4.[illegible]
400	31	7,543	-19.9	-35.5	29	4.9
350	31	8,522	-26.9	-42.5	30	6.1
300	31	9,612	-35.5	-49.9	30	7.9
250	31	10,855	-45.5		30	11.0
200	31	12,309	-55.7		30	11.0
175	31	13,148	-61.4		30	11.9
150	31	14,092	-66.5		30	10.7
125	31	15,182	-71.5		31	9.0
100	31	16,492	-72.9		32	3.4
80	30	17,804	-71.0		[illegible]	2.9
70	30	18,602	-67.7		07	3.6
60	30	19,538	-64.2		08	5.0
50	30	20,662	-61.2		09	5.4
40	30	22,058	-57.6		08	5.8
30	30	23,895	-53.3		08	5.8
25	30	25,073	-51.5		08	6.4
20	27	26,530	-48.0		08	6.5
15	2[illegible]	28,444	-44.7		08	3.9
10	18	31,[illegible]82	-41.8		08	.9
7						

TOPEKA, KANS. — 984 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	268	11.6	8.0	18	.5
1000	31	129				
950	31	560	13.9	7.4	21	3.0
900	31	1,017	13.0	5.9	23	5.0
850	31	1,496	10.7	2.4	25	6.6
800	31	2,009	8.7	-1.2	24	6.3
750	31	2,532	6.3	-4.1	24	7.5
700	31	3,095	3.5	-8.6	24	8.0
650	31	3,694	.6	-11.9	25	8.7
600	31	4,332	-3.2	-17.6	25	9.0
550	31	5,014	-7.9	-22.5	25	10.3
500	31	5,748	-13.1	-27.2	25	12.1
450	31	6,543	-18.2	-31.5	25	12.9
400	31	7,412	-24.4	-37.6	25	14.5
350	31	8,374	-31.5	-42.4	25	16.7
300	31	9,444	-39.6	-47.9	25	19.0
250	31	10,668	-48.2		25	21.5
200	31	12,111	-55.9		26	24.3
175	31	12,955	-59.2		26	24.0
150	31	13,914	-62.3		26	20.8
125	31	15,033	-65.3		25	17.8
100	30	16,337	-65.6		25	11.2
80	27	17,746	-63.5		25	5.5
70	27	18,569	-62.1		26	3.5
60	27	19,525	-61.0		25	2.4
50	27	20,663	-59.1		23	1.8
40	27	22,067	-57.7		25	1.3
30	22	23,880	-55.3		26	2.4
25	22	25,047	-54.1		27	2.9
20	21	26,499	-52.5		26	5.9
15	20	28,388	-50.7		27	9.0
10	15	30,999	-47.8		27	13.9
7						

+ TRUK, CAROLINE IS. — 10[illegible]1 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	2	28.6	24.1	09	2.5
1000	31	77	27.4	[illegible]	09	2.8
950	31	550	24.0	18.6	10	4.6
900	31	1,021	21.1	14.8	10	5.2
850	31	1,515	18.1	11.1	10	5.2
800	31	2,033	15.5	7.5	10	5.5
750	31	2,578	12.7	4.1	09	6.0
700	31	3,155	9.5	.5	10	6.3
650	31	3,766	6.1	-4.0	10	6.7
600	31	4,418	2.4	-7.9	10	6.7
550	31	5,117	-1.3	-11.8	09	5.7
500	31	5,871	-5.3	-17.6	09	4.1
450	31	6,692	-10.1	-22.7	09	3.7
400	31	7,590	-15.6	-29.4	06	1.2
350	31	8,587	-22.5	-37.2	32	1.4
300	31	9,699	-30.5	-45.3	31	3.1
250	31	10,967	-41.0	-52.8	30	5.1
200	31	12,443	-53.5		30	7.3
175	31	13,288	-60.6		29	8.9
150	31	14,231	-67.7		29	9.4
125	31	15,308	-74.9		29	6.1
100	31	16,596	-78.7		07	4.7
80	31	17,870	-72.8		09	7.4
70	31	18,662	-68.8		09	4.1
60	31	19,592	-66.0		08	1.3
50	31	20,711	-61.5		32	1.5
40	31	22,106	-58.0		31	1.6
30	30	23,933	-54.7		10	2.1
25	2[illegible]	25,106	-52.4		[illegible]	2.9
20	2[illegible]	26,561	-49.2		[illegible]	[illegible]
15	2[illegible]	28,468	-46.3		[illegible]	8.2
10	[illegible]	31,197	-40.5		[illegible]	10.9
7	5	33,655	-35.1			

*** TUCSON, ARIZ.** — 924 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	31	789	13.3	6.9	14	2.7
1000	31	111				
950	31	549				
900	31	1,007	15.5	4.6	14	3.4
850	31	1,490	13.4	1.8	17	3.4
800	31	1,998	10.3	-1.1	19	5.0
750	31	2,532	7.1	-5.8	20	6.3
700	31	3,096	3.6	-9.6	21	6.4
650	31	3,694	.0	-14.7	22	7.2
600	31	4,330	-3.8	-19.7	23	8.1
550	31	5,012	-8.2	-24.0	24	9.1
500	31	5,744	-13.2	-28.7	24	10.3
450	31	6,538	-18.8	-33.6	24	12.4
400	31	7,404	-25.3	-39.2	24	13.5
350	31	8,362	-32.6	-45.2	24	15.0
300	31	9,428	-40.5	-51.2	24	18.1
250	31	10,651	-47.6		24	21.1
200	31	12,103	-54.6		25	24.9
175	31	12,952	-57.8		25	24.5
150	31	13,915	-61.8		25	21.7
125	31	15,034	-65.5		25	[illegible]
100	31	16,380	-68.4		25	10.9
80	31	17,722	-66.0		25	5.2
70	30	18,537	-63.6		24	2.3
60	28	19,483	-62.3		09	.5
50	27	20,617	-59.9		11	1.3
40	26	22,019	-57.9		10	1.6
30	25	23,849	-54.7		08	2.4
25	24	25,017	-53.4		08	1.8
20	23	26,454	-51.9		01	.6
15	2[illegible]	28,325	-49.8		28	5.8
10	1[illegible]	31,003	-47.2		28	12.5
7	[illegible]	33,3[illegible]	[illegible]			

*** VANDENBERG AFB, CALIF.** — 1004 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Direction	Speed
SURFACE	29	100	9.0	5.7	07	.9
1000	29	128	1[illegible].2	5.7	05	1.3
950	29	562	16.8	.2	02	4.3
900	29	1,021	15.0	-2.6	01	3.8
850	29	1,502	[illegible]	-5.6	36	[illegible]
800	29	2,007	9.4	-8.6	35	3.[illegible]
750	29	2,540	6.7	-11.2	34	3.9
700	29	3,103	3.5	-14.8	34	4.[illegible]
650	29	3,706	.2	-18.0	33	6.1
600	29	4,337	-3.5	-21.8	32	7.0
550	29	5,019	-7.9	-24.9	32	7.4
500	29	5,753	-13.[illegible]	-29.4	32	8.[illegible]
450	29	6,547	-19.1	-34.7	32	9.3
400	29	7,411	-2[illegible].9	-4[illegible]	32	9.7
350	29	8,3[illegible]	-33.5	-4[illegible]	32	9.7
300	29	9,427	-4[illegible].8		32	11.4
250	29	10,640	-4[illegible].8		32	11.[illegible]
200	29	12,077	-56.0		30	14.1
175	29	12,923	-58.1		30	14.3
150	29	13,848	-60.6		29	13.4
125	29	15,015	-63.5		29	12.4
100	29	16,376	-65.9		29	[illegible]
80	29	17,736	-64.1		29	[illegible]
70	29	18,556	-62.5		29	[illegible]
60	29	19,512	-60.9		29	[illegible]
50	29	20,651	-58.9		32	.4
40	29	22,068	-56.7		[illegible]	[illegible]
30	27	23,896	-5[illegible].3		[illegible]	[illegible]
25	26	25,069	-53.3		[illegible]	[illegible]
20	23	26,524	-5[illegible]		[illegible]	.4
15	20	28,399	-5[illegible].5		28	[illegible]
10	19	31,064	-47.9		30	11.4
7	12	33,443	-4[illegible].2			
	[illegible]	35,139	-4[illegible].6			

* See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	VICTORIA, TEXAS 1014 MB						* GUAM IS., PACIFIC AREA 1014 MB						* WALLOPS IS., VA. NASA 1018 MB						WASHINGTON DULLES INT. AP 1009 MB						WAYCROSS, GA. 1010 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	43	19.6	18.2	09	1.6	3.	5	27.1	23.1	07	6.4	30	4	17.8	15.7	09	2.0	31	85	12.4	11.5	36	1.8	31	44	17.4	16.7	01	.9
1000	31	128	21.5	18.1	09	1.9	31	128	26.1	21.7	07	7.0	30	153	17.4	14.7	09	2.7	31	151	14.6	12.9	04	1.8	31	130	19.2	17.0	02	1.5
950	31	573	19.7	15.4	15	3.8	31	579	22.4	19.8	08	8.0	30	581	15.9	12.6	10	2.3	31	596	14.3	9.9	09	1.6	31	573	19.2	14.3	04	2.4
900	31	1,037	17.1	11.6	17	3.7	31	1,049	19.3	16.2	08	8.1	30	1,049	13.2	9.5	16	2.1	31	1,052	12.6	7.6	13	.8	31	1,037	16.5	11.4	08	.7
850	31	1,524	14.6	6.3	19	3.2	31	1,539	16.5	10.5	09	7.4	30	1,529	11.3	4.1	19	3.1	31	1,530	10.7	2.6	25	.7	31	1,523	14.1	7.3	23	.7
800	31	2,036	13.2	.1	21	3.8	31	2,055	14.7	5.6	09	7.3	30	2,034	9.3	-.1	20	3.2	31	2,035	9.1	-2.2	25	1.3	31	2,033	12.0	2.4	24	1.5
750	31	2,577	10.7	-2.1	22	3.5	31	2,598	11.7	1.3	09	6.6	30	2,568	7.3	-4.4	23	3.3	31	2,568	7.3	-7.0	24	2.2	31	2,572	10.0	-4.7	26	1.6
700	31	3,149	7.8	-5.8	23	3.6	31	3,173	8.7	-4.3	09	6.5	30	3,133	4.8	-8.6	23	4.0	31	3,133	4.2	-11.3	24	3.3	31	3,143	7.2	-8.0	28	2.2
650	31	3,757	4.3	-10.9	24	4.1	31	3,782	5.4	-8.6	08	7.3	30	3,734	1.8	-13.4	24	4.6	31	3,733	.4	-15.4	24	4.4	31	3,749	3.6	-11.8	28	3.1
600	31	4,404	.8	-15.7	24	5.0	31	4,432	1.8	-13.6	08	6.8	30	4,376	-1.7	-17.2	24	5.3	31	4,373	-1.9	-19.1	24	4.4	31	4,394	-.2	-15.2	28	3.8
550	31	5,098	-3.1	-19.8	25	5.9	31	5,129	-2.2	-17.8	07	6.9	30	5,064	-5.4	-20.6	24	6.0	31	5,060	-4.9	-23.7	24	5.0	31	5,085	-4.4	-19.9	27	4.0
500	31	5,845	-8.1	-24.7	25	6.6	31	5,879	-6.9	-22.3	07	7.5	30	5,805	-10.3	-24.5	24	6.6	31	5,800	-10.9	-27.5	25	6.6	31	5,828	-9.4	-25.0	28	4.4
450	31	6,656	-13.2	-30.5	25	9.6	31	6,693	-12.4	-27.1	07	7.1	30	6,609	-15.6	-30.2	24	7.7	31	6,601	-16.1	-32.0	25	7.7	31	6,635	-14.6	-29.9	27	5.2
400	31	7,542	-19.2	-36.1	26	12.0	31	7,582	-18.8	-33.0	06	6.5	30	7,486	-21.9	-34.7	25	8.8	31	7,477	-22.5	-38.3	25	9.0	31	7,516	-20.8	-36.0	27	5.8
350	31	8,525	-26.3	-41.0	26	14.7	31	8,567	-25.8	-39.3	06	5.8	29	8,457	-29.5	-40.8	25	9.6	31	8,446	-30.0	-45.4	25	10.3	31	8,492	-28.0	-42.3	28	7.1
300	31	9,618	-34.4	-48.1	26	17.1	31	9,662	-34.3	-46.8	06	5.6	29	9,535	-37.8	-48.0	24	11.3	31	9,521	-38.8	-50.5	25	12.8	31	9,578	-36.3	-49.4	29	9.1
250	31	10,867	-44.2		26	19.7	31	10,911	-44.1		04	3.9	29	10,766	-47.5		25	13.9	31	10,749	-47.6		25	16.1	31	10,817	-46.1		29	11.6
200	31	12,327	-55.4		26	23.0	31	12,372	-55.2		01	3.5	29	12,210	-57.0		25	15.7	31	12,193	-56.8		25	15.7	31	12,267	-56.0		29	12.7
175	31	13,167	-61.4		27	22.4	31	13,213	-61.2		01	4.4	29	13,048	-60.5		25	15.4	31	13,032	-60.5		26	15.8	31	13,107	-60.8		29	13.7
150	31	14,108	-67.8		26	18.4	30	14,155	-67.2		03	4.7	29	13,999	-64.7		26	13.3	31	13,985	-63.5		26	14.9	31	14,055	-65.5		29	11.7
125	31	15,198	-73.1		26	14.0	30	15,241	-72.9		05	6.4	29	15,106	-67.1		26	10.6	31	15,096	-66.5		27	11.6	31	15,153	-69.6		28	9.3
100	28	16,491	-74.8		25	6.3	26	16,538	-75.4		07	7.6	29	16,446	-68.5		27	7.1	31	16,441	-67.6		27	8.0	31	16,474	-71.6		29	4.8
80	25	17,794	-71.8		23	1.6	21	17,832	-74.6		08	7.8	29	17,792	-65.8		28	4.7	31	17,793	-65.1		27	5.4	31	17,797	-68.8		35	.9
70	25	18,598	-67.5		11	1.3	20	18,615	-71.0		08	7.0	28	18,609	-63.4		29	3.0	31	18,610	-63.0		29	3.7	31	18,602	-66.6		08	2.0
60	25	19,527	-64.0		11	3.0	20	19,538	-66.8		08	6.4	28	19,560	-61.9		32	1.5	30	19,563	-6..3		31	2.2	31	19,541	-63.9		08	4.2
50	25	20,653	-61.0		09	3.8	20	20,650	-63.3		08	8.3	28	20,694	-59.9		36	1.9	30	20,700	-59.7		36	1.8	31	20,667	-60.8		08	4.3
40	23	22,050	-57.8		09	4.4	19	22,033	-58.9		09	10.3	28	22,095	-57.6		01	2.3	27	22,101	-58.1		01	2.2	31	22,067	-57.5		08	3.7
30	21	23,878	-54.8		09	3.5	18	23,854	-53.6		09	10.5	27	23,922	-54.4		31	2.4	27	23,926	-55.1		32	2.6	29	23,904	-53.2		07	3.7
25	20	25,050	-52.1		08	4.2	16	25,038	-51.8		08	12.1	24	25,093	-52.8		29	3.9	27	25,094	-53.7		29	3.6	29	25,083	-51.5		08	3.3
20	17	26,501	-48.7		09	3.8	13	26,501	-48.9		09	13.2	21	26,524	-51.4		27	6.7	25	26,531	-52.1		27	6.7	27	26,540	-49.1		08	2.6
15	16	28,403	-46.7		11	1.7	11	28,415	-45.3		09	11.8	21	28,404	-49.0		27	9.7	23	28,407	-49.8		27	10.5	27	28,440	-46.5		27	2.1
10	10	31,133	-42.6				8	31,181	-40.1				17	31,116	-45.7		28	15.2	20	31,079	-47.7		27	13.6	25	31,156	-43.5		27	7.4
7													11	33,570	-41.6										10	33,621	-38.6			

Standard pressure surface (mb)	WINNEMUCCA, NEV. 871 MB						WINSLOW, ARIZ. 851 MB						YAKUTAT, ALASKA 1005 MB						YAP, CAROLINE IS. 1008 MB						YUCCA FLAT, NEV. 880 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	1,312	.5	-5.0	21	.5	31	1,487	6.8	-.1	21	2.4	31	12	2.4	.8	11	2.2	31	14	27.5	24.4	08	1.8	31	1,198	3.6	-9.8	28	.7
1000	31	186					31	142					31	45			12	3.7	31	86	26.6	22.3	09	2.2	31	149				
950	31	606					31	575					31	472	2.5	-1.3	14	5.8	31	538	23.5	19.6	09	3.9	31	574				
900	31	1,046					31	1,027					3.	907	-.3	-3.6	15	6.5	31	1,010	20.8	16.2	09	3.7	31	1,018				
850	31	1,510	6.5	-3.1	06	.8	31	1,500			17	.2	3.	1,362	-3.3	-5.9	16	7.5	31	1,503	18.0	12.6	09	4.2	31	1,490	10.7	-6.3	34	1.7
800	31	2,007	4.9	-5.4	32	.9	31	2,002	8.2	-2.5	21	3.3	3.	1,839	-6.0	-8.4	18	7.3	31	2,021	15.3	9.3	09	4.1	31	1,992	7.9	-7.8	31	.8
750	31	2,530	2.0	-8.1	29	2.5	31	2,532	5.1	-6.1	21	5.2	3.	2,342	-8.9	-12.2	19	7.0	31	2,566	12.5	5.5	10	4.7	31	2,521	4.8	-10.6	26	.5
700	31	3,083	-1.4	-12.1	29	3.6	31	3,092	1.9	-10.3	22	5.7	3.	2,874	-11.9	-16.4	21	6.7	31	3,143	9.4	1.6	10	4.5	31	3,081	1.4	-12.1	25	1.2
650	31	3,671	-4.7	-15.2	29	4.3	31	3,686	-1.5	-13.9	23	6.0	3.	3,438	-15.3	-19.3	22	6.9	31	3,755	6.1	-2.0	10	4.9	31	3,673	-2.5	-15.7	25	2.3
600	31	4,296	-8.4	-20.4	29	4.8	31	4,319	-5.1	-19.3	23	7.3	31	4,038	-19.0	-22.9	23	8.4	31	4,467	2.4	-5.8	10	5.6	31	4,303	-6.7	-19.7	26	3.5
550	31	4,966	-12.7	-23.9	29	5.3	31	4,997	-9.4	-24.6	23	7.4	31	4,681	-23.1	-27.3	23	9.5	31	5,196	-1.3	-9.4	10	5.3	31	4,978	-10.8	-25.5	27	3.0
500	30	5,683	-17.6	-29.3	31	5.6	31	5,727	-14.5	-29.2	24	7.8	31	5,373	-27.7	-33.3	24	9.9	31	5,861	-5.4	-13.9	10	5.4	30	5,718	-15.4	-29.6	27	4.0
450	30	6,464	-22.6	-33.2	32	6.1	31	6,516	-20.2	-33.9	24	9.2	31	6,123	-32.5	-38.4	26	11.7	31	6,681	-10.1	-20.0	10	4.4	30	6,497	-20.9	-34.8	26	4.5
400	30	7,318	-28.9	-38.9	30	7.2	31	7,378	-26.5	-39.2	24	10.7	31	6,944	-38.0	-41.6	27	13.5	31	7,580	-15.6	-26.5	09	4.2	30	7,356	-27.5	-41.1	27	4.6
350	30	8,262	-35.8	-44.5	29	7.8	31	8,332	-33.7	-45.1	24	11.9	3.	7,856	-43.4	-40.3	27	16.4	30	8,576	-22.6	-34.4	08	3.0	30	8,306	-34.2	-46.8	26	5.1
300	30	9,315	-43.4		31	9.2	31	9,392	-41.5	-51.5	25	10.0	31	8,878	-48.5		27	21.3	30	9,696	-30.8	-43.4	08	1.3	30	9,355	-41.9	-53.8	27	5.8
250	30	10,520	-51.5		29	9.7	31	10,609	-48.7		25	13.4	3.	10,070	-50.7		28	22.7	30	10,953	-41.2	-50.9	35	1.2	30	10,579	-49.3		27	6.5
200	30	11,951	-56.7		29	9.6	30	12,055	-54.9		25	17.7	31	11,525	-50.5		28	21.7	30	12,428	-53.9		33	3.1	30	12,021	-55.5		27	8.1
175	30	12,795	-58.1		28	9.3	30	12,903	-57.9		25	18.0	31	12,395	-50.9		27	21.3	30	13,272	-60.9		32	4.0	30	12,868	-57.5		27	10.3
150	30	13,762	-59.8		28	10.0	30	13,868	-60.7		25	16.9	31	13,398	-51.4		27	19.9	30	14,212	-68.6		33	4.1	30	13,837	-59.3		27	10.6
125	30	14,897	-61.4		28	7.7	27	15,004	-63.4		25	14.4	29	14,566	-51.2		27	17.9	30	15,287	-75.3		02	2.6	28	14,977	-62.1		27	9.7
100	30	16,276	-62.6		27	5.9	25	16,367	-66.0		25	7.1	29	16,015	-51.5		27	14.9	30	16,560	-80.3		08	8.0	28	16,350	-63.5		26	7.4
80	30	17,657	-61.5		27	4.0	24	17,729	-64.5		24	4.1	29	17,461	-52.1		27	14.3	30	17,838	-73.5		09	9.8	27	17,725	-62.9		27	4.2
70	29	18,486	-60.9		28	3.0	24	18,548	-63.0		25	3.9	29	18,326	-52.1		26	12.3	30	18,626	-69.7		09	7.3	27	18,551	-61.1		25	3.3
60	28	19,450	-60.3		25	2.2	24	19,502	-61.3		25	1.6	29	19,322	-53.0		26	11.8	30	19,553	-66.3		07	4.8	26	19,509	-59.9		26	2.2
50	27	20,598	-59.5		26	2.2	21	20,629	-59.6		19	1.4	28	20,495	-53.6		27	12.3	30	20,668	-62.7		07	3.0	24	20,655	-58.9		24	.6
40	26	21,997	-58.1		25	2.4	21	22,032	-57.4		15	.8	28	21,928	-54.4		27	10.8	30	22,057	-58.9		08	2.8	22	22,061	-57.0		32	.3
30	26	23,816	-56.5		26	3.6	19	23,872	-54.8		09	.6	28	23,766	-54.3		28	9.7	30	23,880	-55.0		09	5.2	22	23,892	-54.9		32	.8
25	26	24,977	-55.7		26	4.7	18	25,043	-53.5		24	1.3	28	24,934	-54.2		28	10.9	30	25,051	-53.7		10	4.7	20	25,066	-53.9		31	1.5
20	23	26,404	-54.7		27	5.7	16	26,485	-52.3		27	4.4	28	26,361	-54.2		28	10.8	27	26,507	-49.0		10	4.7	19	26,509	-53.0		29	4.0
15	18	28,252	-53.0		28	5.8	14	28,348	-50.7		26	7.7	19	28,199	-53.8		28	12.7	25	28,413	-45.1		10	12.3	12	28,397	-51.7		27	5.9
10	7	30,846	-50.8				8	31,050	-47.9				8	30,783	-53.5				18	31,149	-40.7		09	20.3	7	31,068	-49.3			
7																			10	33,609	-36.1									

floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance: A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Oct.									
1	----	----	----	----	----	----	1.08	1.00	0.91
2	----	----	(1.14)	1.28	1.41	1.27	1.14	1.02	.94
3	0.98	1.07	1.17	1.29	(1.37)	1.28	1.15	1.04	.94
4	.84	.92	1.03	1.19	1.34	----	----	----	----
5	----	(.94)	(1.09)	----	1.39	1.27	1.13	1.02	.91
6	.83	.97	1.08	1.21	----	----	----	1.03	----
7	.91	1.03	----	1.23	1.35	1.20	1.06	.97	----
8	----	.88	1.02	1.15	1.32	1.15	.96	.80	.72
9	.72	.83	.96	1.13	1.31	1.17	1.03	.93	.82
10	.87	.99	1.09	1.25	1.36	1.21	1.06	.97	.79
11	----	----	----	----	----	----	----	----	.83
12	(.95)	(1.08)	(1.18)	1.26	1.41	1.27	1.11	1.01	(.87)
13	.74	.88	.98	1.14	1.27	1.16	1.00	.88	.75
14	.92	1.02	1.12	1.26	1.37	1.19	1.01	.88	.72
15	.84	.96	1.05	1.20	1.27	1.18	.96	.84	.71
17	.87	1.01	1.10	----	----	----	1.04	----	----
18	----	1.07	1.14	1.29	----	----	----	----	----
19	----	1.04	1.15	1.30	1.42	1.32	1.19	1.10	.97
20	.99	1.08	1.18	1.34	1.41	1.32	1.17	1.08	.96
21	.96	(1.06)	----	----	----	----	----	----	----
22	.68	.86	1.07	1.26	1.38	1.26	1.09	.96	.82
23	.93	1.03	1.14	1.30	(1.36)	1.30	(1.05)	----	----
26	----	----	----	----	----	----	----	----	.86
27	.96	1.06	1.18	1.30	1.38	1.32	1.19	1.07	.96
28	1.00	1.10	1.21	1.33	1.39	1.22	1.05	.95	.85
30	.87	.93	1.06	1.18	1.26	1.19	1.08	.96	.86
31	.92	.99	1.10	1.20	1.24	1.16	1.04	.91	.83
Averages	0.88	0.99	1.04	1.24	1.35	1.23	1.08	0.97	0.85

TUCSON, ARIZ.

Date	Sun's zenith distance: A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Oct.									
1	0.74	0.87	1.00	1.15	1.33	1.04	0.87	0.73	[illegible]
2	.68	.78	.93	1.10	1.28	1.11	.95	.82	[illegible]
3	.72	.82	.95	1.13	1.31	1.07	.91	.81	[illegible]
4	.72	.81	.95	1.11	----	----	----	----	----
5	----	.94	1.06	1.18	1.38	1.18	----	----	----
6	----	.97	1.12	1.27	1.37	----	----	----	----
7	----	----	1.12	1.25	1.38	----	----	----	----
8	.83	.92	1.06	1.22	1.32	----	----	----	----
9	.88	.99	1.12	1.26	1.40	[illegible]	1.04	.88	.77
11	----	----	----	----	----	----	----	91	.79
12	.78	.96	1.03	1.19	1.33	1.11	.86	.75	.68
13	.71	.84	.92	1.15	1.36	1.12	.83	.71	.59
14	.72	.83	.94	1.12	1.32	1.10	1.06	.84	.80
15	.76	.86	.98	1.14	1.30	1.10	----	----	.70
17	----	----	----	----	----	----	1.14	.98	.84
18	----	----	----	1.21	1.40	----	----	----	----
19	.94	.98	1.11	1.28	1.43	1.29	1.13	1.00	.91
20	1.04	1.13	1.23	1.37	1.47	1.31	1.13	.98	.87
21	.95	1.04	1.15	1.28	1.40	1.27	1.11	.98	.93
22	.89	.98	1.11	1.27	1.39	1.33	1.15	.98	.84
23	----	----	----	1.22	----	----	----	.89	.79
25	----	----	----	----	1.46	----	----	----	----
26	.89	.99	1.11	1.26	1.40	1.31	1.11	1.00	.89
27	1.01	1.10	1.20	1.34	1.46	1.30	1.13	1.01	.90
28	1.04	1.11	1.21	1.36	1.44	1.32	1.10	1.04	.90
29	----	----	----	----	1.41	1.34	1.20	1.06	.96
30	1.02	1.13	1.21	1.36	1.49	1.36	1.16	1.04	.92
31	1.00	1.11	1.20	1.33	1.45	1.33	1.17	1.06	.97
Averages	0.86	0.96	1.08	1.23	1.38	1.23	1.06	0.93	0.82

OMAHA, NEBR.

Date	Sun's zenith distance: A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Oct.									
2	----	----	----	1.22	1.34	HS1.23	HS1.07	HS0.94	HS0.84
3	----	----	----	----	HS1.33	.90	.46	.29	.22
4	----	1.03	1.13	1.24	1.34	HS1.22	1.03	HS .93	HS .81
5	----	----	----	----	----	----	----	HS .90	HS .81
6	HS0.80	HS .94	HS1.04	HS1.22	HS1.30	----	----	----	----
7	HS .83	HS .92	HS1.06	HS1.24	HS1.30	HS1.19	HS1.00	.86	HS .75
8	HS .89	HS .98	HS1.10	HS1.24	----	1.22	1.01	.88	----
10	HS .93	HS1.02	HS1.17	HS1.26	HS1.38	HS1.24	HS1.12	----	.87
11	HS .96	HS1.05	HS1.16	HS1.30	HS1.36	----	----	----	----
13	----	----	----	----	----	----	1.04	.94	----
14	----	----	----	----	HM1.28	----	----	----	----
19	.93	1.01	1.11	1.26	1.32	1.23	1.10	.97	----
31	HS .89	HS .98	HS1.15	----	----	----	----	----	----
Averages	0.89	0.99	1.12	1.25	1.33	1.18	0.97	0.84	0.72

MADISON, WIS.

Date	Sun's zenith distance: A M 78.7°	75.7°	70.7°	60.0°	*	P M 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Oct.									
4	0.87	0.95	1.07	1.18	1.27	1.16	1.03	0.91	0.80
11	.90	1.01	1.13	1.29	----	----	----	----	----
14	----	----	----	----	----	----	----	S .78	V .67
15	----	----	----	----	(1.14)	(1.01)	H .72	H .58	H .44
16	----	----	----	----	----	H .89	----	----	----
28	S .92	S 1.00	S 1.10	S 1.24	S 1.28	S 1.22	1.09	.93	.79
31	----	----	S 1.15	S 1.29	S 1.30	----	----	----	----
Averages	0.90	0.99	1.11	1.25	1.25	1.07	0.93	0.79	0.69

( ) Clouds Present
* Values corresponding to true solar noon
BD Blowing Dust
BN Blowing Sand
D Dust
DI Intense Dust
DM Moderate Dust
DS Slight Dust
F Fog
GF Ground Fog
H Haze
[illegible]
HS Slight
I Intense Haze-indeterminable
K Smoke
KI Intense Smoke
KM [illegible] Smoke
KS Slight Smoke
M Moderate Haze-indeterminable
N Sand
S Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1937 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

OCTOBER 1971

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	328	533	518	505	489	401	487	480	470	472	337	474	454	461	448	317	183	354	448	443	380	426	419	155	124	231	412	401	335	407	394	396
AMES IOWA	279	270	453	463	342	441	444	444	316	433	439	99	192	376	349	325	269	51	235	---	---	---	---	---	---	---	---	329	39	70	355	307
ANNETTE ALASKA	---	---	---	---	---	---	---	---	---	38	270	---	91	248	145	---	189	156	169	110	17	70	70	66	111	194	168	40	34	129	190	---
APALACHICOLA FLORIDA	414	449	434	449	425	461	418	472	78	453	508	498	240	414	423	423	257	419	444	394	348	412	430	322	319	374	389	404	390	370	327	392
ARGONNE NAT. LAB.	343	362	166	383	326	315	394	48	200	323	397	339	232	331	309	313	299	279	239	307	100	90	41	30	151	283	143	290	252	149	304	250
ASTORIA OREGON	244	425	328	409	356	237	398	396	187	144	213	261	276	119	365	366	136	72	106	327	130	72	191	289	71	186	290	324	202	97	45	234
ATLANTA GEORGIA	478	461	416	401	351	417	472	454	218	388	456	442	360	360	89	324	81	111	258	86	96	104	80	263	214	364	358	---	162	117	109	283
BARROW ALASKA	111	142	109	146	117	129	117	83	96	41	47	44	41	51	38	26	17	19	22	28	63	34	46	24	32	19	16	8	2	7	7	54
BETHEL ALASKA	80	248	239	270	203	141	76	96	127	143	161	126	55	26	28	61	74	84	62	105	114	102	156	72	49	22	70	37	44	46	57	102
BISMARCK N.DAK.	56	151	257	296	423	429	---	130	423	390	405	115	330	300	107	18	41	---	---	---	---	321	342	300	---	83	314	151	168	193	102	300	236
BLUE HILL MASS.	437	425	310	398	354	97	230	430	213	31	371	355	383	265	260	340	298	339	170	290	343	327	294	53	90	169	188	196	314	277	127	270
BOISE IDAHO	441	457	440	418	435	425	419	414	410	397	347	357	366	392	273	61	364	307	61	200	334	356	191	305	357	202	238	334	361	104	209	322
BROOKINGS SOUTH DAKO	159	409	110	368	362	334	314	177	183	184	353	168	296	361	51	148	118	165	321	178	244	260	128	182	167	198	139	50	26	41	266	208
BROWNSVILLE TEXAS	---	576	538	290	274	129	487	385	222	558	451	461	233	457	463	412	465	450	511	214	312	517	452	311	426	387	399	---	422	483	460	405
BURLINGTON VERMONT	421	336	452	293	291	233	88	359	24	16	199	189	268	298	332	243	183	316	322	252	330	267	91	194	99	68	127	194	306	236	135	231
CAPE HATTERAS N.C.	76	134	206	203	427	182	405	475	265	41	456	452	411	325	422	288	345	81	202	135	271	78	88	264	245	323	306	208	149	271	341	260
CARIBOU MAINE	274	232	367	282	222	151	211	143	233	27	161	227	299	23	135	283	293	196	267	120	235	156	264	266	70	71	47	167	235	146	153	192
CHARLESTON S.C.	148	315	382	342	314	281	431	432	70	110	440	425	356	300	192	193	278	311	89	47	56	106	251	233	299	347	255	299	89	113	185	248
COLUMBIA MISSOURI	411	254	377	392	459	467	451	140	260	453	447	428	425	426	376	388	255	288	47	232	239	151	40	89	354	243	359	357	291	315	373	316
DAVIS CALIFORNIA	509	492	489	485	467	462	441	449	448	456	443	416	415	402	376	290	384	380	371	270	409	358	336	404	382	374	347	390	383	212	366	400
EL CENTRO CALIF. NPF	481	478	463	458	430	---	409	446	446	441	437	429	438	427	418	209	299	430	431	382	424	423	181	302	209	396	392	357	461	415	401	397
EL PASO TEXAS	455	470	489	159	412	279	279	486	355	408	239	398	468	465	455	458	335	469	404	471	448	459	443	373	137	447	445	376	406	445	417	398
ELY NEVADA	154	---	---	---	---	---	451	465	442	445	426	349	433	305	355	247	303	429	435	341	400	401	366	64	264	316	359	302	381	283	289	346
EPPLEY NEWPORT R.I.	432	277	350	310	342	73	177	409	218	27	364	390	370	259	189	306	271	314	---	327	---	251	241	60	106	182	---	190	286	285	---	260
FAIRBANKS ALASKA	---	---	82	77	85	86	79	---	---	---	68	52	58	144	112	66	88	43	68	137	37	56	36	41	---	36	35	28	76	65	36	68
FLAMING GORGE UTAH	270	204	499	426	471	477	451	467	469	459	458	448	443	332	425	167	137	82	397	405	195	381	411	118	274	148	208	25	197	240	251	320
FORT WORTH TEXAS	438	298	27	308	---	470	460	106	472	476	435	288	297	287	291	272	140	124	224	163	406	329	288	396	---	209	407	221	238	198	349	297
FRESNO CALIFORNIA	493	480	476	470	457	449	442	435	414	413	424	406	414	409	355	195	345	409	412	309	374	326	248	330	383	377	368	371	378	310	365	388
GENEVA NEW YORK	342	353	77	161	274	147	169	286	29	24	---	---	---	246	239	151	226	291	305	286	278	167	33	26	58	46	232	247	268	203	216	192
GLASGOW MONTANA	---	250	385	324	317	312	303	370	349	341	290	347	203	292	87	77	104	22	297	274	258	294	239	181	274	123	185	118	262	135	192	240
GLOUCESTER POINT VA	65	122	46	127	380	413	337	440	257	---	448	432	391	359	385	185	202	100	97	131	208	197	34	229	113	31	173	108	127	119	125	213
GRAND JUNCTION COLO.	278	466	553	549	533	524	518	514	440	442	422	452	470	468	258	53	79	160	460	447	237	435	324	124	364	105	382	314	210	390	220	361
GREAT FALLS MONTANA	217	417	397	266	394	330	378	382	338	364	150	357	152	308	105	97	344	200	263	259	332	294	236	153	305	286	144	271	319	---	121	273
GREENSBORO N.C.	48	241	375	305	350	432	477	468	88	142	466	445	345	417	410	172	259	169	257	56	50	47	49	208	257	312	101	362	239	121	136	252
INDIANAPOLIS INDIANA	367	381	375	439	443	413	391	199	248	331	428	418	172	401	265	239	264	---	---	368	98	267	126	73	96	298	314	348	303	293	265	297
ITHACA NEW YORK	441	426	183	131	368	177	174	403	47	57	170	244	310	314	345	200	313	378	371	336	331	243	101	48	49	74	217	303	292	291	104	240
LAKE CHARLES LA.	416	432	459	234	228	290	473	391	175	501	498	377	372	424	355	135	182	353	284	339	244	293	364	419	412	311	271	320	376	378	328	343
LAKELAND FLORIDA	502	504	378	490	---	324	454	386	276	148	221	374	274	288	367	418	300	382	313	341	372	313	370	339	377	436	436	335	352	326	343	358
LANDER WYOMING	257	300	449	400	410	425	385	397	408	402	318	373	205	123	51	129	146	110	357	309	175	302	329	286	295	299	99	173	207	323	297	282
LARAMIE WYOMING	108	161	481	447	441	457	448	415	506	441	395	413	288	414	230	227	329	283	403	391	143	367	374	253	353	340	210	188	186	322	313	333
LAS VEGAS NEVADA	---	---	---	---	---	---	---	467	440	434	431	424	425	404	382	282	320	398	---	390	400	396	390	263	282	382	374	188	364	376	365	373
LEXINGTON KENTUCKY	391	374	336	221	272	438	376	324	65	254	410	415	298	387	---	63	75	231	387	350	120	206	91	81	99	195	323	329	319	299	169	263
LITTLE ROCK ARKANSAS	407	425	396	288	341	473	466	143	464	485	462	417	306	401	213	89	281	147	107	306	248	261	139	359	336	379	404	318	328	345	317	324
LOS ANGELES CALIF.	496	502	503	489	471	464	448	436	403	452	446	388	337	175	228	353	394	395	413	351	407	420	396	289	336	287	73	355	403	381	361	382
LOS ANGELES CALIF.U	480	486	485	468	465	447	437	413	416	440	426	376	367	254	172	359	292	365	394	330	389	378	376	217	330	259	60	347	394	386	350	366
MADISON WISCONSIN	395	329	242	424	339	198	421	278	255	401	412	263	335	361	341	252	281	229	70	187	104	159	43	48	132	179	144	310	163	194	313	252
MANHATTAN KANSAS	292	465	471	453	448	449	430	348	347	447	439	361	418	402	315	136	71	176	400	98	187	194	187	288	329	118	269	349	29	141	341	303
MATANUSKA ALASKA	52	91	71	52	56	97	27	74	58	---	144	42	198	120	30	45	77	129	157	153	---	93	65	135	143	48	22	39	132	25	93	85
MEDFORD OREGON	444	437	426	426	425	357	397	400	392	382	386	378	318	344	---	365	250	201	123	336	217	142	162	247	247	147	241	332	311	69	135	301
MIAMI FLORIDA	---	---	---	---	---	322	263	353	349	393	73	242	337	444	364	402	365	---	406	270	223	234	---	250	416	405	429	212	136	206	329	309
MIDLAND TEXAS	380	429	453	202	492	474	288	351	476	485	413	123	417	469	464	409	241	459	235	470	456	443	439	419	378	150	435	234	127	426	155	368
NASHVILLE TENNESSEE	407	323	422	331	188	442	453	322	189	409	438	402	272	392	122	244	246	337	347	206	120	133	90	106	139	199	332	307	310	303	203	282
NEW YORK CENTRAL PRK	391	88	196	352	273	247	309	446	212	43	407	411	332	229	207	241	322	270	377	117	324	149	145	22	58	283	120	265	327	234	77	241
NORTH OMAHA NEBRASKA	346	482	---	467	455	450	442	437	201	444	441	208	382	393	326	315	265	---	395	66	101	90	127	301	332	---	128	152	33	56	342	292
OAK RIDGE TENNESSEE	409	357	360	354	76	445	464	405	109	310	429	426	231	405	127	297	268	350	392	323	150	135	111	185	132	326	340	327	330	337	216	294

SOLAR RADIATION TOTALS Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

OCTOBER 1971

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OKLAHOMA CITY OKLA.	376	282	286	447	416	448	428	134	454	454	388	348	372	409	290	259	86	153	343	70	400	166	224	367	361	78	384	102	111	203	376	297
PALMER AAES ALASKA	54	75	71	45	94	89	31	69	43	121	108	42	163	107	25	47	68	106	131	126	144	91	57	122	120	60	31	46	67	16	55	78
PHOENIX ARIZONA	469	479	481	459	433	429	430	434	443	393	403	431	419	418	398	186	238	318	426	414	397	412	247	259	392	363	---	355	399	394	382	390
PORTLAND MAINE	385	369	399	243	304	123	316	340	201	21	301	340	339	253	236	294	318	280	113	154	232	241	200	196	24	178	98	213	273	200	117	235
RAPID CITY S.DAK.	52	113	394	282	359	363	255	384	377	361	327	362	283	149	57	58	90	262	330	328	218	318	320	278	240	293	114	194	133	254	280	253
RENO NEVADA	409	404	403	395	386	377	395	373	393	355	343	352	352	348	260	65	138	348	294	303	313	293	322	188	320	230	249	243	312	145	273	309
RICHLAND 25 NW WASH.	430	419	376	392	396	257	393	395	376	364	296	311	267	279	254	368	289	250	188	299	286	151	102	319	162	248	316	302	247	58	81	286
RUSTON LOUISIANA	468	454	349	350	141	488	495	335	402	493	482	455	318	440	323	126	106	223	178	337	250	332	234	318	350	375	411	310	266	374	373	341
SAINT CLOUD MINN.	109	325	99	339	350	282	258	148	115	345	369	26	333	332	105	76	236	38	320	134	70	233	274	119	72	122	34	43	15	11	269	181
SALT LAKE CITY	153	225	466	426	436	426	431	422	422	422	400	415	413	287	374	46	147	260	387	382	231	366	340	57	242	89	80	330	128	235	140	296
SAN ANTONIO TEXAS	371	423	454	132	69	406	505	86	378	528	506	141	290	482	206	282	131	209	182	473	485	453	391	465	264	209	240	268	249	241	288	316
SANTA MARIA CALIF.	509	499	494	490	473	472	453	421	451	454	419	440	442	184	334	342	420	419	416	246	421	357	266	353	400	393	269	408	408	393	378	401
SAULT STE MARIE MICH	302	342	107	192	110	236	352	22	74	77	278	---	221	188	332	271	91	53	123	62	125	25	295	204	74	66	176	259	198	16	260	171
SEATTLE TACOMA WASH.	251	350	179	333	265	53	250	309	330	163	154	288	143	60	304	334	116	80	114	222	155	52	108	225	39	160	290	281	136	44	85	189
SPOKANE WASHINGTON	402	388	256	361	362	266	321	346	341	318	248	260	187	173	287	332	319	256	74	241	283	156	56	177	105	239	194	290	228	99	122	248
STERLING VIRGINIA	61	103	356	141	124	438	345	473	161	46	449	451	284	---	---	---	174*	411	413	105	---	129	43	83	18	162	133	292	259	152	55	217
TAMPA FLORIDA	526	519	457	472	473	474	482	402	265	145	404	394	342	272	417	391	254	353	429	352	365	359	423	355	372	361	423	348	317	336	294	380
UPPER MARLBORO MD.	82	176	339	169	190	385	384	430	177	57	417	403	321	353	372	176	133	130	344	128	312	154	35	67	40	112	130	199	305	141	92	218
WAKE ISLAND PACIFIC	389	230	572	597	596	593	535	535	450	607	580	566	541	354	569	579	494	539	580	483	523	559	564	529	546	535	546	381	---	307	487	512

Note.--Langley is the unit used to denote one gram calorie per square centimeter.
Values with an asterisk are interpolated.

† Indicates urban sites

The solar radiation data in this table form the basis for the analyses in Charts VII, A, and B, of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m. at Palmer, Alaska

OCTOBER 1971

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .	- 17	6	37	- 56	- 53	- 33	- 44	- 34	- 34	- 31	- 39	- 49	- 76	- 1	- 26	-	- 12	- 61	- 80	- 78	- 69	- 22	- 71	-118	- 89	- 32	- 5	- 74	- 90	- 35	-111	- 45

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys. . .													NO DATA - MACHINE MALFUNCTION																			

These data are from an U - V Eppley total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code A S Q Q Q defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units Milli-atmo-cms.

Station	Day of month																															Mean O_3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
AMUNDSEN-SCOTT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	00313	00328	00296	00297	00305	00299	00294	00294	-	-	-	35265	32253	00313	00305	00303	00336	300
BEDFORD, MASS.	DATA NOT RECEIVED																															
BISMARCK, N. DAK.	05308	05328	05310	05292	00294	00294	00310	05306	00280	00282	00289	-	00283	00287	05320	-	-	00293	00316	00282	00268	00278	00267	05261	05299	00290	00320	03289	04275	-	00300	293
BOULDER, COLO.	00318	-	-	00309	00265	00296	00288	00301	-	-	-	00304	03281	00291	05292	-	-	00332	00323	00276	00275	00282	-	-	-	00316	00293	06309	06300	-	-	297
CARIBOU, MAINE	DATA NOT RECEIVED																															
GREEN BAY, WISC.	00291	00287	33290	00301	00331	02343	00321	05355	05360	00324	00237	00304	00334	00295	00299	05313	00291	-	-	35290	05298	05291	05319	04291	34283	04276	03283	00286	04297	-	00279	307
HUANCAYO, PERU	00265	00261	00260	00275	00256	00262	00266	00260	00255	00270	00262	05256	00261	00259	00271	05258	00265	00263	00269	00262	00265	00260	00259	00267	00264	00261	00263	00268	00271	00277	00274	264
MAUNA LOA, HAWAII	05269	-	-	00277	00282	00281	00279	00285	-	-	-	00271	00270	00270	00277	-	-	00277	00280	00267	00267	00266	-	-	-	00271	00276	00279	05270	-	-	274
NASHVILLE, TENN.	00290	00274	00298	00287	-	-	00294	00280	00347	00331	00298	00298	00301	-	-	-	00296	00292	00283	00286	-	-	-	-	-	04289	00291	00284	00267	00282	00252	290
WALLOPS ISLAND, VA.	00271	00267	05289	05264	00282	00292	00310	00307	04296	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	04266	00274	04241	00248	277

The spectrophotometer measures the total amount of ozone in the atmosphere, i e, the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Q Q Q) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g, 350 milli-atmo-cm ozone implies an ozone layer 0.350 centimeter thick. The code A S designates the type of measurement made

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), October



B. Temperature Departure from 30 - Year Mean (°F 1931-60), October 1971.

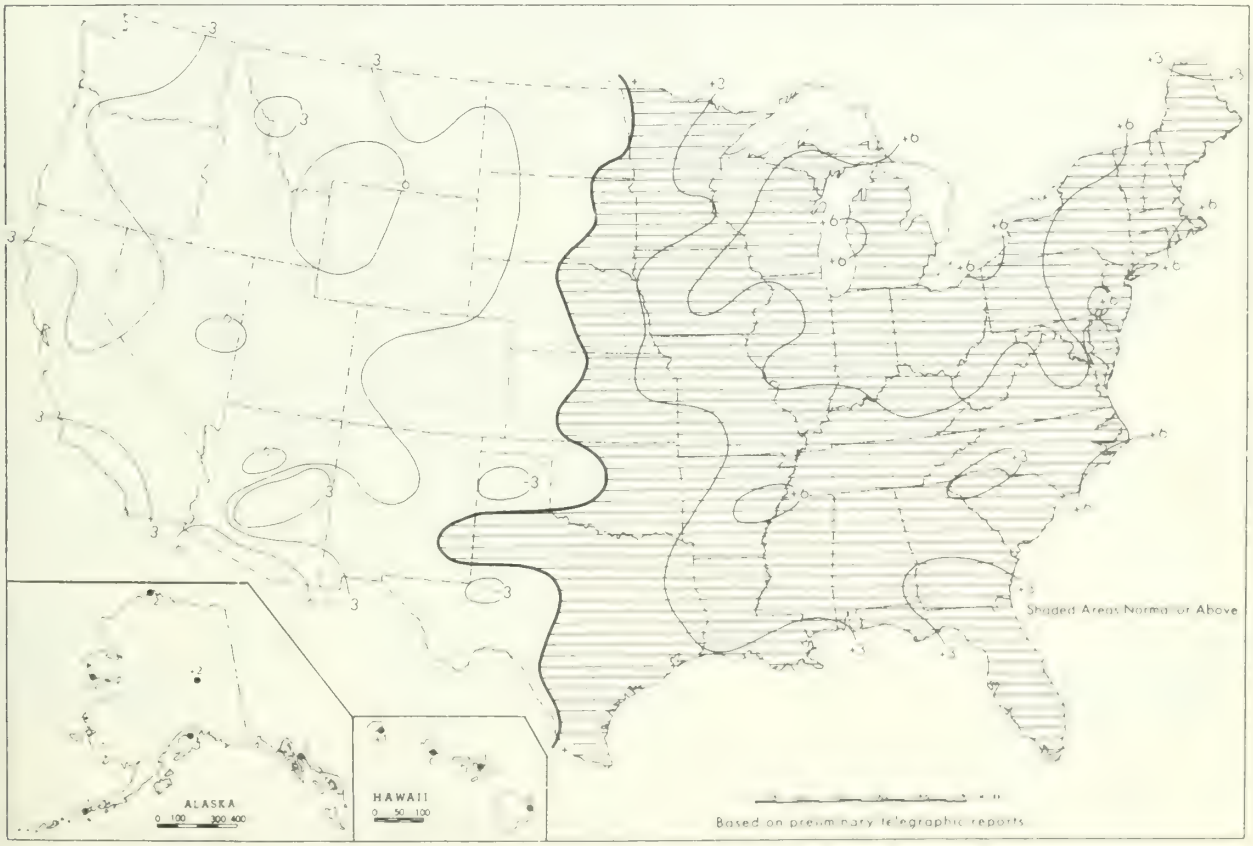


Chart II. Total Precipitation (Inches), October 1971.

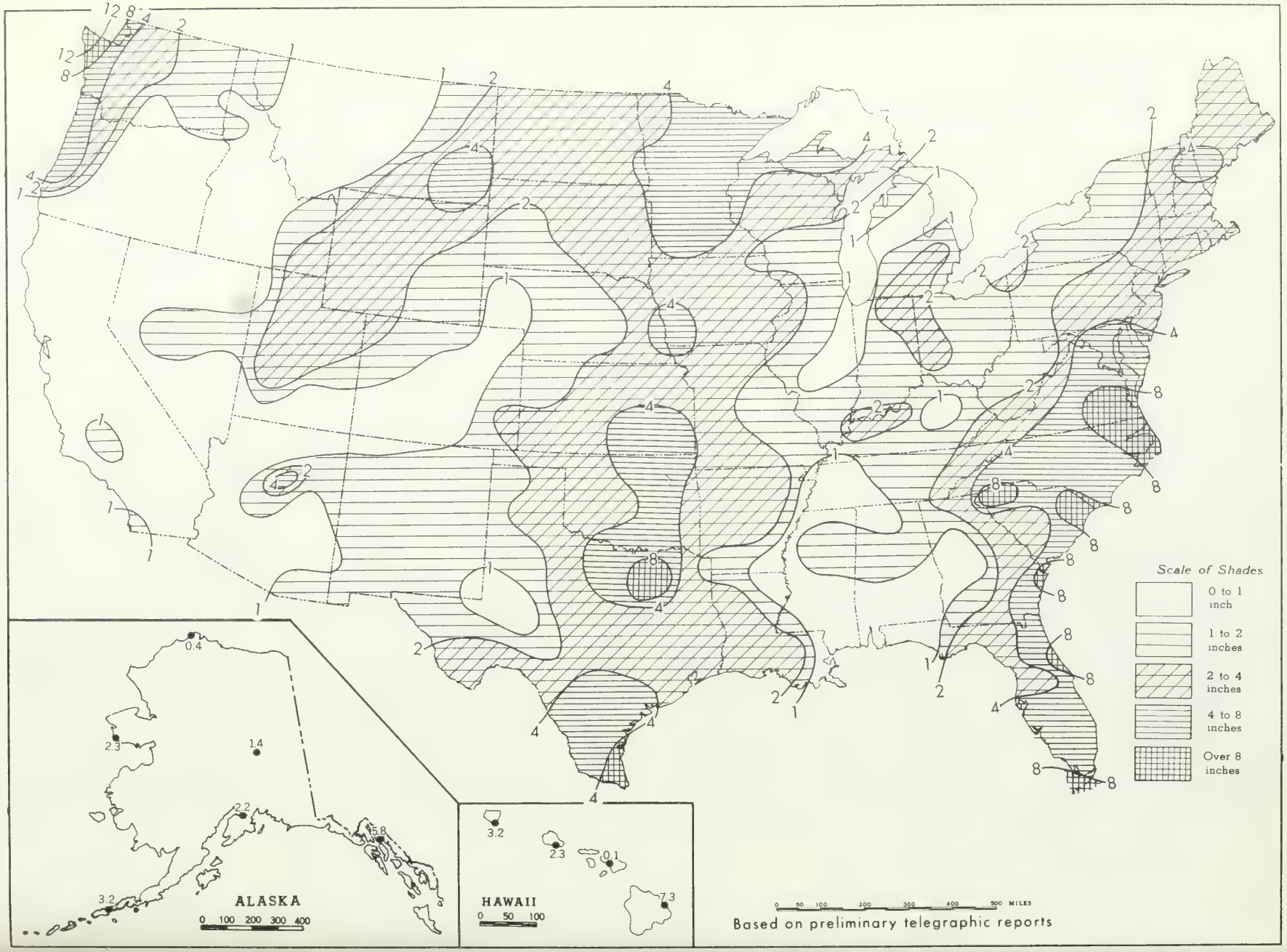


Chart III. Percentage of Normal Precipitation, October 1971.

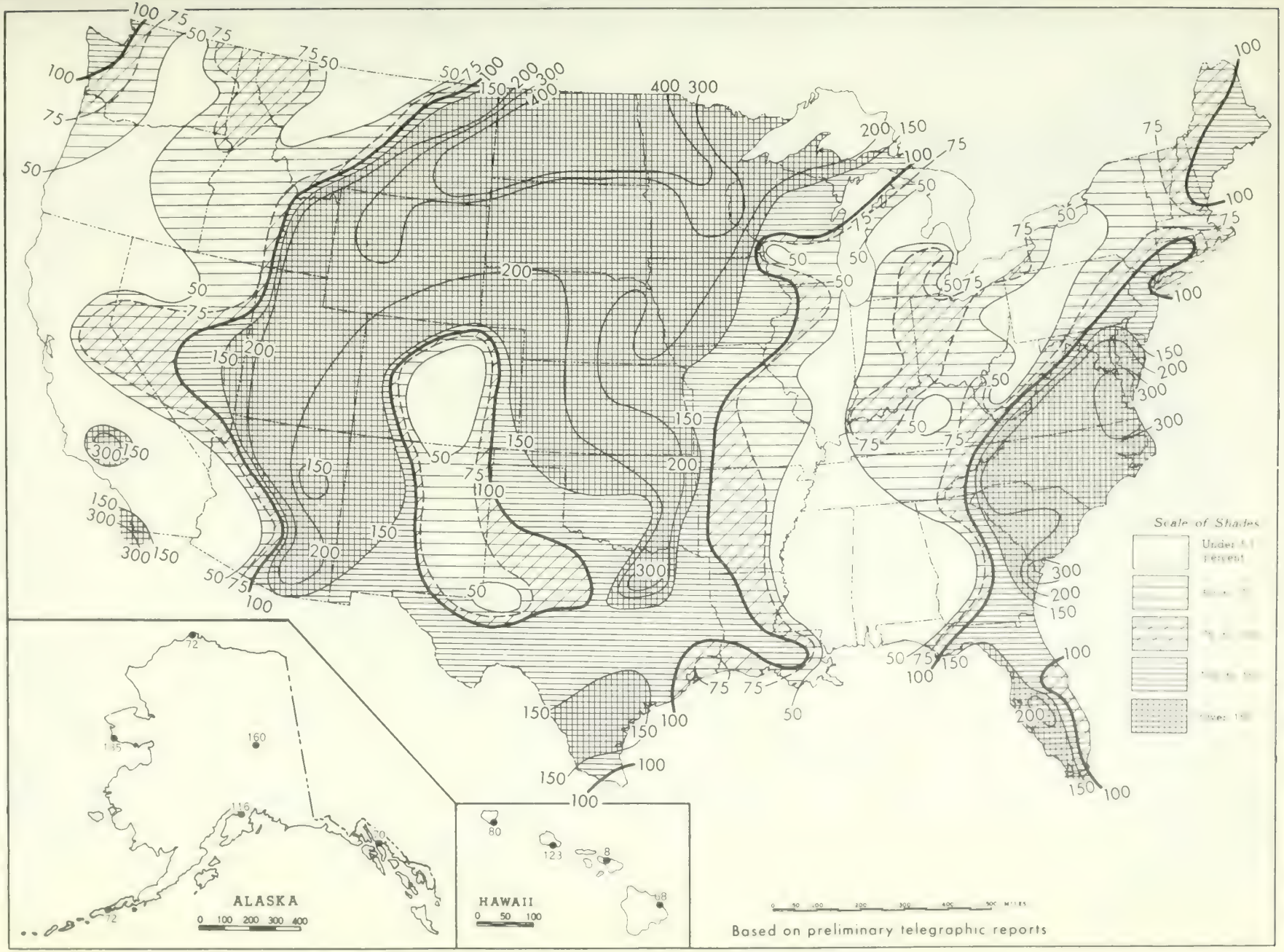
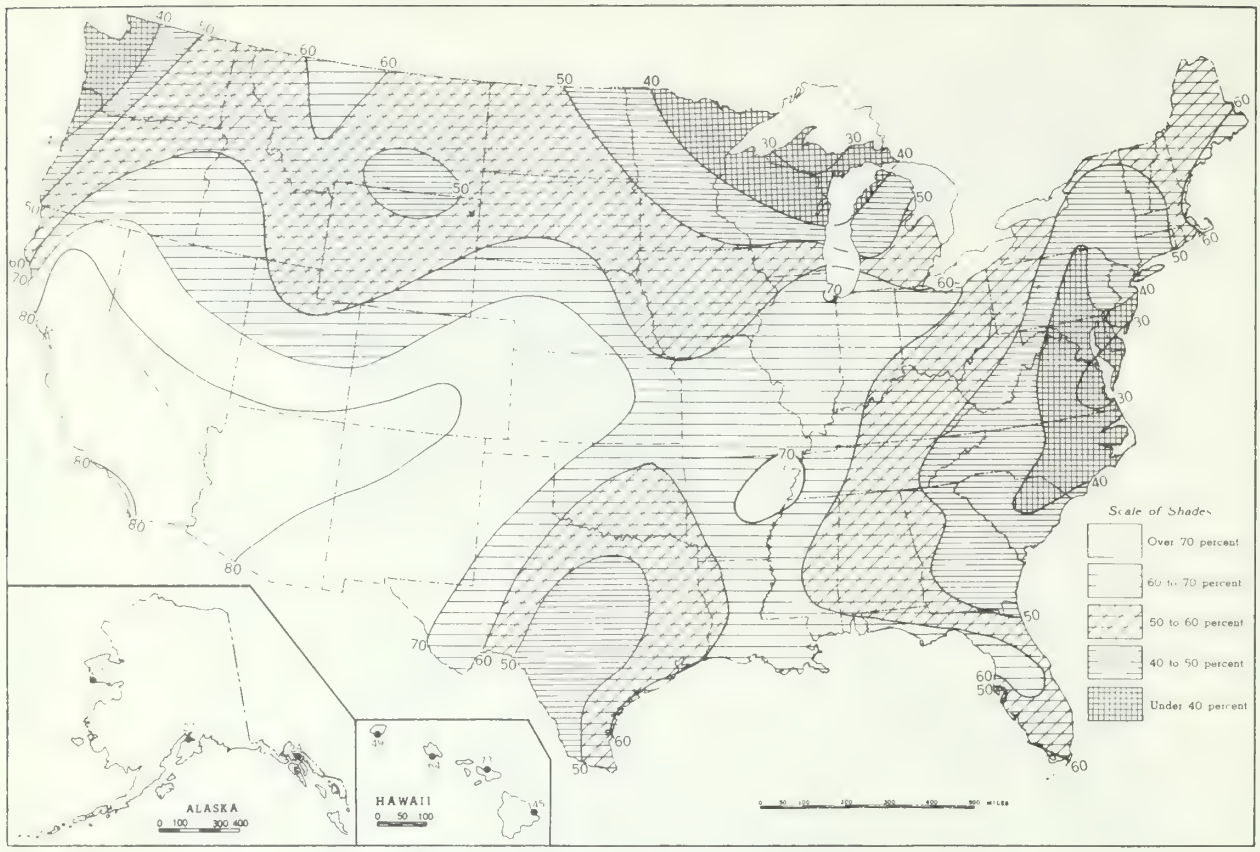
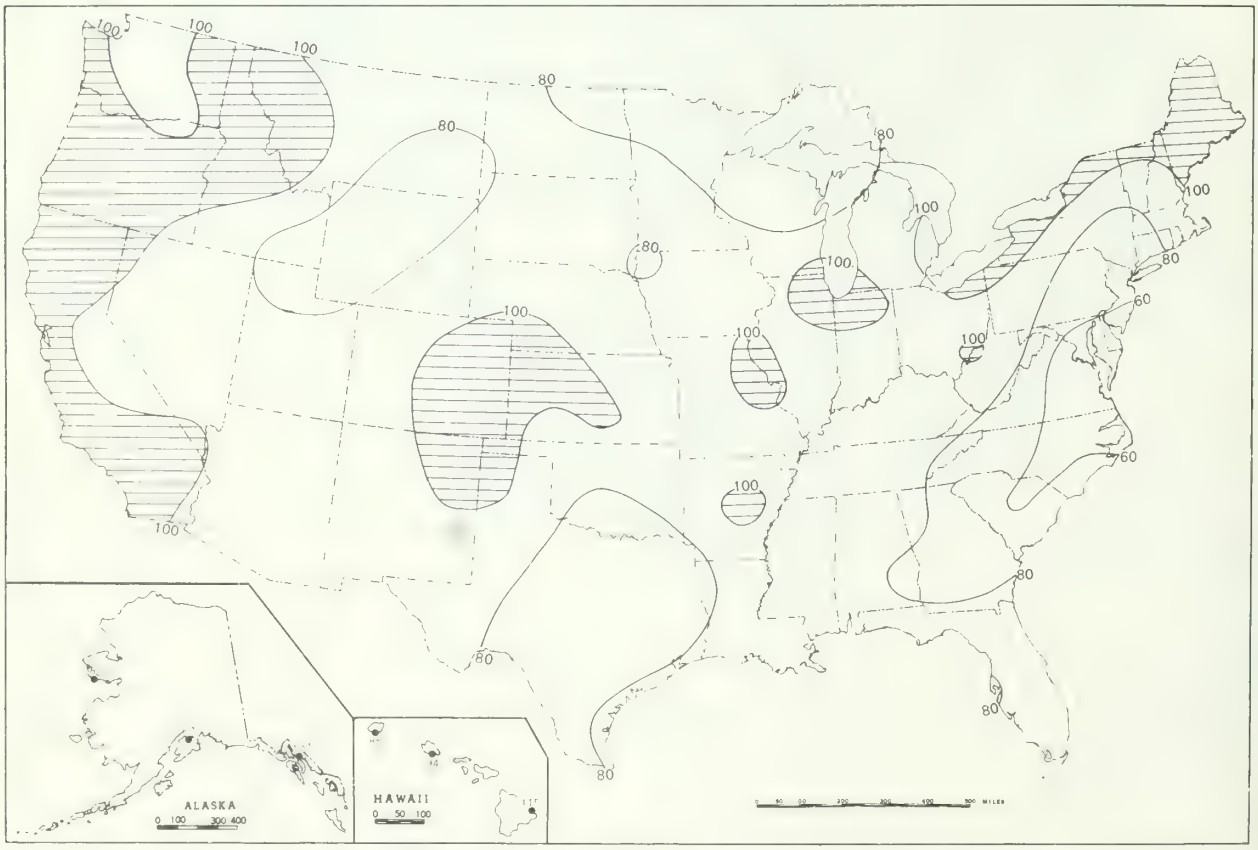


Chart VI. A. Percentage of Possible Sunshine, October 1971.

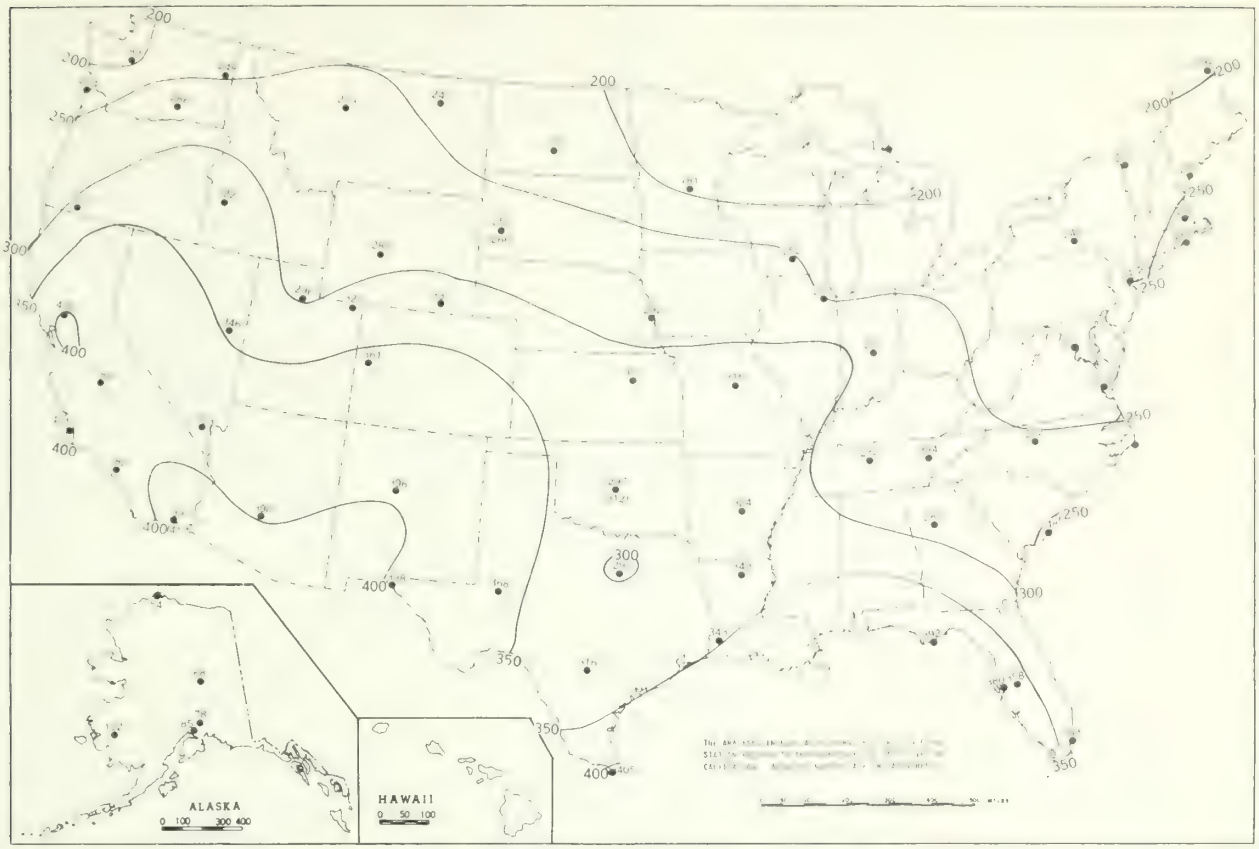


B. Percentage of Mean Monthly Sunshine, October 1971.

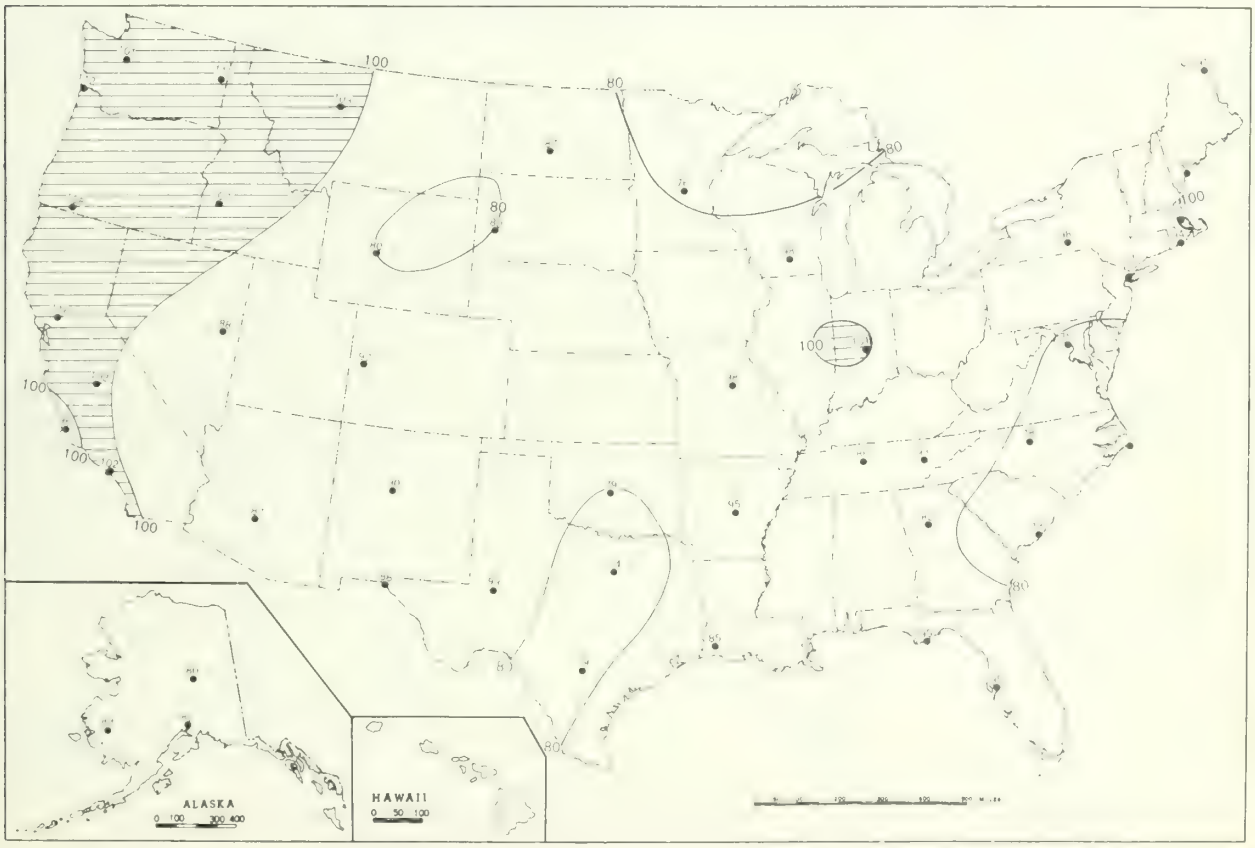


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, October 1971.

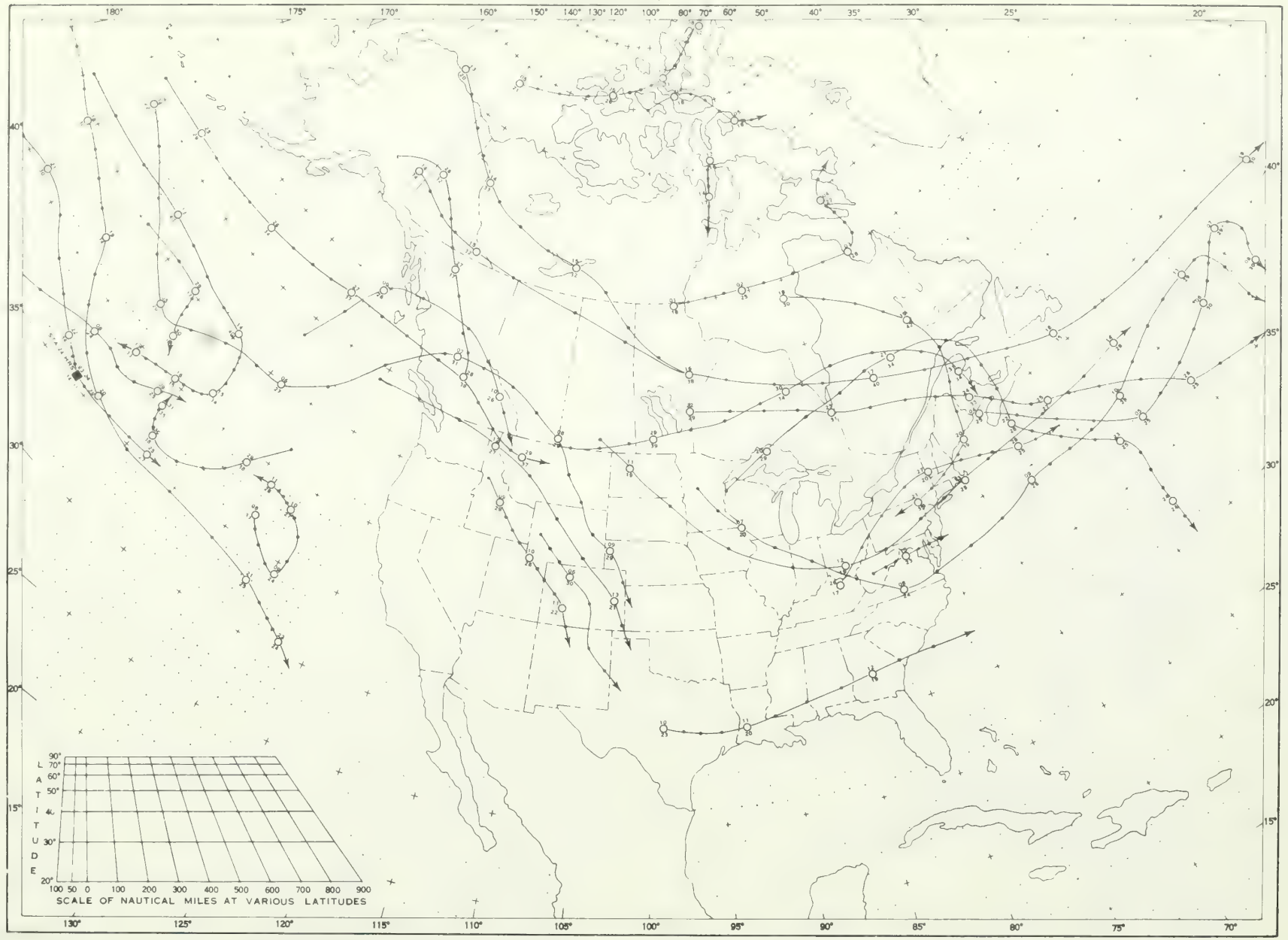


B. Percentage of Mean Daily Solar Radiation, October 1971.



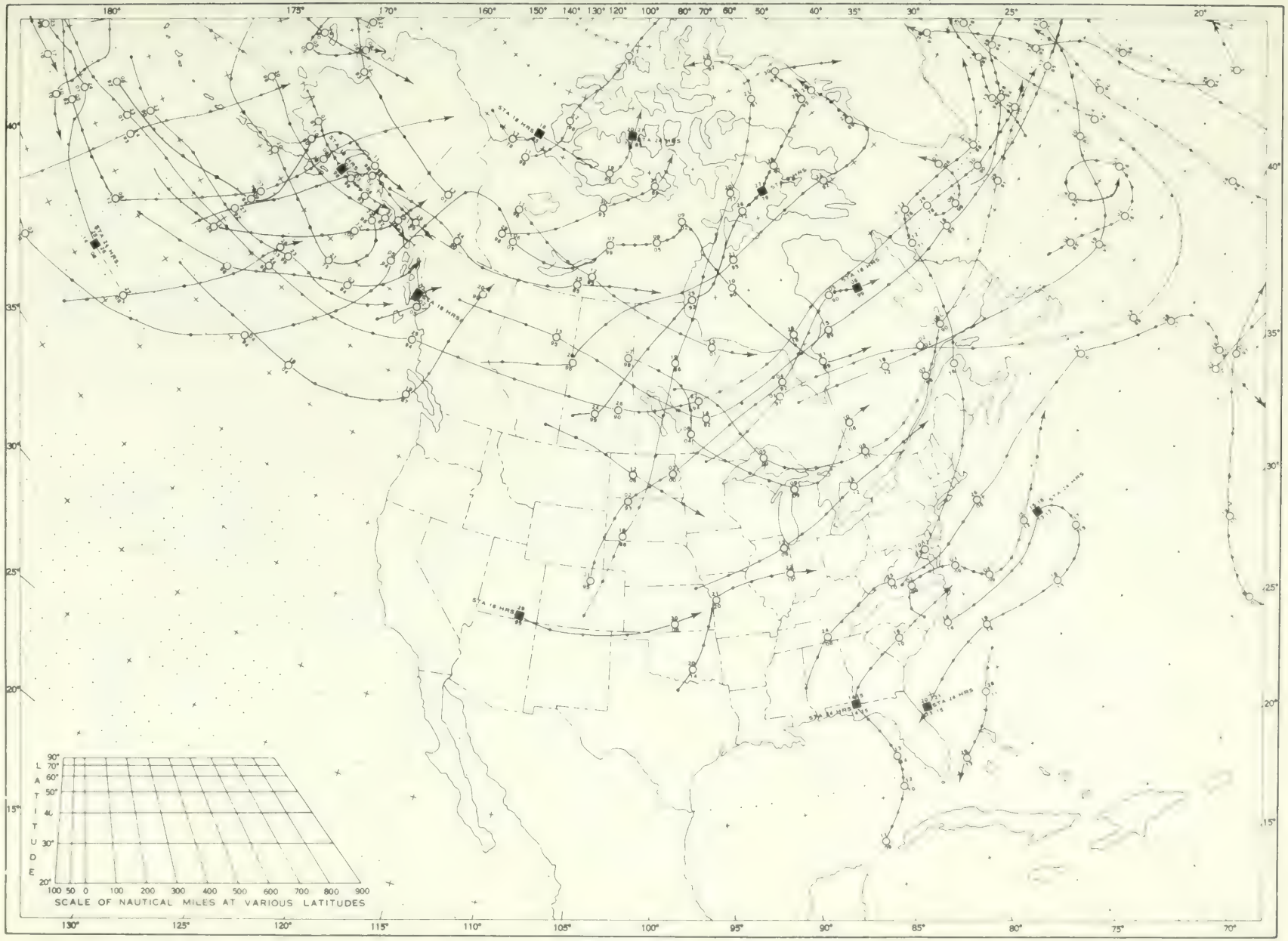
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, October 1971.



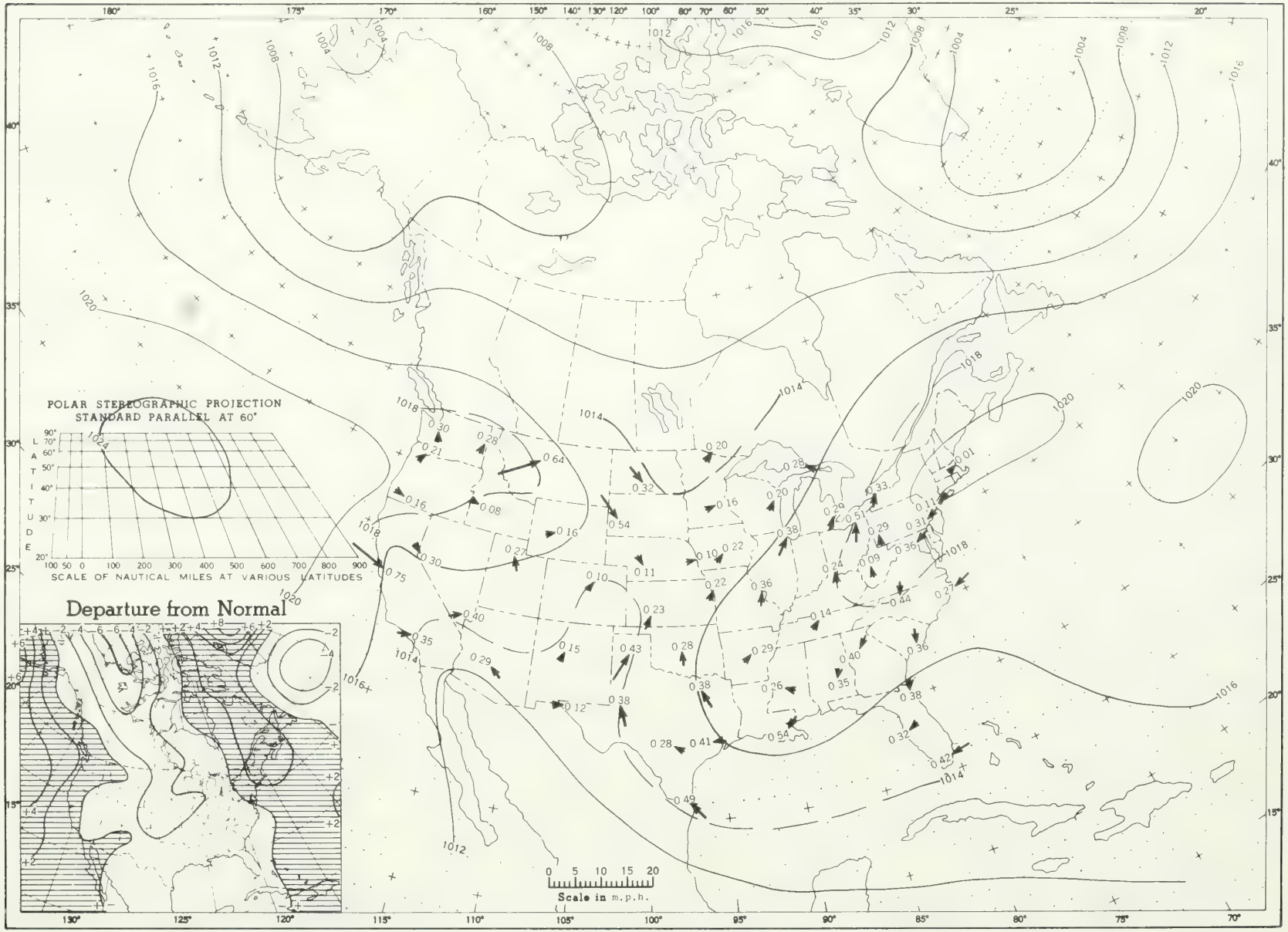
Circle indicates position of center at 7:00 a.m. **e.s.t.** Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, October 1971.



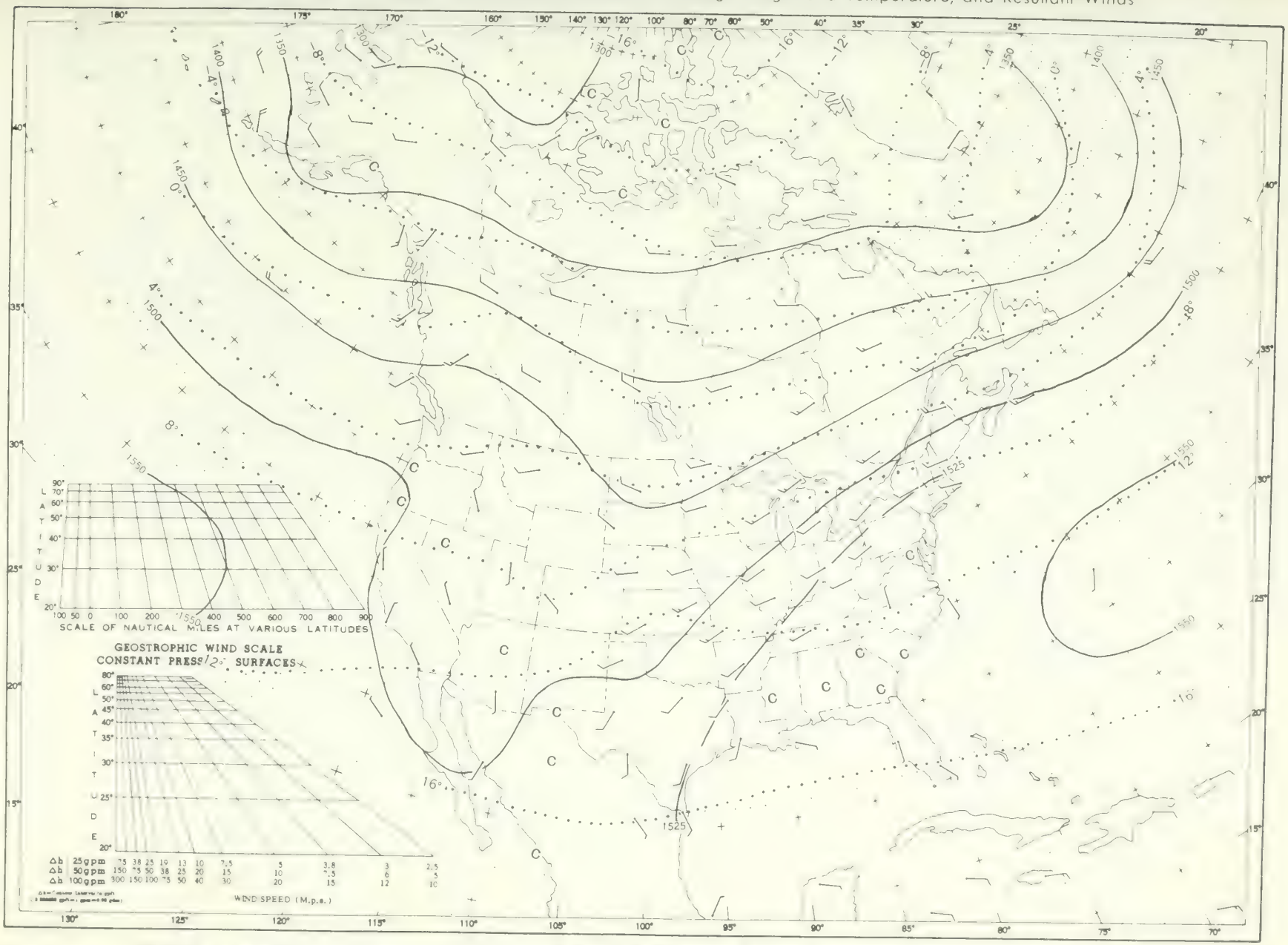
Circle indicates position of center at 7:00 a.m. e.s.t. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, October 1971. Inset Departure of Average Pressure (mb) from Normal, October 1971.



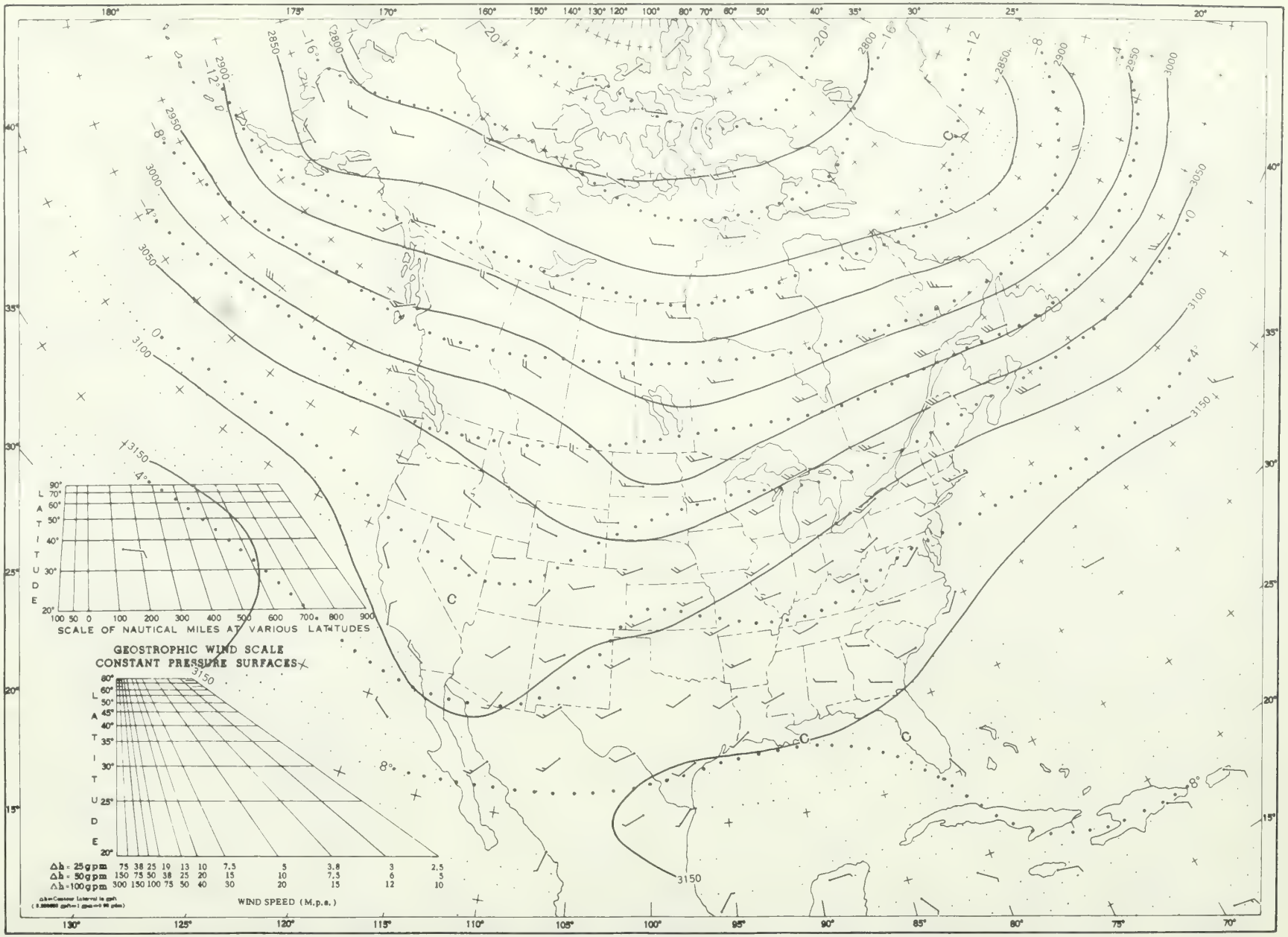
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10 intersections in a diamond grid over the oceans.

Chart XI 350-mb Surface, 1200 G.m.t., October 1971. Average Height and Temperature, and Resultant Winds



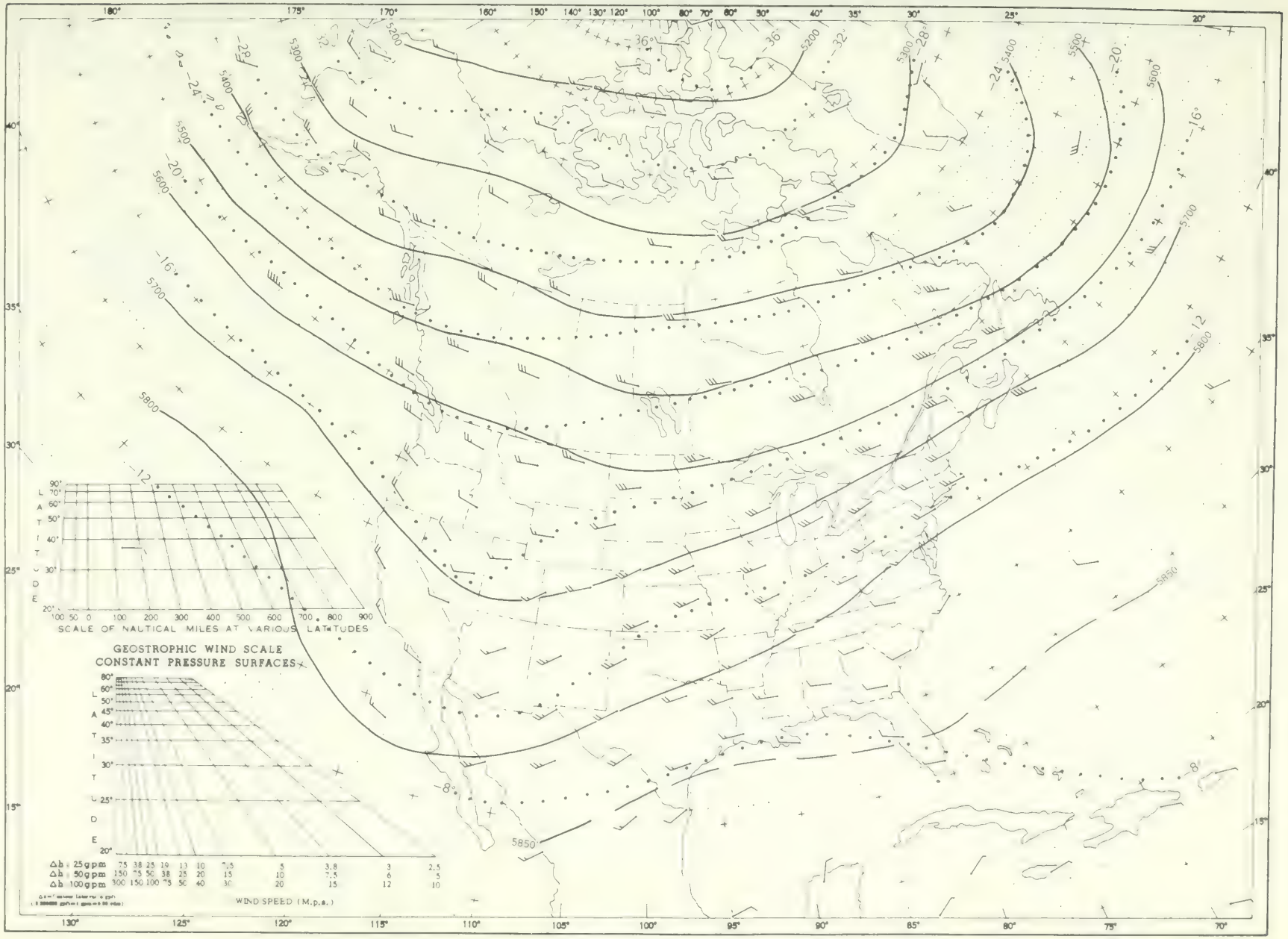
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb Surface, 1200 G.m.t., October 1971. Average Height and Temperature, and Resultant Winds



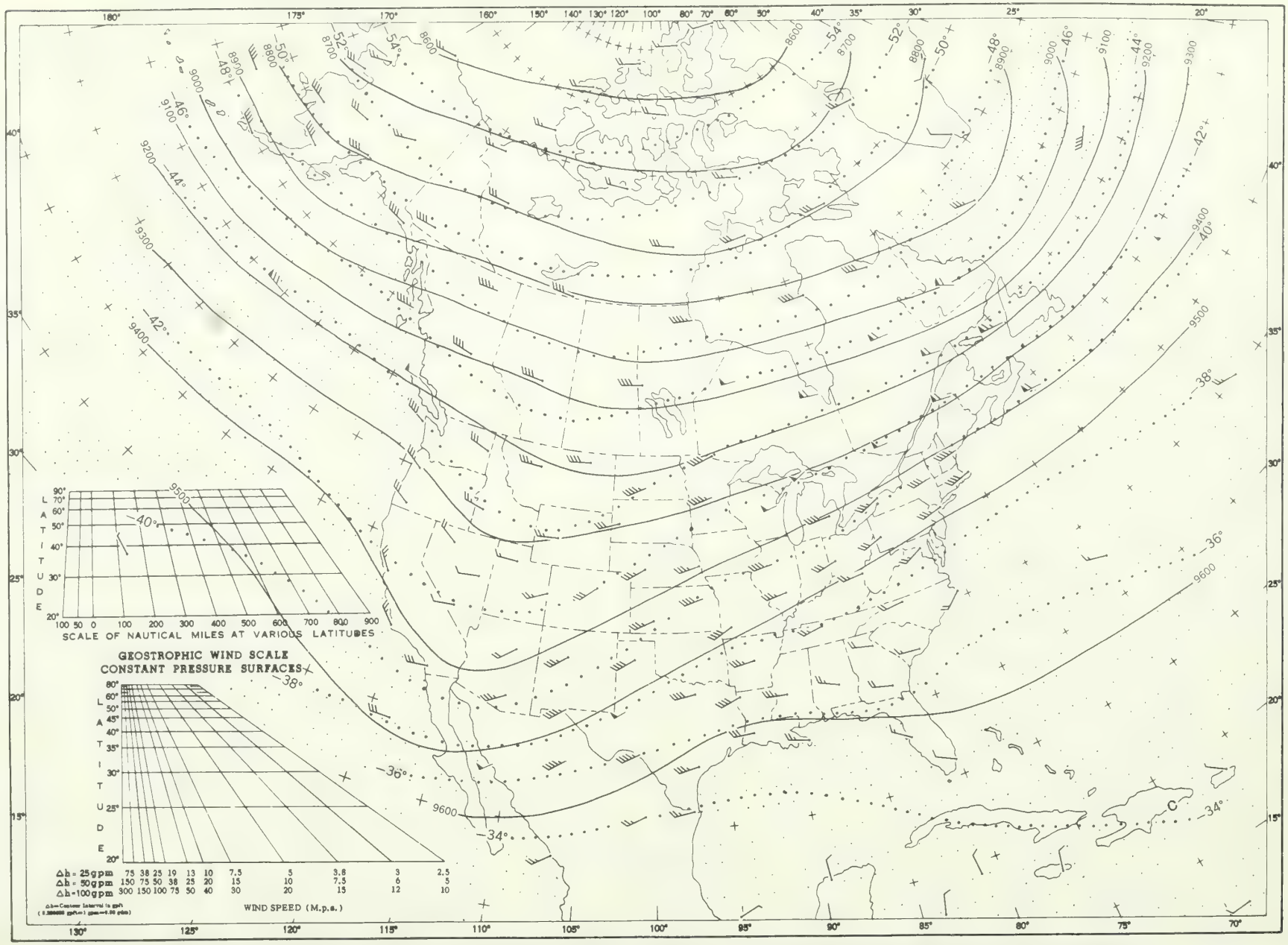
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII 500-mb Surface, 1200 G.m.t., October 1971. Average Height and Temperature, and Resultant Winds



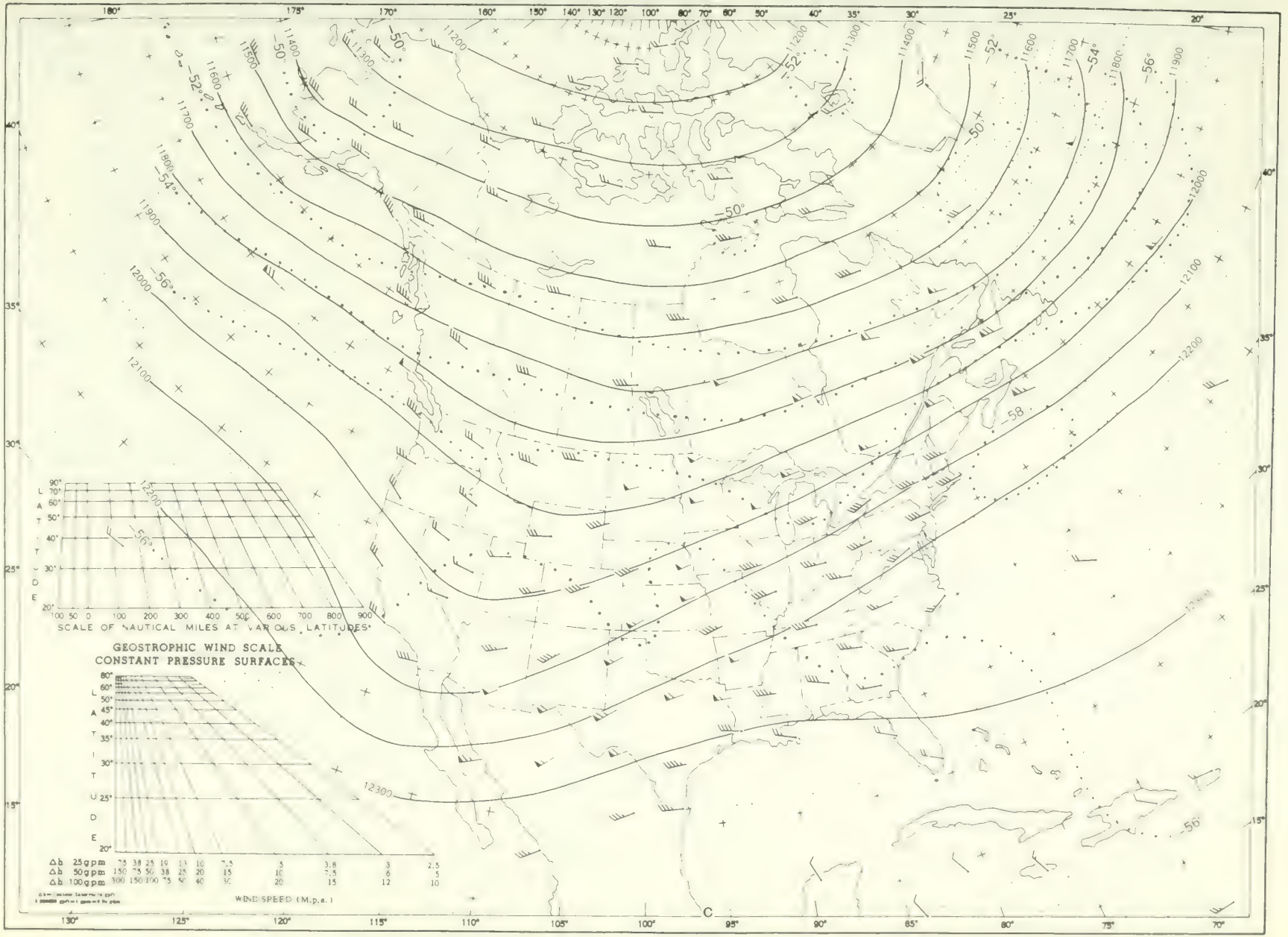
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV. 300-mb. Surface, 1200 G.m.t., October 1971. Average Height and Temperature, and Resultant Winds



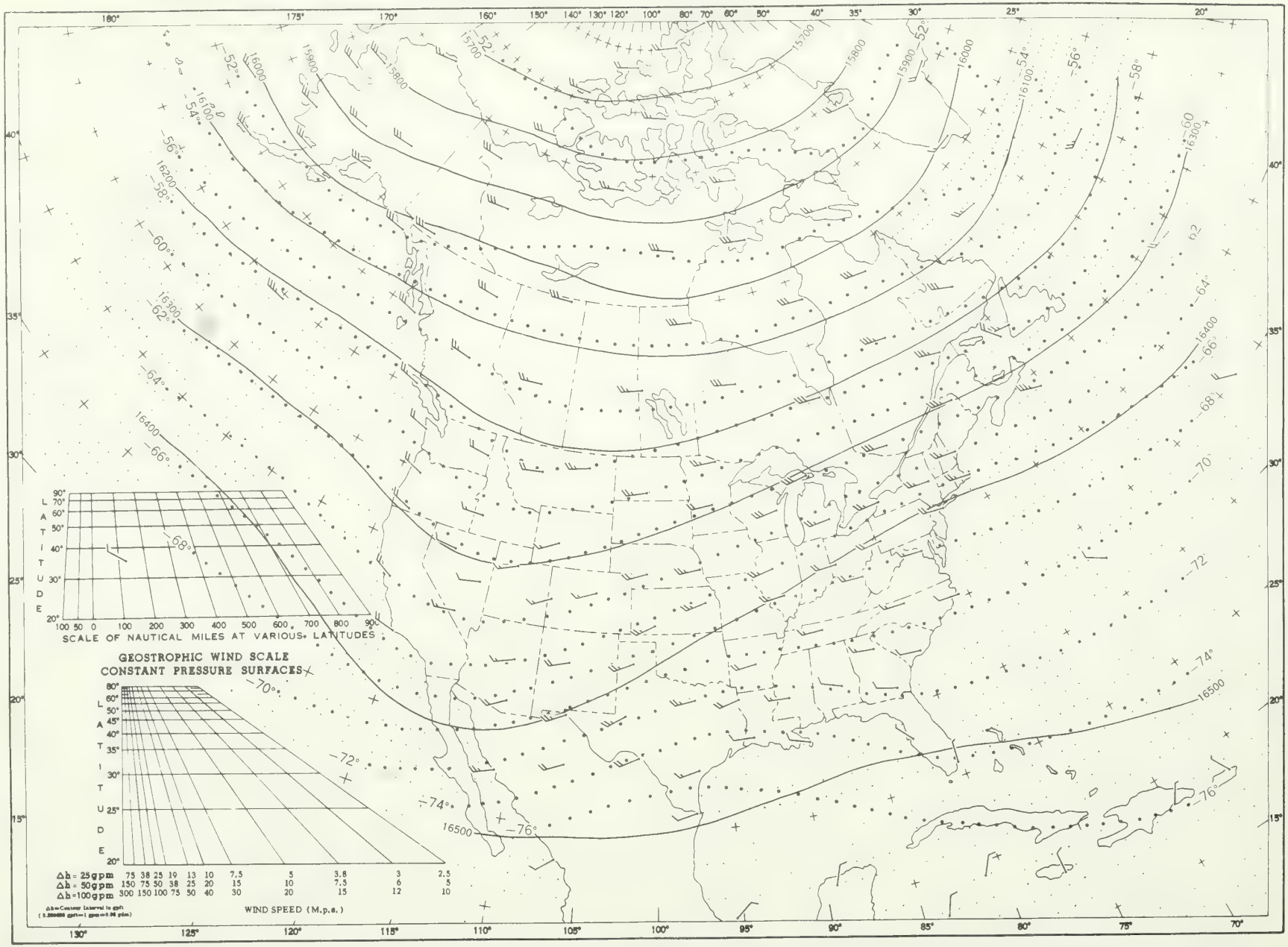
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb Surface, 1200 G.m.t., October 1971. Average Height and Temperature, and Resultant Winds



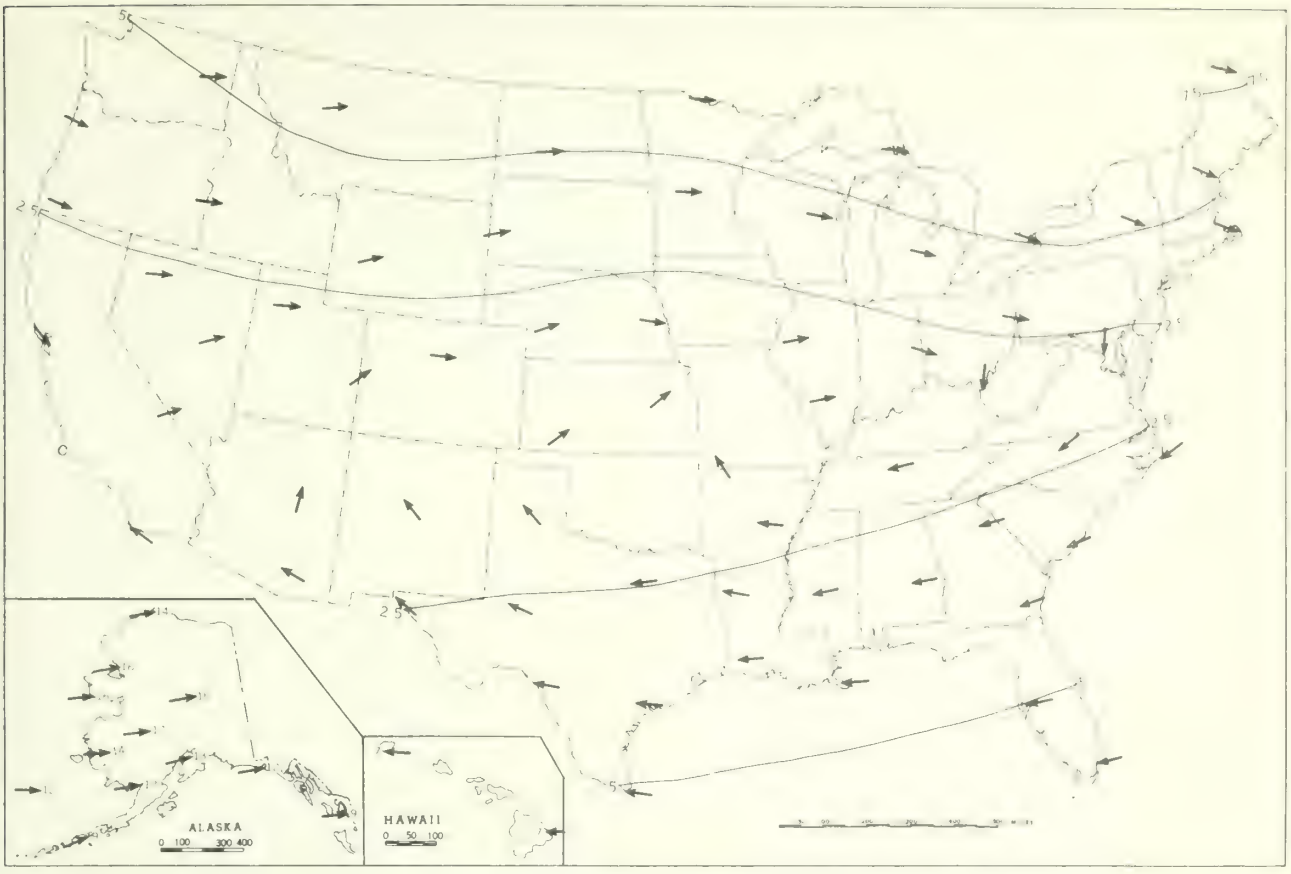
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100-mb. Surface, 1200 G.m.t., October 1971. Average Height and Temperature, and Resultant Winds

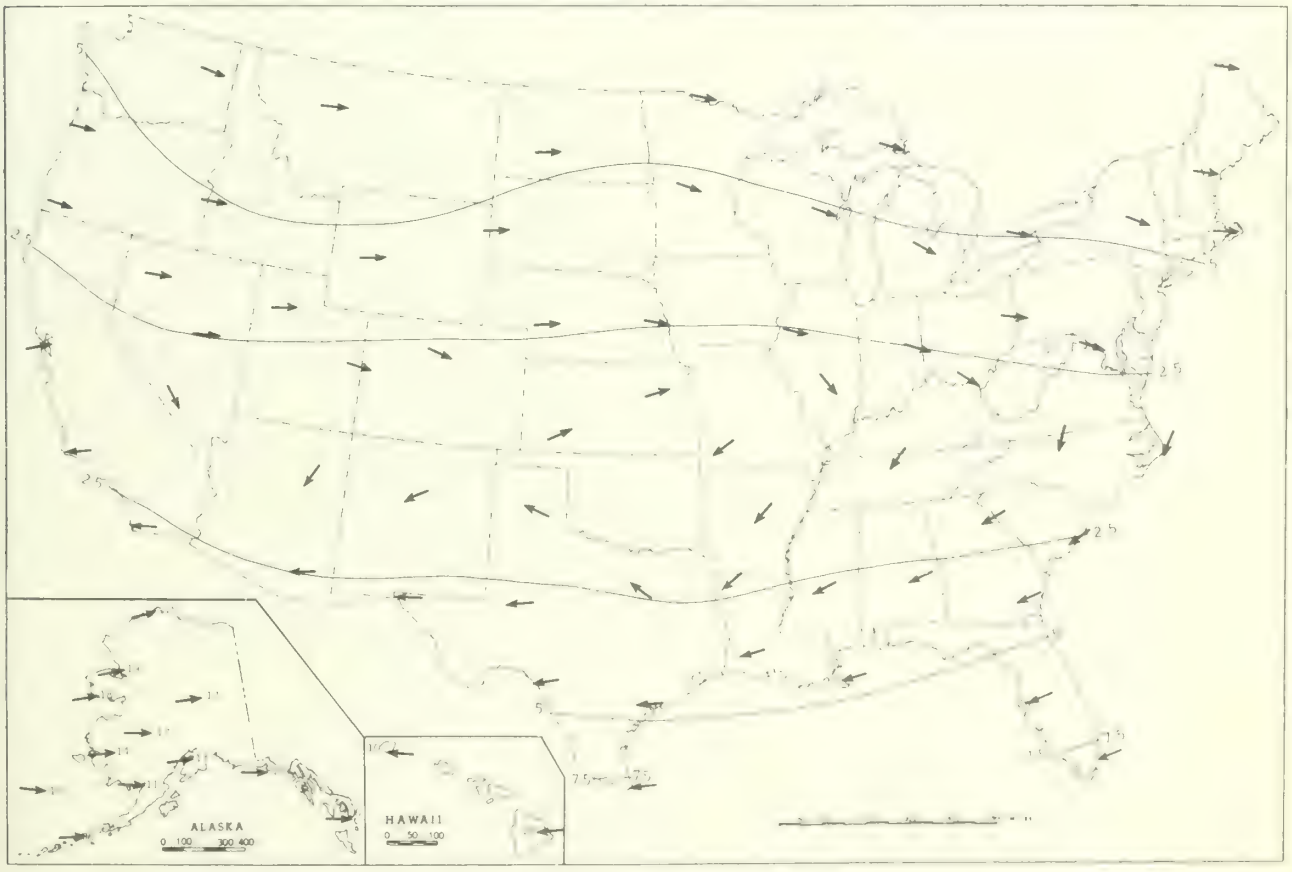


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., October 1971. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., October 1971. Resultant Winds.



Wind speed (isotachs) in meters per second. Arrows show resultant wind direction. All wind data are based on rawin observations.

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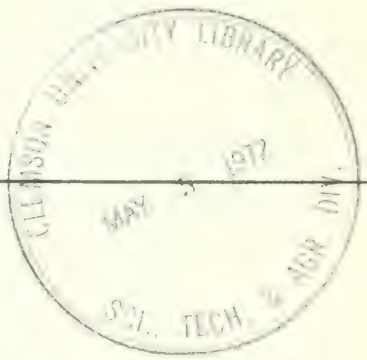
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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service



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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

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I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina 28801.

William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 11

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

NOVEMBER 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. November was unusually dry in the Southwest and extreme Southeast but heavy rains fell over the northern and central Great Plains.
2. Heavy snow fell from the Great Lakes Region to the Northeast.
3. Temperatures averaged within a few degrees of normal in spite of the record high and record low temperatures that occurred and the frequent temperature changes.

TEMPERATURE -- November began with cold air covering the western and central States and unusually balmy summer weather from eastern Texas to the Atlantic and northeastward to New England. Jackson, Miss., registered 88° on November 2 and Washington, D. C., 85° on November 2. Never before have such warm temperatures occurred at Jackson and Washington so late in the season. The cold air from the west and north spread across the east and south in the first week of November bringing an end to the abnormally warm weather. Freezing temperatures plunged southward reaching northern Mississippi and Alabama by November 6. Meanwhile, the Far West warmed, becoming quite pleasant.

On November 9, a high pressure area centered over the central Appalachians brought record-low temperatures to the East. The temperature at Albany, N. Y., plunged to 11°, the coldest it had ever been so early in the autumn at Albany. Record low temperatures set in 1887 were broken at Rochester, N. Y., (20°), Boston, Mass., (24°), and Erie, Pa., (24°). The same High that brought record cold to the East warmed mid-America which enjoyed a period of Indian summer temperatures. Temperatures over the Great Plains warmed to the seventies. Pueblo, Colo., registered 83° on November 11 and Chicago, Ill., registered 78° on the 14th and St. Louis, Mo., recorded 81° on the 15th.

A cold front stretched from Wisconsin to western Texas at midmonth. It moved steadily eastward, tumbling temperatures as it advanced. Chicagoans enjoyed a number of days with temperatures 22° to 30° above normal but their highest temperature on the 19th was a chilly 42°. Freezing temperatures occurred as far south as Port Gibson, about 30 miles south of Vicksburg, Miss.

The last week of the month was cold over the East. Subfreezing temperatures occurred as far south as Montgomery, Ala., which registered 27° on the 23d when Elkins, W. Va., recorded only 4°. A number of stations in Minnesota recorded subzero weather; Hibbing, -6°. The central Appalachians and nearby portions of the Piedmont averaged 9° to 12° below normal in the last week of November. A moderating trend warmed mid-America. Pueblo, Colo., warmed to 69° on Thanksgiving Day, November 25. Moderate temperatures prevailed in southern California and Florida on most days in November.

PRECIPITATION -- Generous rains fell along the eastern seaboard on the first two days of November. Then followed three days of fair skies over most of the Nation. An exception was Palm Beach, Fla., where 5.05 inches of rain fell in 6 hours on November 4. This brought the November total to 9.11 inches, an all-time record for November, and the rains kept falling. About the beginning of the second week of November, a cold front brought rain, a few showers to the Pacific Northwest. Strong winds lashed the coastlines, gusting to 80 m.p.h. at Cape Blanco, Oreg. Another cold front set off rain and showers from the mid-Mississippi River Valley to the southern Great Plains. A touch of winter hit New England. An inch of snow covered Logan International Airport at Boston, Mass., on the morning of November 11. This was the earliest date that an inch or more of snow fell at Boston since November 6, 1894. Light rain fell in the Pacific Northwest at midmonth when snow flurries occurred over the Rocky Mountains. The snow increased, spread to the nearby Great Plains, and blanketed several states from Montana to Minnesota and southward to the northern portions of Arizona and New Mexico. Thunderstorms occurred along a cold front that stretched from Wisconsin to Texas. At the end of the third week, several inches of snow fell to the lee of the Great Lakes and flurries were seen at some distance from the Lakes. At some places, gusty winds accompanied the snow, the visibility was reduced, and automobile travel became hazardous.

A storm centered off the Washington coast brought more rainy weather to the coast and light snow to the Cascades and the Rocky Mountains. More miserable weather plagued the eastern half of the Nation. The weather was especially severe in the Northeast where heavy snow, freezing rain, gusty winds, and cold temperatures combined to make a storm comparable to that of the last week of November in 1950.

Monthly rainfall totals ranged widely from no rain at a few spots in the southwestern deserts to more than 14.0 inches near Puget Sound. Totals exceeded the normals in Oregon, nearby parts of neighboring states, and in the northern and central Great Plains. In Kansas, totals ranged from about 200 percent to more than 600 percent of normal.

Some record and near record daily and monthly precipitation and snowfall totals occurred in November. Pendleton, Oreg., received 1.35 inches of rain on the 26th. This is the largest 24-hour amount to have fallen at Pendleton in any November in the past 36 years. The November total for Pendleton, 2.73 inches, is the largest November total in the past quarter century. The October-November total precipitation at St. Cloud, Minn., 8.72 inches, was the largest October-November total in 72 years. Numerous locations in the Northeast received more snow than in any November in the 20th century. Most of the snow fell on Thanksgiving Day, November 25. This was one of the worst November snowstorms of record.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature						Precipitation			
	Monthly extremes						Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Fairhope 2 NE	91	2	Valley Head	17	22	Eufaula Wildlife Ref	5.70	Orrville	.33
Alaska	3 Stations	51	19+	Prospect Creek Camp	-52	26	Little Port Walter	25.11	Alpine Inn	.00
Arizona	2 Stations	91	11+	Hawley Lake	1	19	McNary	2.14	25 Stations	.00
Arkansas	Eudora	88	3+	2 Stations	17	23+	Pocahontas 1	6.68	Perry	1.08
California	2 Stations	93	4+	White Mountain 1	- 5	14	Honeydew 2 WSW	21.49	25 Stations	.00
Colorado	Two Buttes	86	12	Hermit 7 ESE	-24	19	Mesa Lakes Resort	4.08	Windsor 1 SE	.00
Connecticut	Bulls Bridge Dam	75	2	2 Stations	11	24+	Bridgeport WSO	6.49	Cream Hill	3.60
Delaware	Newark University Farm	81	2	Milford 2 WSW	21	9	Middletown 1 WSW	5.54	Georgetown 5 SW	2.44
Florida	Sarasota	92	2	Fountain 3 SSE	26	26+	West Palm Beach WSO	10.77	La Belle	.13
Georgia	Thomasville 4 SE	89	2	Blairsville Exp Sta	17	9+	Commerce 4 NNW	6.36	Nahunta	.35
Hawaii	Kahului WSO 398 AP, Maui	90	6	Mauna Loa Slope Obs, Hawaii	29	22	Kipa 89.2, Hawaii	35.83	9 Stations	.00
Idaho	2 Stations	70	10+	Dixie	-17	6	Headquarters	5.09	Mackay Ranger Station	.17
Illinois	2 Stations	83	2+	5 Stations	10	24+	Galena 1 N	4.13	Effingham	.49
Indiana	Spurgeon 2 N	83	2	Angola	9	23	Bloomington Indiana U	2.70	Albion 5 E	.87
Iowa	Sioux City WSO	77	11	Waterloo WSO	- 1	30	Sigourney	D 5.74	Le Claire L and D 14	.80
Kansas	Johnson 11 ESE	84	11	Saint Francis	10	19	Burdett 6 SSE	6.11	Saint Francis 8 NW	.86
Kentucky	2 Stations	84	2+	4 Stations	11	23+	Tomahawk 1 WSW	3.61	Cecilia	1.14
Louisiana	4 Stations	90	3+	2 Stations	24	25	Homer Exp Station	5.60	Franklin 3 NW	.84
Maine	East Hiram	74	2	Clayton Lake 2	0	24+	Bar Harbor	5.42	Orono	2.00
Maryland	Dalecarlia Resvr D C	87	1	Oakland 1 SE	- 5	23	Towson	6.79	Princess Anne	1.99
Massachusetts	3 Stations	78	2+	Birch Hill Dam	5	24	2 Stations	8.60	Barre Falls Dam	3.23
Michigan	Coldwater State School	75	2	Vanderbilt Trout Sta	- 8	23	Pellston FAA Airport	4.61	Lapeer	.65
Minnesota	Luverne	70	11	2 Stations	- 9	30+	Beaver	6.03	Red Lake Falls	.24
Mississippi	Merrill	90	2	Tupelo 2 WNW	20	22	Richton 3 SSE	5.36	Walnut Grove	.79
Missouri	Marble Hill	87	15	Conception	9	8+	Oregon	5.22	Weldon Spring Exp Farm	.66
Montana	Grass Range	73	11	Babb 6 NE	-18	6	Troy 18 N	3.98	4 Stations	.00
Nebraska	2 Stations	79	11	Harrisburg 10 NW	0	6	Wymore 2 N	6.02	Sidney 6 NNW	.06
Nevada	Lathrop Wells 16 SSE	83	5	2 Stations	- 4	6+	Jiggs 3 N	D 2.53	5 Stations	.00
New Hampshire	Manchester	76	2	Mount Washington	- 6	8	Mount Washington	10.18	Lakeport 2	1.73
New Jersey	2 Stations	80	3+	High Point Park	14	9	Woodstown	7.18	Cape May 1 NW	3.13
New Mexico	2 Stations	83	12	Red River	-11	19	Maljamar 4 SE	3.90	Ochoa	.00
New York	2 Stations	79	2	Arcade	- 9	23	Sherman	7.28	Troupsburg 4 NE	1.26
North Carolina	4 Stations	85	2+	Grandfather Mountain	9	22	Lake Toxaway 2 SW	8.09	Elizabethtown Lock 2	1.07
North Dakota	3 Stations	67	12+	Hannah 2 N	-12	7	Forman 5 SSE	1.78	3 Stations	T
Ohio	2 Stations	81	1	Millport 2 NW	1	23	Chardon	4.42	Mansfield 6 W	1.02
Oklahoma	Barnsdall	87	12	Kenton	17	6	Beaver 1 SW	5.14	Perkins 1 SSE	T
Oregon	4 Stations	70	19+	Seneca	- 3	6	Valsetz	23.63	Malheur Refuge Hdq	.24
Pennsylvania	Norristown	85	2	Bradford FAA Airport	- 1	23	Strausstown	8.96	Lawrenceville	1.59
Puerto Rico	3 Stations	93	12+	Adjuntas Substation, P.R.	53	30	Villalba, P.R.	11.82	Rincon Power Plant, P.R.	1.39
Rhode Island	Providence WSO	73	1	North Scituate 4 W	15	9	Kingston	6.81	Providence WSO	5.16
South Carolina	Conway	87	2	Walhalla	19	25	Caesars Head 1 NE	7.77	Darlington	1.45
South Dakota	Gregory	77	11	Lemmon	- 5	6	Bridgewater	3.54	Fort Sully 8 NE	.24
Tennessee	Clarksville Sew Plt	86	2	Mountain City No 2	10	23	Watauga Dam	3.02	Sparta	.97
Texas	9 Stations	90	18+	Floydada	19	20	Burlington 3 WSW	6.30	18 Stations	.00
Utah	Saint George	76	10	Bryce Canyon FAA AP	-10	19	Alta	7.31	Jensen	T
Vermont	2 Stations	73	2	Cavendish	- 1	24	Mount Mansfield	5.88	South Newbury	2.20
Virginia	Chincoteague WL Ref	91	1	Burkes Garden	0	27+	Meadows of Dan 5 SW	4.92	Norfolk WSO	.97
Washington	Walla Walla WSO	69	9	Chesaw 4 NNW	4	6	Quinault Ranger Sta	27.39	Moses Lake 3 E	.52
West Virginia	Wardensville R M Farm	87	3	Buckeye	- 7	26	Stony River Dam	5.58	Matoaka	.87
Wisconsin	2 Stations	74	14	Jump River 5 E	- 8	30	Chilton	4.51	South Pelican	1.47
Wyoming	Carpenter 3 E	75	10	Foxpark	-18	18	Bondurant 3 NW	D 3.51	2 Stations	T

+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
ALABAMA	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
BIRMINGHAM	620	998.3	1021.0	63	38	50.7	- 2.6	78	1	24	8	0	6	39	67	1.76	- 1.77	0.61	8	0	T	0	1.5	2	26	SE	28+	15	6	9	4.6	58
HUNTSVILLE	624	997.3	1020.9	61	38	49.6	- 1.2	80	2	24	22	0	11	39	69	1.82	- 1.83	0.67	9	1	T	T	0.6	36	23	27	29	13	4	13	5.1	
MOBILE	211	1012.2	1020.2	71	47	59.2	0.3	87	2+	35	22+	0	0	48	71	1.23	- 2.12	0.78	7	1	0.0	0	3.9	3	23	34	3	15	6	9	4.3	
MONTGOMERY	183	1013.5	1020.8	67	41	54.1	- 0.1	86	2	27	22	0	3	42	69	2.27	- 0.75	0.88	11	2	T	0	2.3	35	26	SW	2	18	5	7	3.6	62
ALASKA												8																				
ANCHORAGE	114	999.7	1004.8	25	12	18.3	- 3.9	40	18	- 7	27	0	30	14	79	0.67	- 0.36	0.16	10	0	8.2	8	3.0	2	26	35	2	8	2	20	7.1	27
ANNETTE	110	1004.1	1008.2	44	35	39.2	- 1.2	48	24+	23	4	0	11	35	85	13.64	- 1.01	3.22	26	0	T	T	5.5	13	35	13	30	2	2	26	8.7	
BARROW	31	1014.6	1015.0	5	- 6	- 0.5	0.2	23	3	-21	23	0	30	- 8	72	0.17	- 0.06	0.09	4	0	2.0	5	8.8	8	35	7	11+	V	V	V		
BARTER ISLAND	39	1012.9	1014.9	6	- 5	0.7	0.5	22	3	-27	29	0	30	- 5	76	0.64	0.24	0.26	12	0	11.1	20	5.0	11	53	11	10	X	X	X		
BETHEL	125	1001.0	1007.0	21	8	14.9	- 2.3	36	5+	-22	30+	0	30	13	87	0.40	- 0.66	0.10	12	0	9.2	5	3.6	3	29	4	26+	9	2	19	6.8	
BETTLES	644			3	-12	- 4.7		19	18	-45	27	0	30			1.23		0.40	9	0	15.0	29			14	35	23	5	8	17	7.0	
BIG DELTA	1268			9	- 6	1.5		36	18	-40	30	0	30			0.21		0.10	6	0	5.6	11			31	12	10	7	7	16	6.6	
COLD BAY	96	1001.4	1005.1	37	28	32.4	- 2.0	49	6	16	29	0	24	28	81	5.11	1.32	1.07	21	0	2.1	1	3.7	26	46	14	12+	1	3	26	9.0	
FAIRBANKS	436	992.9	1010.9	8	- 7	0.5	- 3.4	26	18+	-36	27	0	30	- 9	64	0.54	- 0.06	0.34	7	0	9.8	8	1.7	1	13	36	10	5	7	18	7.4	
FORT YUKON	1572			8	- 9	- 0.8		35	19+	-33	26	0	30			0.73		0.18	12	0	12.5	20	0.7	36	21	18	19	7	5	18	6.9	
HOMER	67	1001.0	1004.8	32	19	25.9		44	18+	- 4	30	0	30	20	77	1.48	- 1.22	0.30	9	0	16.9	9	3.4	3	22	24	28	9	7	14	6.2	
JUNEAU	12	1006.1	1007.0	36	27	31.4	- 2.9	45	18	11	10	0	22	28	86	4.38	- 1.68	1.55	18	0	20.6	7	4.2	9	37	12	17	2	4	24	8.8	13
KING SALMON	49	1002.7	1004.8	28	15	21.6	- 0.4	45	17	-14	30+	0	23	14	72	1.13	- 0.33	0.32	10	0	3.9	1	2.5	5	30	17	10	8	5	17	6.7	
KOTZEBUE	10	1009.3	1009.9	12	1	6.3	- 1.1	24	23+	-21	30	0	30	1	78	0.24	- 0.12	0.13	7	0	5.9	12	12.1	8	44	10	23	9	5	16	6.7	
MC GRATH	344	996.3	1009.5	9	- 8	0.6	- 4.7	29	1	-39	30	0	30	- 2	87	1.22	0.14	0.50	13	0	21.6	17	0.7	31	18	28	1	7	5	18	6.9	
NOME	13	1007.1	1007.8	23	8	15.6	- 0.9	35	17	-17	30	0	30	10	76	0.68	- 0.48	0.21	12	0	12.0	13	5.7	7	36	32	1	8	6	16	6.7	21
ST. PAUL ISLAND	22	1002.7	1003.5	37	28	32.4	- 0.5	43	3	18	16	0	23	30	86	2.03	- 0.47	0.53	20	0	5.1	2	0.5	13	52	33	7	2	11	17	7.8	
SHEMYA	122	997.3	1001.0	40	33	36.6	0.8	46	6	16	15	0	10	30	76	6.27	3.55	1.26	26	0	8.6	2	7.5	23	53	4	27+	0	7	23	8.7	
SUMMIT	2401	917.4	1010.1	12	- 1	5.6		29	18+	-20	30+	0	30	0	76	0.91		0.39	7	0	24.3	23	11.2	4	38	6	28	10	4	16	6.3	
TALKEETNA	345			21	0	10.5	- 8.3	36	18	-34	30	0	30			1.39	- 0.40	0.46	10	0	24.3	25			20	3	2					
UNALAKLEET	15	1007.1	1007.9	16	4	10.1		32	24+	-30	29	0	30			0.66		0.24	12	0	7.3	9	12.5	8	40	29	1	6	4	20	7.2	
YAKUTAT	28	1002.7	1003.7	37	25	30.9	- 2.9	45	18+	10	30+	0	27	27	87	9.40	- 6.63	2.18	20	0	20.9	15	4.8	10	30	14	17	5	5	20	7.8	
ARIZONA																																
FLAGSTAFF	7006	788.8	1020.3	48	19	33.5	- 2.6	64	11	5	18	0	30	13	49	0.40	- 0.60	0.21	4	0	4.9	3	0.8	18	22	23	28	14	8	8	4.3	
PHOENIX	1117	976.6	1015.9	74	46	59.7	1.6	88	11	37	18+	0	0	34	42	T	- 0.49	T	0	0	0.0	0	2.4	11	25Y	ENE	29	17	4	9	4.2	75
TUCSON	2584	927.2	1015.5	70	43	56.8	- 1.3	86	11	35	22+	0	0	34	49	0.69	0.07	0.66	2	0	0.0	0	3.2	15	29	E	3	15	5	10	4.5	75
WINSLOW	4895	853.4	1020.0	59	29	43.9	2.6	74	12+	18	20	0	19	23	50	0.06	- 0.30	0.05	3	0	T	0	1.5	23	28	25	27	14	6	10	4.7	
YUMA	194	1008.8	1016.1	74	47	60.1	- 1.6	84	11+	39	17	0	0	34	42	0.00	- 0.12	0.00	0	0	0.0	0	3.2	35	24	W	29	16	7	7	3.5	79
ARKANSAS																																
FORT SMITH	447	1003.1	1020.1	63	38	50.4	0.4	83	1	27	7	0	9	37	65	2.40	- 0.78	1.35	7	4	2.8	2	1.3	5	25	W	28	12	7	11	5.2	61
LITTLE ROCK	257	1010.5	1020.3	63	38	50.5	1.0	83	14	26	8	0	7	40	70	3.38	- 0.74	1.41	7	3	4.8	3	1.1	28	26	NW	29+	12	8	10	5.1	56
CALIFORNIA																																
BAKERSFIELD	475	1002.0	1019.8	65	42	53.8	- 2.1	75	9+	34	19	0	0	40	65	0.12	- 0.37	0.08	2	0	0.0	0	1.5	6	20	34	13	13	7	10	4.5	
BISHOP	4108	876.1		62	25	43.2	- 2.6	74	4	15	1	0	28			0.04	- 0.49	0.04	1		0.0	0						16	9	5	3.9	
BLUE CANYON	5280			48	35	41.4	- 4.3	66	3	23	14	0	13			7.46	0.71	2.86	9		26.0	14			25	18	11	12	4	14	5.2	
EUREKA U	43			55	44	49.4	- 1.8	65	11	35	2	0	0			6.36	1.75	2.35	15		0.0	0			34	S	9	9	5	16	6.3	48
FRESNO	328	1008.1	1020.0	65	37	50.7	- 3.1	78	10	31	20+	0	6	39	71	0.65	- 0.30	0.49	4	1	0.0	0	0.9	7	19	W	12	12	10	8	4.4	69
LONG BEACH	25	1016.6	1018.1	71	50	60.4	- 0.8	93	3	42	24	1	0	48	69	0.22	- 0.81	0.21	3	0	0.0	0	0.9	26	26	S	19	13	6	11	4.9	
LOS ANGELES	97	1013.9	1017.5	67	51	59.2	- 1.9	86	3	44	1	0	0	46	70	0.22	- 0.87	0.22	2	0	0.0	0	2.0	27	29Y	W	29+	14	6	10	4.7	
LOS ANGELES J	270			70	51	60.2	- 2.5	89	3	44	15	0	0			0.30	- 0.78	0.30	2		0.0	0			20	NW	27	17	10	3	3.7	64
MT SHASTA R	3544	895.0	1021.0	49	30	39.9	- 1.9	61	6	19	6	0	20			4.28	0.31	1.08	9		8.4	7										
OAKLAND	6	1020.3	1020.5	60	46	52.9	- 1.8	71	18	39	17	0	0	43	71	1.66	- 0.07	0.67	6	0	0.0	0	1.3	26	28	S	18	15	4	11	4.4	
RED BLUFF	342	1007.1	1019.9	63	42	52.6	- 1.9	76	4+	36	4	0	0	35	59	1.77	- 0.52	0.59	6	0	0.0	0	1.9	35	41	SE	13	14	4	12	4.9	65
SACRAMENTO	17	1019.0	1019.9	65	41	52.7	- 0.2	76	4	30	17	0	1	39	67	0.87	- 0.58	0.39	6	0	0.0	0	0.6	30	33	NW	15	14	7	9	4.5	79
SANDBERG R	4517	864.2		56	38	47.0	- 2.0	75	4	25	19	0	7			0.31	- 0.61	0.13	4		0.0	0			38	33	26	15	5	10	4.7	
SAN DIEGO	13	1016.9	1017.8	67	52	59.5	- 2.3	80	3	46	24+	0	0	47	68	0.06	- 0.84	0.04	2	0	0.0	0	1.8	31	17	W	29+	10	8	12	5.5	65
SAN FRANCISCO	8	1019.6	1020.5	62	44	53.2	- 1.6	71	6	40	30+	0	0	42	71	0.99	- 0.58	0.44	6	0	0.0	0	3.2	29	29	S	26+	15	5	10	4.5	
SAN FRANCISCO J	52			61	50	55.6	- 1.8	72	3	44	7	0	0			1.92	- 0.08	0.67	7		0.0	0			26	N	16					65
SANTA MARIA	236			64	38	50.8	- 5.3	81	3	30	16	0	4			0.49	- 0.53	0.41	4		0.0	0						17	8	5	3.8	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						Snow, Ice pellets				Fastest mile									
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
CALIFORNIA																																
STOCKTON	22	1019.6	1020.6	64	40	52.1	- 0.9	76	4	32	17	0	1	37	61	0.81	- 0.36	0.34	6	0	0.0	0	1.7	29	29	34	15	13	5	12	5.0	
COLORADO																																
ALAMOSA	7536	771.8		45	11	28.1	- 1.4	63	11	- 5	20	0	30			0.44	0.15	0.31	6		7.7	5						18	6	6	3.7	
COLORADO SPRINGS	6145	810.0	1017.7	52	24	37.9	0.4	72	11	6	19	0	26	17	51	0.03	- 0.37	0.03	1	0	0.3	T	2.9	4	36	30	13	16	4	10	4.4	
DENVER	5283	834.7	1015.3	54	24	39.1	1.4	75	10	12	18+	0	25	22	59	0.16	- 0.53	0.12	3	0	1.4	1	1.5	21	38	NW	2	10	9	11	5.3	61
GRAND JUNCTION	4843	854.7	1020.9	50	27	38.4	- 0.4	61	14+	19	19	0	26	26	67	0.56	- 0.02	0.36	5	0	3.9	2	1.1	10	26	NW	27	10	11	9	5.3	62
PUEBLO	4684	855.1	1016.5	57	25	40.7	0.7	83	11	12	19+	0	27	23	56	0.45	- 0.08	0.41	2	0	3.5	2	1.4	34	63	NW	13	13	8	9	4.5	75
CONNECTICUT																																
BRIDGEPORT	7	1017.3	1017.9	51	36	43.5	- 1.0	70	2	22	9	0	9	33	67	6.49	2.47	1.55	14	0	T	T	6.0	31	37	2	25	7	6	17	6.7	
HARTFORD	169	1010.2	1016.9	48	31	39.6	- 1.7	73	2+	21	24+	0	21	30	72	5.68	1.84	1.61	15	0	8.2	8	3.8	31	26	NE	25	5	7	18	7.1	40
DELAWARE																																
WILMINGTON	74	1015.6	1018.5	54	37	45.7	0.3	80	2	24	9	0	7	36	71	5.52	1.99	1.84	9	2	T	T	4.2	30	36	35	25	5	11	14	6.7	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	290	1007.1	1019.1	55	34	44.4		84	2	19	9	0	17	36	75	3.13		1.81	6	0	2.9	2	3.4	29	29	31	22	5	11	14	6.5	
WASHINGTON NATIONAL	10	1016.6	1019.0	57	40	48.2	0.5	85	2	26	23	0	5	36	66	3.76	0.92	2.63	8	0	1.4	1	4.1	29	31	NW	25	8	11	11	5.9	42
FLORIDA																																
APALACHICOLA U	13			71	53	62.3	1.0	85	2	38	22	0	0			2.49	- 0.09	1.48	5	0	0.0	0			25	E	23	17	9	4	3.1	89
DAYTONA BEACH	31	1017.6	1019.0	75	57	65.9	0.6	84	3	41	22	0	0	56	73	1.33	- 1.00	0.69	6	1	0.0	0	2.5	1	23	35	25+	9	13	8	5.1	
FORT MYERS	15	1017.3	1017.7	80	62	71.0	1.8	87	1	52	26+	0	0	60	71	0.16	- 1.04	0.11	2	1	0.0	0	5.4	5	21	7	6	9	12	9	5.3	
JACKSONVILLE	26	1018.6	1019.6	74	49	61.7	0.0	86	2	32	22	0	1	53	79	0.83	- 0.86	0.65	4	1	0.0	0	2.5	36	35	SE	29	15	8	7	4.1	69
KEY WEST	4	1015.6	1016.1	80	72	75.8	1.7	85	3	66	23+	0	0	67	74	1.69	- 1.11	0.56	10	1	0.0	0	9.8	7	26	E	19+	4	12	14	6.8	74
LAKELAND U	214			76	59	67.7	0.8	87	1	44	22	0	0			3.18	1.59	1.81	5		0.0	0						11	16	3	4.3	65
MIAMI	7	1016.6	1016.9	80	68	73.9	1.5	84	1	56	22	0	0	63	70	0.98	- 1.85	0.37	9	1	0.0	0	6.1	4	24	6	17	7	9	14	6.2	
ORLANDO	108	1014.2	1018.7	80	59	69.5	3.6	88	3	46	22+	0	0	58	71	1.21	- 0.36	0.66	5	3	0.0	0	4.1	2	23	17	29+	10	13	7	4.9	
PENSACOLA	112	1015.6	1019.9	71	50	60.2	0.7	84	2	37	11	0	0	49	70	2.37	- 0.87	1.66	7	1	0.0	0	4.6	4	22	3	3	17	7	6	4.0	
TALLAHASSEE	55	1017.3	1019.6	74	43	58.2	- 1.0	86	2	27	12	0	4	47	72	0.88	- 1.56	0.51	6	2	0.0	0	3.2	2	21	1	10	17	6	7	3.5	
TAMPA	19	1018.0	1018.2	78	57	67.7	0.9	90	1	45	22+	1	0	57	73	1.40	- 0.06	0.72	5	2	0.0	0	4.9	7	20	9	23	10	14	6	4.9	50
WEST PALM BEACH	15	1016.6	1017.1	81	65	73.1	0.6	87	3	54	26	0	0	63	73	10.77	7.91	5.44	13	4	0.0	0	5.9	6	29	2	3	5	12	13	6.5	
GEORGIA																																
ATHENS	802	990.9	1020.3	62	41	51.5	0.0	80	2	26	22	0	6	39	68	4.02	1.09	1.27	10	2	T	T	2.0	33	20	31	21	16	6	8	4.1	
ATLANTA	1010	982.7	1020.1	62	40	50.7	- 0.5	79	2	26	22	0	7	38	65	3.42	0.46	1.03	9	0	T	T	2.3	35	29	NW	21	17	6	7	3.9	76
AUGUSTA	136	1014.9	1020.1	67	40	53.6	- 0.5	81	2+	25	22	0	7	42	72	2.64	0.46	1.10	7	0	0.0	0	1.9	31	28	31	21	15	7	8	4.2	
COLUMBUS	385	1006.1		67	43	55.0	0.9	82	2	30	22	0	2	43	68	2.41	- 0.18	1.43	7	0	0.0	0	2.6	36	22	32	21	18	7	5	3.3	
MACON	354	1007.8	1021.0	68	42	54.9	- 0.5	85	2+	28	22	0	6	42	68	3.40	0.95	1.52	8	1	0.0	0	2.9	35	26	NW	21	16	9	5	3.6	74
ROME	637			62	36	48.9	- 0.3	80	2	25	11+	0	14			2.45	- 0.97	0.83	9		T	0										
SAVANNAH	46	1018.0	1019.9	70	46	58.0	0.7	84	2	29	22	0	2	47	72	1.26	- 0.79	0.74	10	0	0.0	0	2.4	35	27	NW	21	14	9	7	4.3	69
HAWAII																																
HILO	27	1016.3	1017.3	81	67	73.8	0.6	84	5+	62	20	0	0	67	84	17.88	4.51	4.16	29	0	0.0	0	2.2	19	17	SE	26+	1	16	13	7.3	29
HONOLULU	7	1015.9	1016.5	82	69	75.7	- 0.2	85	6	64	30+	0	0	65	73	0.95	- 1.21	0.42	8	0	0.0	0	12.0	6	29	NE	23	4	17	9	5.9	66
KAHULUI	48	1013.5	1015.9	85	66	75.5	0.5	90	6	60	29+	1	0	65	72	0.24	- 1.28	0.10	7	0	0.0	0	9.8	6	30	NE	17	16	7	7	4.3	72
LIHUE	103	1012.9	1017.8	81	73	77.0	2.5	83	7+	67	16	0	0	68	74	2.25	- 2.28	0.64	16	0	0.0	0	10.8	7	24	NE	9+	1	17	12	6.9	30
IDAHO																																
BOISE	2838	918.7	1020.8	48	32	39.7	1.1	63	9	20	8+	0	16	28	66	2.32	1.12	0.88	11	0	0.4	T	2.0	12	26	W	26	3	9	18	7.5	38
LEWISTON	1413			47	33	39.8	0.0	55	9+	24	5	0	13			1.45	0.22	0.44	13		T	0			40Y		4	1	5	24	8.9	
POCATELLO	4454	864.9	1020.9	42	23	32.7	- 2.3	66	12	8	16	0	29	24	74	1.81	0.82	0.82	9	1	9.6	6	7.2	21	42	SW	27	4	6	20	7.7	34
ILLINOIS																																
CAIRO U	314			58	41	49.3	1.4	80	1	27	8	0	5			1.82	- 2.05	1.03	9		2.0	2			29	E	28	12	7	11	5.2	57
CHICAGO O HARE	658	992.6	1017.4	50	33	41.7	3.6	77	14	17	22	0	14	30	65	1.32	- 0.85	0.44	10	0	1.3	1	5.4	24	47	18	1	7	8	15	6.7	
CHICAGO MIDWAY	607	994.9	1017.8	50	34	42.0	2.1	78	14	18	7	0	13	31	68	0.96	- 1.24	0.43	8	2	1.2	1	4.8	23	43	S	1	8	8	14	6.4	55

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft	Mb	Mb	F.	F.	F.	F.	F.		F.				F	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							
ILLINOIS																																
MOLINE	582	996.6	1018.5	49	31	40.0	0.8	75	14	12	7	0	16	29	67	2.21	0.26	0.72	9	0	5.9	2	4.0	24	34	SW	19+	8	8	14	6.4	41
PEORIA	652	993.9	1018.5	50	31	40.5	0.8	75	14	14	7	0	19	30	69	1.43	- 0.71	0.49	9	0	4.0	1	3.4	22	33	NW	21	8	6	16	6.8	42
ROCKFORD	724	990.2	1017.6	48	31	39.1	2.0	73	14	14	22	0	18	30	73	2.24	- 0.13	0.84	11	0	5.0	1	3.1	25	30	24	5	6	7	17	6.8	
SPRINGFIELD	588	995.9	1018.6	53	34	43.8	2.0	77	15+	16	7	0	15	32	66	1.41	- 0.95	0.45	10	0	4.4	1	4.8	22	34	NW	20	9	6	15	6.1	52
INDIANA																																
EVANSVILLE	381	1005.8	1020.3	56	36	45.7	0.9	80	1	19	8	0	14	34	67	1.57	- 1.59	0.59	11	0	3.4	1	2.7	23	27	NW	21	9	8	13	5.9	59
FORT WAYNE	791	988.5	1019.3	49	31	40.0	1.1	71	17	16	8	0	16	32	76	1.22	- 1.33	0.32	12	0	6.7	1	5.1	24	38	SW	2	5	6	19	7.5	46
INDIANAPOLIS	792	989.5	1019.1	53	33	43.1	2.2	76	14	16	7	0	14	33	72	1.29	- 1.80	0.33	11	0	4.4	2	3.7	23	38	SW	2	7	6	17	6.9	41
SOUTH BEND	773	989.2	1017.8	49	33	40.9	1.8	71	14	12	23	0	13	32	73	1.83	- 0.82	0.39	13	0	16.3	5	4.6	21	31	19	5	3	6	21	7.9	
IOWA																																
BURLINGTON	672			50	32	41.1	1.7	74	14	15	7	0	18	33	75	1.82	- 0.06	0.62	8	0	3.6	2	3.5	25	28	33	21	9	8	13	6.3	
DES MOINES	938	982.4	1017.8	48	32	39.6	2.5	68	11	14	7	0	17	31	72	3.29	1.53	2.05	9	1	10.3	5	2.8	25	33	NW	6	7	7	16	6.8	49
DUBUQUE	1056	978.0		45	30	37.6	2.8	70	14	11	30	0	21			4.39	1.80	2.65	11		12.3	9										
SIOUX CITY	1095	976.6	1017.3	48	28	37.8	1.7	77	11	10	30	0	23	27	68	1.71	0.55	1.06	7	0	3.4	2	1.3	27	38	NW	6	7	5	18	7.0	50
WATERLOO	868	985.1	1017.8	43	26	34.7	0.0	65	16	- 1	30	0	27	29	80	2.76	0.93	1.25	11	1	11.7	8	2.0	25	37	33	21	7	6	17	6.9	
KANSAS																																
CONCORDIA	1474	963.4	1017.3	52	33	42.4	0.9	72	13	16	7	0	15	34	76	4.88	3.90	3.20	7	3	7.5	4	3.4	21	34	NW	26	12	1	17	5.8	64
DODGE CITY	2582	925.2	1017.1	54	33	43.5	0.7	78	12	23	19+	0	17	30	65	3.75	3.11	2.42	5	3	1.6	1	2.7	22	36	NW	26+	13	7	10	5.0	62
GOODLAND	3654	887.9	1016.8	52	27	39.6	1.6	75	12	16	6	0	25	27	67	1.31	0.82	0.66	5	0	3.6	3	4.2	26	44	30	13	13	7	10	4.8	
TOPEKA	877	986.1	1018.4	56	35	45.4	2.8	77	15	18	7	0	12	34	69	3.03	1.53	1.85	7	2	2.4	1	2.9	23	31	W	1	13	3	14	5.6	54
WICHITA	1321	969.2	1018.0	54	34	43.9	- 0.5	71	15+	22	7	0	17	36	77	2.49	1.00	0.94	6	3	2.3	2	2.4	20	33	NW	26	10	5	15	5.8	60
KENTUCKY																																
COVINGTON	869	987.8	1020.0	52	34	43.2	0.5	74	14	14	8	0	18	33	69	1.68	- 1.33	0.45	9	0	3.0	T	4.0	23	26	29	21	8	3	19	6.9	
LEXINGTON	966	984.4	1020.3	57	37	47.2	2.5	80	1	18	8	0	13	35	66	1.71	- 1.58	0.52	9	0	0.7	1	3.8	22	22	21	18	6	9	15	6.5	
LOUISVILLE	477	1002.0	1019.9	57	38	47.0	2.3	78	1	20	8	0	9	35	66	2.06	- 1.14	0.53	10	0	5.4	2	2.8	24	30	W	29+	7	6	17	6.7	47
LOUISIANA																																
ALEXANDRIA	92	1016.3	1020.8	68	42	55.0	- 1.6	86	2	30	25	0	1			2.46	- 2.32	1.21	7	2	T	0	1.6	4	23	2	7	16	8	6	3.8	
BATON ROUGE	64	1016.9	1019.8	70	46	57.9	- 1.0	86	1	33	25	0	0	48	74	3.17	- 0.92	2.09	7	1	0.0	0	3.0	6	21	4	3	10	11	9	4.9	
LAKE CHARLES	9	1018.3	1019.5	72	49	60.2	0.6	86	2+	36	25+	0	0	50	74	1.64	- 2.58	0.67	6	2	0.0	0	4.0	6	24	3	3	13	7	10	4.2	
NEW ORLEANS	4	1019.0	1019.7	70	48	59.2	- 0.8	85	1	34	25	0	0	51	74	2.63	- 0.71	1.41	7	1	0.0	0	4.1	4	22	28	28	11	10	9	4.8	
SHREVEPORT	254	1010.5	1019.7	69	44	56.4	0.7	84	2+	29	25	0	1	42	64	3.75	- 0.46	3.10	6	2	T	T	1.3	9	22	36	6	13	11	6	4.2	64
MAINE																																
CARIBOU	624	991.9		36	20	27.9	- 2.3	58	1	8	15	0	28			3.31	0.27	1.43	10		18.9	14						4	11	15	7.0	
PORTLAND	43	1013.9	1016.3	45	26	35.4	- 2.7	71	1	15	10	0	26	26	67	4.13	- 0.04	1.65	11	1	6.2	4	4.9	33	30	E	30	8	5	17	6.6	51
MARYLAND																																
BALTIMORE	148	1013.5	1019.3	55	38	46.4	0.9	83	2	27	23+	0	8	35	68	3.75	0.62	2.41	8	0	1.0	0	4.9	28	42	NE	25	6	12	12	6.2	57
MASSACHUSETTS																																
BLUE HILL OBS	629			46	32	38.8	- 3.2	74	1	17	9	0	19			6.78	2.25	2.22	14		12.0	12			46	NE	25					42
BOSTON	15	1015.2	1016.3	50	36	43.1	- 1.8	76	1	24	9	0	8	32	66	6.74	2.81	2.59	13	1	2.8	2	4.5	30	39	NE	25	5	3	18	6.7	43
WORCESTER	986	979.0	1016.8	43	30	36.6	- 2.6	70	1	15	9	0	23	27	71	5.01	0.75	1.32	13	1	20.7	16	4.9	30	32	31	7	5	4	21	7.1	
MICHIGAN																																
ALPENA	689	990.5	1016.3	43	28	35.7	1.1	64	17	2	23	0	22	27	73	2.30	- 0.07	0.87	13	0	12.0	4	2.4	25	36	W	2	0	4	26	8.9	24
DETROIT	619			48	35	41.5	1.1	69	15+	18	23	0	11	30	64	0.92	- 1.29	0.25	8	0	4.3		5.0	25	29	22	2					
DETROIT METRO	633	992.9	1017.5	47	30	38.5	- 0.8	70	2	10	23	0	17	31	77	1.34	- 0.93	0.28	11	0	4.2	1	4.6	25	35	NW	2	3	10	17	7.3	44
FLINT	771	988.5	1016.8	46	31	38.8	0.6	68	17	12	23	0	11	30	72	1.46	- 0.72	0.33	11	0	10.4	2	4.6	25	28	23	5	3	7	20	8.1	
GRAND RAPIDS	784	987.5	1017.2	46	30	38.0	0.7	68	17	14	23	0	20	30	75	2.84	0.35	0.84	16	0	14.9	3	3.7	22	41	SW	6	2	6	22	8.2	30
HOUGHTON LAKE	1149	978.6	1016.5	41	27	34.4	0.3	65	17	1	23	0	32	29	81	1.96	- 0.40	0.64	13	1	16.7	6	3.0	26	31	28	2	1	5	24	8.6	
LANSING	841	985.1	1017.4	47	30	38.3	0.4	69	17	9	30	0	17	32	82	1.61	- 0.60	0.47	12	0	13.0	4	4.4	24	40	SW	5	3	6	21	8.0	35
MARQUETTE CO	677			40	30	34.9	1.1	56	17	16	23	0	19			2.33	- 0.95	0.90	19		11.2	6			34	SW	8	0	1	29	9.4	15

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)				
												No. of days							Snow, Ice pellets				Fastest mile								
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90°F. or above	Min. 32°F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	°F.	°F.	F.	°F.		°F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	993.6	1017.3	46	30	38.1	- 1.5	65	2	13	23	0	18	30	74	1.86	- 1.08	0.42	17	0	20.2	7	3.0	25	37	18	5	1	6	23	8.4	
SAULT STE MARIE	721	988.5	1015.6	37	26	31.6	- 1.7	58	18	10	22	0	25	27	82	3.41	0.08	1.67	17	1	13.7	5	0.7	6	31	SE	5	1	5	24	8.9	21
MINNESOTA																																
DULUTH	1428	963.1	1016.3	34	22	28.1	0.8	51	9	2	25	0	24	23	81	2.07	0.29	0.87	12	1	6.4	4	1.8	28	40	W	5	1	8	21	8.1	23
INTERNATIONAL FALLS	1179	971.6	1016.0	31	19	24.7	0.9	48	11	- 3	22	0	28	22	89	1.21	- 0.25	0.38	14	0	10.2	5	1.8	25	26	24	5	2	5	23	8.6	
MINNEAPOLIS	834	985.8	1017.0	39	26	32.7	1.5	57	12	8	30	0	25	26	76	2.67	1.27	0.83	10	0	13.4	7	2.0	27	34	NW	20	4	6	20	7.7	33
ROCHESTER	1297	968.2	1017.2	42	26	34.2	2.7	61	11	4	30	0	24	28	80	2.18	0.61	0.58	11	0	7.8	4	4.1	25	33	33	20	3	5	22	7.8	
ST CLOUD	1034	978.0	1017.3	38	23	30.7	1.2	56	12	6	30	0	26			2.56	1.23	1.35	11		8.9	7						5	6	19	7.6	
MISSISSIPPI																																
JACKSON	310	1008.5	1020.6	69	40	54.7	- 0.8	88	2	26	8	0	4	46	77	2.54	- 1.36	1.75	7	2	T	0	1.5	8	29	SE	18	15	6	9	4.3	64
MERIDIAN	290	1009.5	1020.9	67	40	53.4	- 0.7	84	1	29	11	0	4	43	75	3.09	- 0.01	1.25	7	1	T	0	1.5	36	22	16	28	15	6	9	4.6	
MISSOURI																																
COLUMBIA REGIONAL	887	986.5	1019.2	55	36	45.6	2.3	78	12	17	7	0	13	33	64	2.41	0.14	0.76	9	1	8.3	4	4.2	22	34	SW	1	10	6	14	6.0	57
KANSAS CITY	742	990.5	1018.0	56	38	46.9	2.3	77	15	18	7	0	8	36	70	1.68	- 0.12	0.75	8	1	0.2	T	3.0	23	31	W	26	10	5	15	5.8	53
ST JOSEPH	811			54	32	43.0	1.6	77	15	17	7	0	18	32	71	3.84	2.16		10				1.7	22	23	29	26+	12	2	16	5.9	
ST LOUIS	535	998.6	1019.4	57	36	46.0	1.9	81	15+	16	7	0	14	34	68	1.67	- 0.90	0.52	9	1	1.3	1	3.5	22	35	SW	1	7	10	13	6.0	60
SPRINGFIELD	1268	973.2	1019.3	57	36	46.1	1.1	78	1	20	7	0	14	35	69	2.66	- 0.10	1.37	8	1	2.8	1	4.0	20	29	SE	28	10	7	13	5.6	56
MONTANA																																
BILLINGS	3567	889.9	1016.2	45	27	35.9	0.8	63	11+	8	6	0	25	22	61	0.17	- 0.46	0.09	5	0	1.1	T	7.9	25	40	NW	4	4	8	18	7.5	45
GLASGOW	2284	932.3	1016.2	42	22	32.3	4.1	63	4	3	6	0	26	21	68	0.04	- 0.43	0.03	2	0	0.6	1	0.5	35	36	31	5	3	8	19	7.7	
GREAT FALLS	3662	886.2	1016.2	46	26	36.3	2.0	68	11	-13	6	0	20	22	59	0.36	- 0.39	0.29	5	0	4.2	3	12.4	23	43	SW	4	3	5	22	7.9	44
HAVRE	2584	921.4	1015.6	43	22	32.9	3.4	64	10	3	7	0	27	20	64	0.23	- 0.27	0.23	1	0	T	T	5.0	25	39	NW	4	3	6	21	7.9	40
HELENA	3828	880.1	1018.4	45	22	33.6	2.0	64	10	1	6	0	28	21	62	0.34	- 0.23	0.15	5	0	4.6	2	5.2	26	40	SW	1	1	6	23	8.4	44
KALISPELL	2965	912.0	1018.9	40	26	33.1	2.1	53	20	11	6	0	28	26	79	1.36	- 0.07	0.32	16	0	12.4	4	2.8	18	25	29	4	1	4	25	8.9	
MILES CITY	2629	921.1	1016.1	44	25	34.6	2.0	66	4	7	6	0	27	26	74	0.42	- 0.01		4	0	4.6		3.4	27								
MISSOULA	3190	905.5	1020.1	42	25	33.7	3.2	61	10	12	6	0	29	28	83	1.18	0.28	0.30	17	0	13.1	5	1.8	30	34	NW	4	2	2	26	8.9	25
NEBRASKA																																
GRAND ISLAND	1841	949.9	1017.1	51	29	39.9	2.7	72	11	12	7	0	23	28	66	1.82	1.06	1.31	5	0	4.1	3	3.2	25	30	33	26	6	9	15	6.8	
LINCOLN U	1150			51	33	41.8	1.0	71	15	17	7	0	16			3.41	2.15	1.62	8		10.0	6			29	SE	13	9	3	18	6.6	54
NORFOLK	1544			48	27	37.3	1.4	72	11	8	7	0	25			1.48	0.57	1.00	7		3.9	3						7	5	18	7.0	
NORTH PLATTE	2775	917.7	1017.7	51	24	37.1	1.6	71	11+	9	7	0	27	25	68	0.90	0.40	0.50	6	1	2.5	2	2.4	30	33	N	5	8	9	13	6.1	52
OMAHA	977	981.4	1017.3	51	31	41.2	2.3	73	15	13	7	0	18	31	69	3.12	1.86	1.05	10	2	9.0	5	1.5	24	31	NW	26	8	4	18	6.9	43
SCOTTSBLUFF	3957	878.8	1017.2	51	24	37.9	2.1	72	4	9	6	0	26	23	63	0.33	- 0.13	0.15	5	0	3.4	2	4.5	32	37	29	19	11	4	15	5.9	
VALENTINE	2587			48	24	36.1	2.5	72	11	6	7	0	26			0.33	- 0.16	0.28	5		1.0	2			35	NW	5	9	3	18	7.2	39
NEVADA																																
ELKO	5050	846.6	1021.1	45	23	33.9	- 0.3	65	10	8	7	0	27	20	63	1.23	0.35	0.41	9	0	8.9	2	2.1	23	20	18	12	4	7	19	7.1	
ELY	6253	810.0	1020.5	46	18	32.0	- 1.7	61	4+	2	1	0	27	20	68	0.59	0.00	0.21	6	1	6.0	3	4.5	20	34	S	12	10	10	10	5.5	69
LAS VEGAS	2162	941.8	1019.2	63	38	50.9	- 1.6	73	10+	31	20	0	2	20	34	0.12	- 0.19	0.12	1	0	0.0	0	3.0	28	31	SW	13	14	9	7	4.1	75
RENO	4404	868.3	1020.6	54	21	37.5	- 0.8	72	4	13	17	0	27	22	59	0.24	- 0.33	0.12	4	0	0.2	T	0.5	23	42	W	28	11	5	14	5.4	67
WINNEMUCCA	4301	871.0	1021.0	51	22	36.1	0.3	71	9	2	6	0	27	23	65	1.10	0.30	0.36	9	0	5.5	2	1.5	19	26	SW	28	7	5	18	6.8	49
NEW HAMPSHIRE																																
CONCORD	342	1003.7	1016.7	43	22	32.4	- 5.2	72	1	6	24	0	26	25	74	2.91	- 0.81	0.93	11	0	18.4	10	4.5	31	30	W	30+	6	7	17	6.9	48
MT WASHINGTON OBS	6262			25	11	18.0	- 2.3	49	2	- 6	8	0	28			10.18	3.57	4.53	21	0	52.8	6			98Y	W	7	5	3	22	7.9	29
NEW JERSEY																																
ATLANTIC CITY	64	1015.6	1018.1	55	34	44.5	- 2.2	76	2+	19	23	0	14	35	71	5.02	1.36	2.30	8	2	0.0	0	5.0	29	32	8	25	6	9	15	6.7	46
ATLANTIC CITY U	11			53	39	46.2	- 2.1	69	2	26	9	0	5			4.29	0.50	1.42	8						39	E	25					
NEWARK	7	1016.6	1017.6	53	39	46.2	0.8	78	2	29	9	0	5	35	66	3.86	0.49	1.19	11	1	T	T	5.0	29	29	2	25	4	9	17	6.9	
TRENTON U	56			52	39	45.1	- 0.7	77	2	28	23+	0	6			4.64	1.48	1.76	9		T	T			35	NE	25+	6	11	13	6.6	50

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days		Snow, Ice pellets		Resultant speed	Resultant direction	Fastest mile			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
NEW MEXICO	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
ALBUQUERQUE	5311	839.1	1017.7	58	33	45.2	1.6	72	5	21	20	0	12	26	54	0.67	0.29	0.33	5	0	T	T	1.5	36	38	NW	27	14	5	11	4.4	77
CLAYTON	4969			57	30	43.1	1.4	81	12	18	6	0	23			0.87	0.54	0.58	3		0.5	1						16	6	8	4.0	
ROSWELL	3612			64	33	48.4	2.5	77	14+	24	24+	0	16			0.45	0.11	0.24	4		0.0	0			33	NW	28					66
NEW YORK																																
ALBANY	275	1006.8	1017.7	45	28	36.9	- 2.2	75	2	11	9	0	23	28	74	3.78	1.08	1.69	15	1	24.0	18	3.1	29	33	W	30	6	5	19	7.5	38
BINGHAMTON	1590	957.7	1017.8	42	29	35.8	- 2.2	74	2	14	24+	0	21	29	79	3.17	0.66	0.81	17	0	17.9	8	3.9	25	29	W	7	2	5	23	8.5	29
BUFFALO	705	990.9	1017.2	46	32	39.1	0.0	71	2	9	23	0	14	33	80	3.07	- 0.53	0.87	17	4	18.7	4	4.0	26	32	W	19+	1	8	21	8.5	31
NEW YORK JFK	132	1015.6	1017.2	51	39	45.1	- 1.9	75	2	26	24+	0	5	36	72	5.64	2.25	1.55	11	1	T	T	3.9	29	44	NE	25					43
NEW YORK KENNEDY	13	1016.9	1017.6	54	41	47.2	1.0	73	2	27	9	0	4	35	65	4.07	0.56	1.55	10	0	T	T	6.1	30	36	33	25	5	13	12	6.5	
NEW YORK LA GUARDIA	11	1016.3	1017.3	50	39	44.5	- 2.9	76	2	27	24+	0	5	34	66	4.58	0.99	1.33	12	2	T	0	5.1	31	56	NE	25	4	12	14	6.7	
ROCHESTER	547	996.6	1017.3	46	31	38.4	- 1.7	79	2	5	23	0	17	33	83	1.96	- 0.55	0.43	18	0	11.2	4	4.3	25	37	SW	2	1	9	20	8.4	32
SYRACUSE	410	1002.0	1017.3	44	30	36.9	- 3.3	76	2	13	23	0	20	31	82	3.52	0.62	0.89	21	0	16.7	7	2.1	25	30	S	6+	2	8	20	8.3	27
NORTH CAROLINA																																
ASHEVILLE	2140	943.1	1020.3	57	34	45.8	1.2	80	2	20	23	0	15	37	76	2.84	0.07	1.00	10	0	0.6	T	3.7	35	29	34	30+	15	7	8	4.3	76
CAPE HATTERAS R	7	1019.0	1019.2	63	49	56.0	- 0.2	81	1	36	12	0	0	48	74	2.40	- 1.69	0.85	9	0	0.0	0	4.4	36	35	18	24	13	7	10	4.7	55
CHARLOTTE	736	992.2	1020.2	59	39	49.0	- 1.4	81	2	26	26+	0	10	37	67	2.96	0.43	1.31	7	1	T	T	2.5	34	26	NW	21	16	6	8	4.2	69
GREENSBORO	897	987.8	1020.0	59	37	47.7	- 0.2	80	2	20	23	0	13	36	66	2.58	- 0.10	1.50	8	0	0.9	T	2.4	28	28	NW	30	15	3	12	4.8	64
RALEIGH	434	1004.1	1020.1	61	37	48.7	- 1.3	82	2+	18	23	0	12	36	67	1.81	- 0.96	0.97	6	0	T	0	2.0	30	24	30	21	16	8	6	4.0	80
WILMINGTON	28	1018.3	1019.8	67	43	55.1	- 0.3	83	1	29	23	0	4	44	73	2.22	- 0.87	1.06	6	1	0.0	0	2.4	34	30	W	21	16	9	5	3.6	68
NORTH DAKOTA																																
BISMARCK	1647	955.0	1016.6	39	21	30.1	1.2	60	12	0	7	0	29	23	76	0.59	0.00	0.30	10	0	6.4	4	2.3	31	42	W	5	4	5	21	7.8	38
FARGO	896	983.1	1016.9	37	22	29.6	1.5	56	9	7	7	0	28	24	80	0.83	- 0.01	0.56	5	1	2.3	1	2.1	32	44	W	5	4	4	22	8.1	27
WILLISTON	1899	945.8	1016.1	38	21	29.3	1.7	56	12	0	7	0	30	23	78	0.40	- 0.18	0.28	6	0	4.3	4	2.8	28	39	N	5	4	7	19	7.6	31
OHIO																																
AKRON	1208	972.9	1018.5	47	30	38.5	- 2.3	69	18+	10	23	0	19	31	75	2.02	- 0.23	0.48	12	0	10.8	5	4.9	24	29	31	20	2	12	16	7.5	
CINCINNATI ABBE OB	761			53	37	44.8	0.2	75	14	19	8	0	12			1.63	- 1.32	0.53	9		1.0	T			22	NW	21					42
CLEVELAND	777	988.8	1018.4	49	34	41.4	0.1	71	2	20	23	0	12	31	68	2.02	- 0.59	0.74	16	1	5.3	2	6.0	22	33	W	19+	1	8	21	8.2	26
COLUMBUS	812	988.8	1019.4	49	31	40.4	- 0.8	71	15+	12	23	0	19	34	78	1.73	- 0.77	0.49	9	0	5.0	1	3.4	23	34	NW	5	7	7	16	6.8	43
DAYTON	1002	982.4	1019.1	51	35	42.8	1.0	71	18+	17	8	0	15	33	70	1.55	- 1.12	0.41	10	0	3.4	1	4.6	22	30	NW	19	7	6	17	6.9	46
MANSFIELD	1295			50	32	40.7	1.3	71	18+	14	23	0	17	32	75	1.11	- 1.58	0.39	11	0	2.8	1	6.6	23	29	26	2	3	11	16	7.4	
TOLEDO	669	992.2	1018.0	48	27	37.6	- 1.0	70	14+	5	23	0	22	30	75	1.17	- 0.87	0.30	11	0	9.7	2	4.6	24	35	W	3	3	8	19	7.6	29
YOUNGSTOWN	1178	974.6	1018.3	46	31	38.5	- 0.8	70	15	4	23	0	17	32	77	3.26	0.45	0.97	16	0	20.1	13	5.0	24	27	32	21+	1	10	19	8.0	
OKLAHOMA																																
OKLAHOMA CITY	1285	971.9	1018.9	59	39	49.0	0.6	77	13	27	19	0	4	37	67	0.29	- 1.27	0.22	7	0	0.5	T	3.2	17	33	NW	28	11	7	12	5.4	59
TULSA	650	994.2	1018.9	61	40	50.1	2.5	80	12	28	7	0	7	38	67	1.21	- 1.07	0.50	9	1	2.0	2	3.7	19	36	S	5	12	6	12	5.2	56
OREGON																																
ASTORIA	8	1017.3	1018.1	53	41	46.8	0.5	59	12	29	5	0	2	43	86	9.08	- 2.12	1.20	25	2	0.0	0	3.4	18	29	18	9	2	4	24	5.9	
BURNS U	4151	875.0	1020.6	46	23	34.8	- 1.3	60	9	9	6	0	30	26	73	1.62	0.46	0.80	11		7.2	4	1.7	30				3	10	17	7.3	
EUGENE	359	1000.4	1020.1	51	36	43.5	- 2.0	59	3	22	6+	0	12	40	89	9.48	3.86	2.82	17	0	3.0	0	3.7	18	24	17	4	0	7	23	8.7	
MEACHAM	4056	877.4	1020.2	38	28	33.1	- 1.3	51	21	17	5	0	27			5.20	1.05	1.99	18		31.5	18			22	20	1	1	5	24	8.7	
MEDFORD	1298	972.6	1021.2	50	33	41.5	- 0.9	63	11	19	6	0	12	35	81	3.43	0.83	1.06	14	0	T	T	0.3	27	30	16	11	2	5	23	8.1	
PENDLETON	1482	964.8	1019.3	52	36	43.7	2.4	70	9	22	6	0	9	34	73	2.73	1.33	1.35	15	0	T	T	3.2	23	32	27	1	2	4	20	7.9	
PORTLAND	21	1018.0	1019.4	51	40	45.5	0.4	60	3	27	6	0	3	40	83	5.76	0.43	1.50	20	0	0.0	0	3.7	16	36	S	13	0	3	27	7.3	11
SALEM	196	1012.2	1019.6	52	38	44.5	- 0.7	58	3	24	6	0	7	41	88	6.27	0.56	1.18	17	0	0.0	0	5.4	19	29	18	13+	1	4	25	9.0	
SEXTON SUMMIT R	3834	885.9	1020.2	45	34	39.5	- 3.3	66	20	27	15	0	17			9.48	5.10	3.65	17		7.9	2			42	18	9	7	6	17	6.8	
PACIFIC AREA																																
AGANA TAGUA R	361	997.0	1009.7	85	73	79.1	- 0.2	87	24+	68	12+	0	0	75	87	6.75	- 3.54	1.20	26	2	0.0	0	8.8	9	23	ESE	9					19
JOHNSTON	7	1012.2	1010.0	81	77	79.0	- 0.6	84	6	73	10+	0	0	71	77	1.53	- 0.53	0.54	13	0	0.0	0	16.4	9	34	SE	10	7	4	14	6.2	74
KOROR R	94	1004.4	1008.3	88	76	82.0	0.8	91	15+	73	5	2	0	76	86	10.26	- 2.67	3.06	25	8	0.0	0	0.3	12	26	SW	4	0	1	29	9.6	47
KWAJALEIN	8	1008.1	1009.2	86	77	81.5	0.2	88	12+	75	29+	0	0	75	81	4.86	- 7.27	1.36	25	2	0.0	0	10.5	8	29	9	19	3	12	15	7.1	
MAJURO	10	1009.1	1009.6	85	77	81.1	0.6	87	11+	74	30+	0	0	74	80	9.46	- 6.46	2.08	19	0	0.0	0	8.9	8	25	E	25+	1	17	12	7.3	60

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						No. of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PACIFIC AREA																																
PAGO PAGO	12	1010.2	1010.4	86	74	80.0		89	15+	68	21	0	0	73	80	9.24		5.03	20	3	0.0	0	5.0	8	26	E	12	5	14	11	6.1	67
PONAPE R	123	1002.7	1007.8	88	74	80.6	0.7	91	12	70	6	4	0	75	85	12.02	- 4.83	3.01	27	5	0.0	0	3.8	14	21	NE	27	0	10	20	8.4	50
TRUK MOEN ISLAND	5	1008.1	1008.3	87	77	82.1	1.3	89	13+	74	21+	0	0	75	79	5.20	- 7.16	1.55	19	2	0.0	0	5.6	6	22	NE	27	0	2	28	9.4	73
WAKE	11	1012.9	1013.1	85	76	80.2	- 0.2	87	23+	73	5+	0	0	70	74	5.01	1.93	2.24	18	0	0.0	0	13.4	7	28	NE	3+	14	8	8	4.6	62
YAP R	44			87	75	80.6	- 0.9	89	15+	71	4	0	0			10.26	- 0.89	3.72	24	5	0.0	0			31	W	10	0	8	22	8.4	62
PENNSYLVANIA																																
ALLENTOWN	387	1003.7	1018.2	49	33	40.9	- 1.0	77	2	22	9	0	17	34	80	6.31	2.98	2.21	11	1	6.1	6	4.6	30	35	1	25	3	7	20	7.4	
ERIE	731	990.5	1017.8	45	33	39.3	- 1.9	68	2	16	23	0	12	32	75	4.51	1.15	0.98	18	5	14.6	3	4.6	23	25	34	21	2	6	22	8.2	
HARRISBURG	338	1005.8	1018.7	51	36	43.5	0.1	82	2	25	9	0	7			5.18	2.23	2.38	13	1	8.8	6	3.7	29	33	W	10	3	12	15	6.9	32
PHILADELPHIA	5	1017.3	1018.2	54	38	46.1	1.8	79	2	25	23+	0	6	34	66	5.37	1.97	1.88	9	2	T	0	4.9	30	30	Nw	30	5	7	18	7.0	57
PITTSBURGH	1137	973.9	1018.8	48	33	40.4	- 0.4	72	15+	9	23	0	15	30	69	1.94	- 0.30	0.47	12	0	10.5	6	5.9	27	25	30	21+	4	6	20	7.8	44
SCRANTON	930	982.7	1017.6	45	32	38.8	- 0.8	75	2	18	9	0	18	33	82	3.55	0.61	1.39	14	0	22.5	20	3.4	25	25	S	7	2	4	24	8.4	26
WILLIAMSPORT	524	999.0	1018.4	46	33	39.6	- 1.5	80	2	19	9	0	18	32	76	3.18	- 0.27	0.81	14	0	9.3	7	2.8	28	23	28	7	2	4	24	8.5	
RHODE ISLAND																																
BLOCK ISLAND	110			51	38	44.1	- 1.1	67	2	25	9	0	7			5.15	1.44	2.40	15		T	0						7	5	18	7.0	
PROVIDENCE	51	1014.2	1016.7	49	32	40.4	- 2.6	73	1	21	24+	0	22	32	73	5.16	1.05	1.69	16	1	T	T	5.0	32	32	1	25	9	0	21	7.0	39
SOUTH CAROLINA																																
CHARLESTON	40	1017.6	1019.7	70	45	57.1	1.2	86	2	28	22	0	2	45	71	1.61	- 0.48	0.83	6	1	0.0	0	2.7	33	40Y	SW	29	17	7	6	3.5	75
CHARLESTON U	9			67	50	58.7	0.1	84	2	35	23	0	0			2.72	0.80	1.37	6		0.0	0			29	N	8+					
COLUMBIA	213	1012.2	1020.3	67	40	53.8	0.1	83	1	24	9	0	8	41	68	2.35	- 0.01	1.15	7	0	0.0	0	1.9	31	23	30	21	17	5	8	4.1	67
GRNVLLE-SPRTNBRG	957	985.1	1020.2	60	38	48.9	- 2.4	80	2	25	8	0	13	37	67	4.22	1.38	1.89	10	1	T	T	2.2	35	27	NW	3	16	6	8	4.0	65
SOUTH DAKOTA																																
ABERDEEN	1296	968.5	1016.8	42	23	32.2	1.9	62	12+	4	7	0	28	24	75	1.39	0.65	0.47	12	0	9.1	6	3.1	34	35	31	5	7	5	18	7.1	
HURON	1281	968.8	1016.6	43	23	33.3	2.1	65	10	3	30	0	28	25	74	2.04	1.36	0.77	12	3	11.8	7	1.8	31	35	NW	6+	5	6	19	7.7	53
RAPID CITY	3162	903.5	1016.7	46	23	34.5	- 0.6	69	10+	7	18	0	29	22	65	0.79	0.38	0.42	8	0	6.9	2	5.4	33	37	NW	20+	8	6	16	6.7	64
SIOUX FALLS	1418	964.8	1017.4	45	22	33.3	0.7	68	11	4	30	0	28	26	76	2.45	1.45	1.48	8	2	4.4	4	2.0	29	35	32	5	5	5	20	7.4	
TENNESSEE																																
BRISTOL	1507	965.8	1020.7	58	35	46.5	0.6	80	2	21	23	0	14	35	69	2.45	- 0.06	0.93	11	0	0.7	1	1.9	28	21	27	21	11	8	11	5.5	
CHATTANOOGA	665	995.6	1020.8	60	38	48.7	- 0.7	79	2	27	8	0	11	38	70	1.93	- 1.72	0.54	10	1	T	T	1.0	31	24	NW	21	11	5	14	5.5	54
KNOXVILLE	980	985.4	1020.9	58	40	48.7	0.0	77	2	26	8	0	7	37	68	2.21	- 1.03	0.86	9	1	T	0	2.4	33	25	W	29	12	6	12	5.6	48
MEMPHIS	258	1010.2	1020.6	62	40	50.9	0.8	83	1	23	8	0	5	37	60	1.49	- 2.89	0.58	4	0	0.8	T	0.9	20	23	14	28	13	8	9	4.9	65
NASHVILLE	590	998.3	1020.4	61	39	49.9	1.4	84	1	22	8	0	9	37	65	1.18	- 2.10	0.32	8	0	0.1	T	2.4	23	28	N	21	9	9	12	5.5	57
OAK RIDGE R	905			56	37	46.7	- 0.6	74	1	24	8	0	9			2.25	- 1.52	0.81	9		0.2	T			30Y		29	11	6	13	5.9	
TEXAS																																
ABILENE	1784	955.6	1017.7	65	45	55.0	2.0	81	1	30	19	0	1	41	64	0.76	- 0.35	0.61	2	1	0.0	0	5.3	18	33	W	28+	11	6	13	5.6	65
AMARILLO	3604	891.3	1016.1	58	34	45.6	- 0.4	80	12	24	19	0	14	29	59	2.08	1.42	1.29	5	3	T	T	4.3	22	38	W	1	15	6	9	4.6	68
AUSTIN	597	996.6	1018.6	71	50	60.5	1.7	84	2	39	24	0	0	49	70	3.02	0.90	2.42	6	3	0.0	0	2.0	8	28	NW	28+	13	7	10	5.0	61
BROWNSVILLE	19	1016.6	1017.0	79	59	69.3	1.7	86	1	48	20	0	0	61	78	0.74	- 0.58	0.27	5	0	0.0	0	2.6	9	28	SE	17	10	12	8	5.2	48
CORPUS CHRISTI	41	1016.3	1017.7	78	56	67.1	3.0	87	2	43	20	0	0	59	78	0.44	- 1.28	0.36	5	1	0.0	0	4.8	8	34	N	18	12	9	9	4.6	57
DALLAS	481	1001.7	1019.1	67	48	57.1	2.2	82	13	36	22	0	0	43	63	1.59	- 1.11	0.79	3	1	0.0	0	3.3	14	32	W	28	15	5	10	4.7	58
DEL RIO	1026	981.4	1017.5	72	51	61.7	2.9	85	2	38	20	0	0	50	70	0.83	0.21	0.72	8	0	0.0	0	4.4	11	26	14	15	7	10	13	5.9	
EL PASO	3918	883.5	1016.5	65	39	52.1	0.9	77	5	31	24+	0	3	30	47	0.14	- 0.19	0.13	2	0	0.0	0	1.9	34	33	W	28	15	9	6	4.2	82
FORT WORTH	537	998.6	1019.3	68	46	57.0	2.2	83	14+	37	27+	0	0	45	69	1.77	- 0.69	0.92	3	1	T	0	2.2	17	32	31	28	13	5	12	5.0	
GALVESTON U	7			71	60	65.2	2.2	82	2	45	23	0	0			2.29	- 1.27	1.76	5		0.0	0			37	N	23					68
HOUSTON INTERCON	96	1015.6	1019.4	72	48	60.0	1.2	86	2	35	25	0	0	51	77	1.82	- 2.08	0.89	7	1	0.0	0	2.8	8	23	25	28+	10	9	11	5.3	58
LUBBOCK	3254	904.5	1016.3	64	38	50.8	2.9	82	12	23	19	0	4	35	60	0.43	- 0.11	0.16	3	0	T	0	3.5	20	30	29	28	12	10	8	5.0	
MIDLAND	2851	917.7	1016.7	67	40	53.3	0.8	82	13	29	19	0	6	39	67	0.42	- 0.05	0.25	5	3	0.0	0	3.3	17	30	25	22	15	6	9	4.3	
PORT ARTHUR	16	1019.0		71	48	59.3	- 0.4	85	2	35	25	0	0	50	75	2.64	- 0.82	1.25	6	3	0.0	0	3.8	7	37	SW	28	14	8	8	4.5	70
SAN ANGELO	1903	950.6	1017.5	68	44	56.0	1.2	81	1	33	27+	0	0	44	70	0.27	- 0.51	0.19	3	1	0.0	0	2.9	20	29	32	28	10	6	14	5.6	
SAN ANTONIO	788	990.2	1018.2	75	52	63.2	3.7	85	2	37	24	0	0	50	66	2.74	1.37	2.32	4	1	0.0	0	1.8	6	26	NW	28+	12	9	9	5.0	59
VICTORIA	104	1014.2	1018.4	75	53	64.2	1.8	86	2	43	27+	0	0	54	73	1.37	- 0.99	0.75	4	2	0.0	0	3.9	7	44Y	N	18	11	8	11	5.2	
WACO	501	1000.7	1019.1	69	49	58.5	1.7	82	13+	38	24	0	0	47	69	1.64	- 0.55	0.84	3	3	0.0	0	2.0	14	25	24	28	12	5	13	5.2	

See footnotes at end of table

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In	In.	M.p.h.		M.p.h.							%
TEXAS																																
WICHITA FALLS	994	980.7	1017.7	65	42	53.0	0.5	83	1	30	19	0	3	44	76	0.91	- 0.51	0.40	3	1	T	T	3.1	16	36	31	28	13	7	10	5.1	
UTAH																																
MILFORD	5028	848.3		48	22	34.8	- 1.3	66	10	4	1	0	28			0.20	- 0.32	0.10	5		2.8	4						13	6	11	5.0	
SALT LAKE CITY	4220	874.4	1021.1	47	29	37.6	0.9	67	12	16	1	0	24	27	69	1.03	- 0.27	0.52	8	3	5.4	7	2.8	17	28	NW	27	8	8	14	6.0	53
WENDOVER	4237	873.7	1021.8	44	26	34.8	- 2.8	54	12	15	7	0	27	23	66	0.35	0.06	0.22	4		T	T						9	7	14	6.3	
VERMONT																																
BURLINGTON	332	1004.4	1017.3	41	26	33.5	- 1.8	68	2	12	24+	0	23	27	76	2.29	- 0.33	0.66	11	1	19.2	9	0.2	30	34	S	6	3	3	24	8.4	22
VIRGINIA																																
LYNCHBURG	916			55	35	44.9	- 2.1	82	2	17	23	0	14			3.11	0.53	1.44	7		5.9	5			26	NW	25	15	4	11	4.9	58
NORFOLK	24	1018.3	1019.2	62	43	52.4	1.0	84	1	33	23	0	0	40	63	0.97	- 2.08	0.44	5	2	T	0	3.1	29	34	NW	7	12	13	5	4.6	60
RICHMOND	164	1013.2	1019.6	60	37	48.5	0.0	84	2	22	23	0	8	37	70	2.76	- 0.28	1.72	6	0	T	0	2.1	29	29	NW	21	12	10	8	5.0	61
ROANOKE	1149	977.0	1019.7	56	35	45.4	- 1.3	82	2	17	23	0	12	33	64	2.18	- 0.52	0.93	7	0	10.2	6	4.7	30	39	31	21	11	9	10	5.2	
WALLOPS ISLAND	9			59	42	50.3		79	2	26	23	0	4			2.44		1.33	7		0.0	0			48Y	WNW	25					
WASHINGTON																																
OLYMPIA	195	1010.5	1018.0	50	38	43.6	- 0.2	58	12	24	5	0	4	42	93	7.59	- 0.08	1.42	22	0	T	T	4.8	20	25	22	24+	1	5	24	8.8	
QUILLAYUTE	179	1009.1	1016.5	50	39	44.3	- 0.3	57	12	26	5	0	5	42	89	14.33	1.01	3.90	26	0	0.0	0	2.9	16	29	SE	9	2	3	25	8.7	16
SEATTLE-TACOMA	400	1001.0	1017.8	50	41	45.7	1.8	55	20+	33	5	0	0	39	78	5.31	- 0.04	1.50	19	0	T	0	4.5	15	26	SE	9	1	3	26	9.1	20
SPOKANE	2356	933.0	1018.3	41	30	35.4	- 0.3	52	9	16	5	0	23	29	79	1.51	- 0.73	0.31	17	0	4.0	3	3.2	19	38	SW	4	2	2	26	8.7	17
STAMPEDE PASS R	3958	878.4		34	28	31.3	- 0.1	44	11	20	6+	0	26			11.01	- 1.57	3.56	23		48.3	27						1	2	27	9.3	
WALLA WALLA U	949			52	38	45.0	2.7	69	9	23	6	0	4			2.70	0.98	1.03	14		T	T			24	NW	1	1	5	24	8.7	20
YAKIMA	1052	979.7	1019.1	50	27	38.5	1.1	62	3	15	6+	0	26	29	73	0.97	0.01	0.37	10	0	0.0	0	3.0	27	35	30	21	6	6	18	7.1	
WEST INDIES																																
SAN JUAN P.R.	13	1011.9	1014.6	86	75	80.6	2.4	88	13+	71	21	0	0	67	65	2.31	- 4.18	0.70	16	1	0.0	0	4.3	9	22	E	4+	7	18	5	5.3	60
WEST VIRGINIA																																
BECKLEY	2504	929.9	1020.3	50	32	41.2	- 1.0	75	1	10	23	0	17	31	71	2.03	- 0.97	0.54	12	1	7.6	3	4.0	23	29	30	21	9	2	19	6.9	
CHARLESTON	939	985.1	1019.7	56	36	45.9	0.6	80	2	16	23	0	10	34	66	2.83	0.04	1.26	11	0	4.2	3	3.2	25	22	23	20	5	7	18	6.9	
ELKINS	1948	947.5		51	29	39.7	- 1.0	76	2	4	23	0	22			2.76	0.01	0.71	16		11.0	4						2	9	19	7.7	
HUNTINGTON	827	989.2	1019.9	53	36	44.8	- 0.7	76	2	15	23	0	12	34	68	1.96	- 0.50	0.50	9	0	4.0	4	3.0	23	22	23	29	7	7	16	6.8	
PARKERSBURG U	615			53	35	44.2	- 0.6	76	2	16	23	0	10			2.26	- 0.10	0.62	10		5.0	5			30	W	2					43
WISCONSIN																																
GREEN BAY	682	990.5	1016.6	42	27	34.7	0.5	66	17	11	30	0	22	29	79	3.21	1.30	1.07	15	1	12.6	10	3.3	27	33	SW	5	2	12	16	7.7	28
LA CROSSE	651	992.9	1017.9	44	29	36.4	2.2	64	17	11	30	0	21	29	79	2.20	0.26		12	0	3.8		1.1	24								
MADISON	858	984.8	1017.0	45	26	35.2	1.2	71	14	7	30	0	22	30	81	3.48	1.34	2.32	13	0	8.8	6	3.8	25	34	SW	5	6	7	17	7.2	38
MILWAUKEE	672	991.5	1017.3	45	30	37.3	1.5	70	14	15	8	0	21	30	77	2.45	0.27	0.90	10	0	6.1	3	5.3	26	40	SW	5	5	6	19	7.0	46
WYOMING																																
CASPER	5338	836.4	1017.9	40	21	30.5	- 3.1	57	11	0	6	0	27	22	73	0.61	- 0.10	0.28	8	0	9.7	5	11.2	22	38	21	19+	7	7	16	6.9	
CHEYENNE	6126	810.0	1016.4	48	24	36.0	1.8	70	11+	12	5	0	26	15	47	0.05	- 0.57	0.03	2	0	0.9	1	10.0	29	60	NW	20	10	6	14	6.1	50
LANDER	5563	828.0	1019.6	37	17	27.0	- 4.0	54	4	7	6	0	30	17	69	0.41	- 0.51	0.19	5	0	9.3	11	1.9	22	36	W	4	9	10	11	5.8	66
SHERIDAN	3964	877.4	1017.4	46	20	32.8	- 0.6	69	12	0	7	0	29	23	68	0.71	- 0.09	0.20	9	0	9.3	6	3.7	30	30	N	4	4	6	20	7.2	42

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication
V Sun below horizon November 19 - 30, inclusive.
X Sun below horizon November 24 - 30, incli

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C.	C.	C.	C	C.		C.				C.	%	Mm	Mm	Mm.			Mm	Mm	M p s.		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	998.3	1021.0	17.2	3.3	10.4	- 1.4	25.6	1	- 4.4	8	0	6	3.9	67	45	- 45	15	8	0	T	0	0.7	2	11.6	SE	28+	15	6	9	4.6	58
HUNTSVILLE	190	997.3	1020.9	16.1	3.3	9.8	- 0.7	26.7	2	- 4.4	22	0	11	3.9	69	46	- 46	17	9	1	T	T	0.3	36	10.3	27	29	13	4	13	5.1	
MOBILE	64	1012.2	1020.2	21.7	8.3	15.1	- 0.2	30.6	2+	1.7	22+	0	0	8.9	71	31	- 54	20	7	1	0	0	1.7	3	10.3	34	3	15	6	9	4.3	
MONTGOMERY	56	1013.5	1020.8	19.4	5.0	12.3	- 0.1	30.0	2	- 2.8	22	0	3	5.6	69	58	- 19	22	11	2	T	0	1.0	35	11.6	SW	2	18	5	7	3.6	62
ALASKA												8														8					
ANCHORAGE	35	999.7	1004.8	- 3.9	-11.1	- 7.6	- 2.2	4.4	18	-21.7	27	0	30	-10.0	79	17	- 9	4	10	0	208	203	1.3	2	11.6	35	2	8	2	20	7.1	27
ANNETTE	34	1004.1	1008.2	6.7	1.7	4.0	- 0.7	8.9	24+	- 5.0	4	0	11	1.7	85	346	- 26	82	26	0	T	T	2.5	13	15.6	13	30	2	2	26	8.7	
BARROW	9	1014.6	1015.0	-15.0	-21.1	-18.1	0.1	- 5.0	3	-29.4	23	0	30	-22.2	72	4	- 2	2	4	0	51	127	3.9	8	15.6	7	11+	V	V	V		
BARTER ISLAND	12	1012.9	1014.9	-14.4	-20.6	-17.4	0.3	5.6	3	-32.8	29	0	30	-20.6	76	16	6	7	12	0	282	508	2.2	11	23.7	11	10	X	X	X		
BETHEL	38	1001.0	1007.0	- 6.1	-13.3	- 9.5	- 1.3	2.2	5+	-30.0	30+	0	30	-10.6	87	10	- 17	3	12	0	234	127	1.6	3	13.0	4	26+	9	2	19	6.8	
BETTLES	196			-16.1	-24.4	-20.4		- 7.2	18	-42.8	27	0	30			31		10	9	0	381	737			6.3	35	23	5	8	17	7.0	
BIG DELTA	386			-12.8	-21.1	-16.9		2.2	18	-40.0	30	0	30			5		3	6	0	142	279			13.9	12	10	7	7	16	6.6	
COLD BAY	29	1001.4	1005.1	2.8	- 2.2	0.2	- 1.1	9.4	6	- 8.9	29	0	24	- 2.2	81	130	34	27	21	0	53	25	1.7	26	20.6	14	12+	1	3	26	9.0	
FAIRBANKS	133	992.9	1010.9	-13.3	-21.7	-17.5	- 1.9	- 3.3	18+	-37.8	27	0	30	-22.8	64	14	- 2	9	7	0	249	203	0.8	1	5.8	36	10	5	7	18	7.4	
GULKANA	479			-13.3	-22.8	-18.2		1.7	19+	-36.1	26	0	30			19		5	12	0	318	508	0.3	36	9.4	18	19	7	5	18	6.9	
HOMER	20	1001.0	1004.8	0.0	- 7.2	- 3.4		6.7	18+	-20.0	30	0	30	- 6.7	77	38	- 31	8	9	0	429	229	1.5	3	9.8	24	28	9	7	14	6.2	
JUNEAU	4	1006.1	1007.0	2.2	- 2.8	- 0.3	- 1.6	7.2	18	-11.7	10	0	22	- 2.2	86	111	- 43	39	18	0	521	178	1.9	9	16.5	12	17	2	4	24	8.8	13
KING SALMON	15	1002.7	1004.8	- 2.2	- 9.4	- 5.8	- 0.2	7.2	17	-25.6	30+	0	23	-10.0	72	29	- 8	8	10	0	99	25	1.1	5	13.4	17	10	8	5	17	6.7	
KOTZEBUE	3	1009.3	1009.9	-11.1	-17.2	-14.3	- 0.6	- 4.4	23+	-29.4	30	0	30	-17.2	78	6	- 3	3	7	0	150	305	5.4	8	19.7	10	23	9	5	16	6.7	
MC GRATH	105	996.3	1009.5	-12.8	-22.2	-17.4	- 2.6	- 1.7	1	-39.4	30	0	30	-18.9	87	31	4	13	13	0	549	432	0.3	31	8.0	28	1	7	5	18	6.9	
NOME	4	1007.1	1007.8	- 5.0	-13.3	- 9.1	- 0.5	1.7	17	-27.2	30	0	30	-12.2	76	17	- 12	5	12	0	305	330	2.5	7	16.1	32	1	8	6	16	6.7	21
ST. PAUL ISLAND	7	1002.7	1003.5	2.8	- 2.2	0.2	- 0.3	6.1	3	- 7.8	16	0	23	- 1.1	86	52	- 12	13	20	0	130	51	0.2	13	23.2	33	7	2	11	17	7.8	
SHEMYA	37	997.3	1001.0	4.4	0.6	2.6	0.4	7.8	6	- 8.9	15	0	10	- 1.1	76	159	90	32	26	0	218	51	3.4	23	23.7	4	27+	0	7	23	8.7	
SUMMIT	732	917.4	1010.1	-11.1	-18.3	-14.7		- 1.7	18+	-28.9	30+	0	30	-17.8	76	23		10	7	0	617	584	5.0	4	17.0	6	28	10	4	16	6.3	
TALKEETNA	105			- 6.1	-17.8	-11.9	- 4.6	2.2	18	-36.7	30	0	30			35	- 10	12	10	0	617	635			8.9	3	2					
UNALAKLEET	5	1007.1	1007.9	- 8.9	-15.6	-12.2		0.0	24+	-34.4	29	0	30			17		6	12	0	185	229	5.6	8	17.9	29	1	6	4	20	7.2	
YAKUTAT	9	1002.7	1003.7	2.8	- 3.9	- 0.6	- 1.6	7.2	18+	-12.2	30+	0	27	- 2.8	87	239	-168	55	20	0	531	381	2.1	10	13.4	14	17	5	5	20	7.8	
ARIZONA																																
FLAGSTAFF	2135	788.0	1020.3	8.9	- 7.2	0.8	- 1.4	17.8	11	-15.0	18	0	30	-10.6	49	10	- 15	5	4	0	124	76	0.4	18	9.8	23	28	14	8	8	4.3	
PHOENIX	340	976.6	1015.9	23.3	7.8	15.4	0.9	31.1	11	2.8	18+	0	0	1.1	42	T	- 12	T	0	0	0	0	1.1	11	11.2Y	ENE	19	17	4	9	4.2	75
TUCSON	788	927.2	1015.5	21.1	6.1	13.8	- 0.7	30.0	11	1.7	22+	0	0	1.1	49	18	2	17	2	0	0	0	1.4	15	13.0	E	3	15	5	10	4.5	75
WINSLOW	1492	853.4	1020.0	15.0	- 1.7	6.6	1.4	23.3	12+	- 7.8	20	0	19	- 5.0	50	2	- 8	1	3	0	T	0	0.7	23	12.5	25	27	14	6	10	4.7	
YUMA	59	1008.8	1016.1	23.3	8.3	15.6	- 0.9	28.9	11+	3.9	17	0	0	1.1	42	0	- 3	0	0	0	0	0	1.4	35	10.7	W	29	16	7	7	3.5	79
ARKANSAS																																
FORT SMITH	136	1003.1	1020.1	17.2	3.3	10.2	0.2	28.3	1	- 2.8	7	0	9	2.8	65	61	- 20	34	7	4	71	51	0.6	5	11.2	W	28	12	7	11	5.2	61
LITTLE ROCK	78	1010.5	1020.3	17.2	3.3	10.3	0.6	28.3	14	- 3.3	8	0	7	4.4	70	86	- 19	36	7	3	122	76	0.5	28	11.6	NW	29+	12	8	10	5.1	56
CALIFORNIA																																
BAKERSFIELD	145	1002.0	1019.8	18.3	5.6	12.1	- 1.2	23.9	9+	1.1	19	0	0	4.4	65	3	- 9	2	2	0	0	0	0.7	6	8.9	34	13	13	7	10	4.5	
BISHOP	1252	876.1		16.7	- 3.9	6.2	- 1.4	23.3	4	- 9.4	1	0	28			1	- 12	1	1		0	0						16	9	5	3.9	
BLUE CANYON	1609			8.9	1.7	5.2	- 2.4	18.9	3	- 5.0	14	0	13			189	18	73	9		660	356			11.2	18	11	12	4	14	5.2	
EUREKA U	13			12.8	6.7	9.7	- 1.0	18.3	11	1.7	2	0	0			162	44	60	15		0	0			15.2	S	9	9	5	16	6.3	48
FRESNO	100	1008.1	1020.0	18.3	2.8	10.4	- 1.7	25.6	10	- 0.6	20+	0	6	3.9	71	17	- 8	12	4	1	0	0	0.4	7	8.5	W	12	12	10	8	4.4	69
LONG BEACH	8	1016.6	1018.1	21.7	10.0	15.8	- 0.4	33.9	3	5.6	24	1	0	8.9	69	6	- 21	5	3	0	0	0	0.4	26	8.9	8	19	13	6	11	4.9	
LOS ANGELES	30	1013.9	1017.5	19.4	10.6	15.1	- 1.1	30.0	3	6.7	1	0	0	7.8	70	6	- 22	6	2	0	0	0	0.9	27	13.0Y	W	29+	14	6	10	4.7	
LOS ANGELES U	82			21.1	10.6	15.7	- 1.4	31.7	3	6.7	15	0	0			8	- 20	8	2		0	0			8.9	NW	27	17	10	3	3.7	69
MT SHASTA R	1080	895.0	1021.0	9.4	- 1.1	4.4	- 1.1	16.1	6	- 7.2	6	0	20			109	8	27	9		213	178										
OAKLAND	2	1020.3	1020.5	15.6	7.8	11.6	- 1.0	21.7	18	3.9	17	0	0	6.1	71	42	- 2	17	6	0	0	0	0.6	26	12.5	4	18	15	4	11	4.4	
RED BLUFF	104	1007.1	1019.9	17.2	5.6	11.4	- 1.1	24.4	4+	2.2	4	0	0	1.7	59	45	- 13	15	6	0	0	0	0.8	35	18.3	SE	13	14	4	12	4.9	65
SACRAMENTO	5	1019.0	1019.9	18.3	5.0	11.5	- 0.1	24.4	4	- 1.1	17	0	1	3.9	67	22	- 15	10	6	0	0	0	0.3	30	14.8	NW	15	14	7	9	4.5	79
SANDBERG R	1377	864.2		13.3	3.3	8.3	- 1.1	23.9	4	- 3.9	19	0	7			8	- 15	3	4		0	0			17.0	33	26	15	5	10	4.7	
SAN DIEGO	4	1016.9	1017.8	19.4	11.1	15.3	- 1.3	26.7	3	7.8	24+	0	0	8.3	68	2	- 21	1	2	0	0	0	0.8	31	7.6	W	29+	10	8	12	5.5	65
SAN FRANCISCO	2	1019.6	1020.5	16.7	6.7	11.8	- 0.9	21.7	6	4.4	30+	0	0	5.6	71	25	- 15	11	6	0	0	0	1.4	29	13.0	2	16+	15	5	10	4.5	
SAN FRANCISCO U	16			16.1	10.0	13.1	- 1.0	22.2	3	6.7	7	0	0			49	- 2	17	7		0	0			11.6	N	16					65
SANTA MARIA	72			17.8	3.3	10.4	- 2.9	27.2	3	- 1.1	16	0	4			12	- 13	10	4		0	0						17	8	5	3.8	
STOCKTON	7	1019.6	1020.6	17.8	4.4	11.2	- 0.5	24.4	4	0.0	17	0	1	2.8	61	21	- 9	9	6	0	0	0	0.8	29	13.0	34	15	13	5	12	5.0	
COLORADO																																
ALAMOSA	2297	771.8		7.2	-11.7	- 2.2	- 0.8	17.2	11	-20.6	20	0	30			11	4	8	6		196	127						18	6	6	3.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation					Wind			No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
											No. of days							No. of days	Snow, Ice pellets			Fastest mile (1.6 kilometers)						
	Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min. 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy 8-10		
	M.	Mb	Mb.	C.	C.	C	C.	C		C.			C	%	Mm.	Mm.	Mm			Mm	Mm.	M.p.s.		M.p.s							%
COLORADO																															
COLORADO SPRINGS	1873	810.0	1017.7	11.1	- 4.4	3.3	0.2	22.2	11	-14.4	19	0	26	- 8.3	51	1	- 9	1	1	0	8	T	1.3	4	16.1	30	13	16	4	10	4.4		
DENVER	1610	834.7	1015.3	12.2	- 4.4	3.9	0.8	23.9	10	-11.1	18+	0	25	- 5.6	59	4	- 13	3	3	0	36	25	6.7	21	17.0	Nw	2	10	9	11	5.3	61	
GRAND JUNCTION	1476	854.7	1020.9	10.0	- 2.8	3.6	- 0.2	16.1	14+	- 7.2	19	0	26	- 3.3	67	14	- 1	9	5	0	99	51	0.5	10	11.6	NW	27	10	11	9	5.3	62	
PUEBLO	1428	855.1	1016.5	13.9	- 3.9	4.8	0.4	28.3	11	-11.1	19+	0	27	- 5.0	56	11	- 2	10	2	0	89	51	0.6	34	28.2	NW	13	13	8	9	4.5	75	
CONNECTICUT																															
BRIDGEPORT	2	1017.3	1017.9	10.6	2.2	6.4	- 0.6	21.1	2	- 5.6	9	0	9	0.6	67	165	63	39	14	0	T	T	2.7	31	16.5	2	25	7	6	17	6.7		
HARTFORD	52	1010.2	1016.9	8.9	- 0.6	4.2	- 0.9	22.8	2+	- 6.1	24+	0	21	- 1.1	72	144	47	41	15	0	208	203	1.7	31	11.6	NE	25	5	7	18	7..	40	
DELAWARE																															
WILMINGTON	23	1015.6	1018.5	12.2	2.8	7.6	0.2	26.7	2	- 4.4	9	0	7	2.2	71	140	51	47	9	2	T	T	1.9	30	16.1	35	25	5	11	14	6.7		
DIST.OF COLUMBIA																															
WASHINGTON DULLES	88	1007.1	1019.1	12.8	1.1	6.9		28.9	2	- 7.2	9	0	17	2.2	75	80		46	6	0	74	51	1.5	29	13.0	31	22	5	11	14	6.6		
WASHINGTON NATIONAL	3	1016.6	1019.0	13.9	4.4	9.0	0.3	29.4	2	- 3.3	23	0	5	2.2	66	96	23	67	8	0	36	25	1.8	29	13.9	NW	25	8	11	11	5.9	42	
FLORIDA																															
APALACHICOLA U	4			21.7	11.7	16.8	0.6	29.4	2	3.3	22	0	0			63	- 2	38	5	0	0	0			11.2	E	23	17	9	4	3.1	84	
DAYTONA BEACH	9	1017.6	1019.0	23.9	13.9	18.8	0.3	28.9	3	5.0	22	0	0	13.3	73	34	- 25	18	6	1	0	0	1.1	1	1..	35	25+	9	14	8	5.1		
FORT MYERS	5	1017.3	1017.7	26.7	16.7	21.7	1.0	30.6	1	11.1	26+	0	0	15.6	71	4	- 26	3	2	1	0	0	2.4	5	9.4	7	6	9	12	9	7.3		
JACKSONVILLE	8	1018.6	1019.6	23.3	9.4	16.5	0.0	30.0	2	0.0	22	0	1	11.7	79	21	- 22	17	4	1	0	0	1.1	36	15.6	NE	29	15	8	7	4.1	69	
KEY WEST	1	1015.6	1016.1	26.7	22.2	24.3	0.9	29.4	3	18.9	23+	0	0	19.4	74	43	- 28	14	10	1	0	0	4.4	7	11.6	E	19+	4	12	14	6.8	74	
LAKELAND U	65			24.4	15.0	19.8	0.4	30.6	1	6.7	22	0	0			81	40	46	5		0	0						11	16	3	4.3	68	
MIAMI	2	1016.6	1016.9	26.7	20.0	23.3	0.8	28.9	1	13.3	22	0	0	17.2	70	25	- 47	9	9	1	0	0	2.7	4	20.7	6	17	7	9	14	6..		
ORLANDO	33	1014.2	1018.7	26.7	15.0	20.8	2.0	31.1	3	7.8	22+	0	0	14.4	71	31	- 9	17	5	3	0	0	1.8	2	1..3	17	29+	10	13	7	4.7		
PENSACOLA	34	1015.6	1019.9	21.7	10.0	15.7	0.4	28.9	2	2.8	11	0	0	9.4	70	60	- 22	42	7	1	0	0	2.1	4	9.8	3	3	17	7	6	4..		
TALLAHASSEE	17	1017.3	1019.6	23.3	6.1	14.6	- 0.6	30.0	2	- 2.8	12	0	4	8.3	72	22	- 40	13	6	2	0	0	1.4	2	9.4	1	10	17	6	7	3.3		
TAMPA	6	1018.0	1018.2	25.6	13.9	19.8	0.5	32.2	1	7.2	22+	1	0	13.9	73	36	- 2	18	5	2	0	0	2.2	7	8.9	9	23	10	14	6	4.2	NC	
WEST PALM BEACH	5	1016.6	1017.1	27.2	18.3	22.8	0.3	30.6	3	12.2	26	0	0	17.2	73	274	201	138	13	4	0	0	2.6	6	13..	2	3	6	12	13	6..		
GEORGIA																															
ATHENS	244	990.9	1020.3	16.7	5.0	10.8	0.0	26.7	2	- 3.3	22	0	6	3.9	68	102	28	32	10	2	T	T	0.9	32	8.9	31	21	16	6	8	4..		
ATLANTA	308	982.7	1020.1	16.7	4.4	10.4	- 0.3	26.1	2	- 3.3	22	0	7	3.3	65	87	12	26	9	0	T	T	1.0	35	13.0	Nw	21	17	6	7	4.9	74	
AUGUSTA	41	1014.9	1020.1	19.4	4.4	12.0	- 0.3	27.2	2+	- 3.9	22	0	7	5.6	72	67	12	28	7	0	0	0	0.8	32	12.5	11	21	13	7	8	4..		
COLUMBUS	117	1006.1		19.4	6.1	12.8	0.5	27.8	2	- 1.1	22	0	2	6.1	68	61	- 5	36	7	0	0	0	1.2	26	9.8	30	21	18	9	5	4..		
MACON	108	1007.8	1021.0	20.0	5.6	12.7	- 0.3	29.4	2+	- 2.2	22	0	6	5.6	68	86	24	39	8	1	0	0	1.3	35	12.6	Nw	21	15	9	5	4.5	74	
ROME	194			16.7	2.2	9.4	- 0.2	26.7	2	- 3.9	11+	0	14			62	- 25	21	9		T	T											
SAVANNAH	14	1018.0	1019.9	21.1	7.8	14.4	0.4	28.9	2	- 1.7	22	0	2	8.3	72	32	- 20	19	10	0	0	0	1.1	35	1..1	Nw	21	14	9	7	4..	68	
HAWAII																															
HILO	8	1016.3	1017.3	27.2	19.4	23.2	0.3	28.9	5+	16.7	20	0	0	19.4	84	454	115	106	29	0	0	0	1.0	19	7.6	S	26+	1	18	12	7..	24	
HONOLULU	2	1015.9	1016.5	27.8	20.6	24.3	- 0.1	29.4	6	17.8	30+	0	0	18.3	73	24	- 31	11	8	0	0	0	5.4	6	13.0	NE	23	4	17	9	5..	6.	
KAHULUI	15	1013.5	1015.9	29.4	18.9	24.2	0.3	32.2	6	15.6	29+	1	0	18.3	72	6	- 33	3	7	0	0	0	4.4	6	13.4	NE	17	16	7	7	4.3	71	
LIHUE	31	1012.9	1017.8	27.2	22.8	25.0	1.4	28.3	7+	19.4	16	0	0	20.0	74	57	- 58	16	16	0	0	0	4.8	7	1..7	NE	94	1	17	12	6.9	45	
IDAHO																															
BOISE	865	918.7	1020.8	8.9	0.0	4.3	0.6	17.2	9	- 6.7	8+	0	16	- 2.2	66	59	28	22	11	0	10	1	0.9	12	11.6	N	26	4	9	18	7.5	48	
LEWISTON	431			8.3	0.6	4.3	0.0	12.8	9+	- 4.4	5	0	13			37	6	11	13		T	0			17.9*		4	1	5	24	8.9		
POCATELLO	1358	864.9	1020.9	5.6	- 5.0	0.4	- 1.3	18.9	12	-13.3	16	0	29	- 4.4	74	46	21	21	9	1	244	152	3.2	21	18.8	Sw	27	4	6	20	7.7	14	
ILLINOIS																															
CAIRO U	96			14.4	5.0	9.6	0.8	26.7	1	- 2.8	8	0	5			46	- 52	26	9		51	51			13.0	E	28	12	7	11	5.2	57	
CHICAGO O HARE	201	992.6	1017.4	10.0	0.6	5.4	2.0	25.0	14	- 8.3	22	0	14	- 1.1	65	34	- 22	11	10	0	33	25	2.4	24	21..	18	1	7	8	15	6.7		
CHICAGO MIDWAY	185	994.7	1017.8	10.0	1.1	5.6	1.2	25.6	14	- 7.8	7	0	13	- 0.6	68	24	- 31	11	8	2	30	25	2.1	23	19.2	S	1	8	8	14	6.4	54	
MOLINE	177	996.6	1018.5	9.4	- 0.6	4.4	0.4	23.9	14	-11.1	7	0	16	- 1.7	67	56	- 7	18	9	0	153	51	1.8	24	15.2	Sw	14+	5	8	14	6.4	41	
PEORIA	199	993.9	1018.5	10.0	- 0.6	4.7	0.4	23.9	14	-10.0	7	0	19	- 1.1	69	36	- 18	12	9	0	102	25	1.5	21	14.8	Nw	21	4	6	16	6.4	42	
ROCKFORD	221	990.2	1017.6	8.9	- 0.6	3.9	1.1	22.8	14	-10.0	22	0	18	- 1.1	73	57	- 3	21	11	0	127	26	1.4	24	13.4	24	5	4	7	17	6.8		
SPRINGFIELD	179	995.9	1018.6	11.7	1.1	6.6	1.1	25.0	15+	- 8.9	7	0	15	0.0	66	36	- 24	11	10	0	112	25	2.1	22	15.2	Nw	20	9	6	15	5.1	52	
INDIANA																															
EVANSVILLE	116	1005.8	1020.3	13.3	2.2	7.6	0.5	26.7	1	- 7.2	8	0	14	1.1	67	40	- 40	15	11	0	86	25	1.2	23	12..	Nw	21	9	8	13	5..	54	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant direction	Wind: Resultant speed	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm	Mm.	M.p.s		M.p.s							%
INDIANA																																
FORT WAYNE	241	988.5	1019.3	9.4	- 0.6	4.4	0.6	21.7	17	- 8.9	8	0	16	0.0	76	31	- 34	8	12	0	170	25	2.3	24	17.0	SW	2	5	6	19	7.5	46
INDIANAPOLIS	241	989.5	1019.1	11.7	0.6	6.2	1.2	24.4	14	- 8.9	7	0	14	0.6	72	33	- 46	8	11	0	112	51	1.7	23	17.0	SW	2	7	6	17	6.9	41
SOUTH BEND	236	989.2	1017.8	9.4	0.6	4.9	1.0	21.7	14	-11.1	23	0	13	0.0	73	46	- 21	10	13	0	414	127	2.1	21	13.9	19	5	3	6	21	7.9	
IOWA																																
BURLINGTON	211			10.0	0.0	5.1	0.9	23.3	14	- 9.4	7	0	18	0.6	75	46	- 2	16	8	0	91	51	1.6	25	12.5	33	21	9	8	13	6.3	
DES MOINES	286	982.4	1017.8	8.9	0.0	4.2	1.4	20.0	11	-10.0	7	0	17	- 0.6	72	84	39	52	9	1	262	127	1.3	25	14.8	NW	6	7	7	16	6.8	49
DUBUQUE	322	978.0		7.2	- 1.1	3.1	1.6	21.1	14	-11.7	30	0	21			112	46	67	11		312	229										
SIOUX CITY	334	976.6	1017.3	8.9	- 2.2	3.2	0.9	25.0	11	-12.2	30	0	23	- 2.8	68	43	14	27	7	0	86	51	0.6	27	17.0	NW	6	7	5	18	7.0	50
WATERLOO	265	985.1	1017.8	6.1	- 3.3	1.5	0.0	18.3	16	-18.3	30	0	27	- 1.7	80	70	24	32	11	1	297	203	0.9	25	16.5	33	21	7	6	17	6.9	
KANSAS																																
CONCORDIA	448	963.4	1017.3	11.1	0.6	5.8	0.5	22.2	13	- 8.9	7	0	15	1.1	76	124	99	81	7	3	191	102	1.5	21	15.2	NW	26	12	1	17	5.8	64
DODGE CITY	787	925.2	1017.1	12.2	0.6	6.4	0.4	25.6	12	- 5.0	19+	0	17	- 1.1	65	95	79	61	5	3	41	25	1.2	22	16.1	NW	26+	13	7	10	5.0	62
GOODLAND	1114	887.9	1016.8	11.1	- 2.8	4.2	0.9	23.9	12	- 8.9	6	0	25	- 2.8	67	33	21	17	5	0	91	76	1.9	26	19.7	30	13	13	7	10	4.8	
TOPEKA	267	986.1	1018.4	13.3	1.7	7.4	1.6	25.0	15	- 7.8	7	0	12	1.1	69	77	39	47	7	2	61	25	1.3	23	13.9	W	1	13	3	14	5.6	54
WICHITA	403	969.2	1018.0	12.2	1.1	6.6	- 0.3	21.7	15+	- 5.6	7	0	17	2.2	77	63	25	24	6	3	58	51	1.1	20	14.8	NW	26	10	5	15	5.8	60
KENTUCKY																																
COVINGTON	265	987.8	1020.0	11.1	1.1	6.2	0.3	23.3	14	-10.0	8	0	18	0.6	69	43	- 34	11	9	0	76	T	1.8	23	11.6	29	21	8	3	19	6.9	
LEXINGTON	294	984.4	1020.3	13.9	2.8	8.4	1.4	26.7	1	- 7.8	8	0	13	1.7	66	43	- 40	13	9	0	18	25	1.7	22	9.8	21	18	6	9	15	6.5	
LOUISVILLE	145	1002.0	1019.9	13.9	3.3	8.3	1.3	25.6	1	- 6.7	8	0	9	1.7	66	52	- 29	13	10	0	137	51	1.3	24	13.4	W	29+	7	6	17	6.7	47
LOUISIANA																																
ALEXANDRIA	28	1016.3	1020.8	20.0	5.6	12.8	- 0.9	30.0	2	- 1.1	25	0	1			62	- 59	31	7	2	T	0	0.7	4	10.3	2	7	16	8	6	3.8	
BATON ROUGE	20	1016.9	1019.8	21.1	7.8	14.4	- 0.6	30.0	1	0.6	25	0	0	8.9	74	81	- 23	53	7	1	0	0	1.3	6	9.4	4	3	10	11	9	4.9	
LAKE CHARLES	3	1018.3	1019.5	22.2	9.4	15.7	0.3	30.0	2+	2.2	25+	0	0	10.0	74	42	- 66	17	6	2	0	0	1.8	6	10.7	3	3	13	7	10	4.3	
NEW ORLEANS	1	1019.0	1019.7	21.1	8.9	15.1	- 0.4	29.4	1	1.1	25	0	0	10.6	74	67	- 18	36	7	1	0	0	1.8	4	9.8	28	28	11	10	9	4.8	
SHREVEPORT	77	1010.5	1019.7	20.6	6.7	13.6	0.4	28.9	2+	- 1.7	25	0	1	5.6	64	95	- 12	79	6	2	T	T	0.6	9	9.8	36	6	13	11	6	4.3	64
MAINE																																
CARIBOU	190	991.9		2.2	- 6.7	- 2.3	- 1.3	14.4	1	-13.3	15	0	28			84	7	36	10		480	356						4	11	15	7.0	
PORTLAND	13	1013.9	1016.3	7.2	- 3.3	1.9	- 1.5	21.7	1	- 9.4	10	0	26	- 3.3	67	105	- 1	42	11	1	157	102	2.2	33	13.4	E	30	8	5	17	6.6	51
MARYLAND																																
BALTIMORE	45	1013.5	1019.3	12.8	3.3	8.0	0.5	28.3	2	- 2.8	23+	0	8	1.7	68	95	16	61	8	0	25	0	2.2	28	18.8	NE	25	6	12	12	6.2	57
MASSACHUSETTS																																
BLUE HILL OBS R	192			7.8	0.0	3.8	- 1.8	23.3	1	- 8.3	9	0	19			172	57	56	14		305	305			20.6	NE	25					42
BOSTON	5	1015.2	1016.3	10.0	2.2	6.2	- 1.0	24.4	1	- 4.4	9	0	8	0.0	66	171	71	66	13	1	71	51	2.0	30	17.4	NE	25	9	3	18	6.7	43
WORCESTER	301	979.0	1016.8	6.1	- 1.1	2.6	- 1.4	21.1	1	- 9.4	9	0	23	- 2.8	71	127	19	34	13	1	526	406	2.2	30	14.3	31	7	5	4	21	7.1	
MICHIGAN																																
ALPENA	210	990.5	1016.3	6.1	- 2.2	2.1	0.6	17.8	17	-16.7	23	0	22	- 2.8	73	58	- 2	22	13	0	305	102	1.1	25	13.4	W	2	0	4	26	8.9	24
DETROIT	189			8.9	1.7	5.3	0.6	20.6	15+	- 7.8	23	0	11	- 1.1	64	23	- 33	6	8	0	109		2.2	25	13.0	22	2					
DETROIT METRO	193	992.9	1017.5	8.3	- 1.1	3.6	- 0.4	21.1	2	-12.2	23	0	17	- 0.6	77	34	- 24	7	11	0	107	25	2.1	25	15.6	SW	2	3	10	17	7.3	44
FLINT	235	988.5	1016.8	7.8	- 0.6	3.8	0.3	20.0	17	-11.1	23	0	11	- 1.1	72	37	- 18	8	11	0	264	51	2.1	25	12.5	23	5	3	7	20	8.1	
GRAND RAPIDS	239	987.5	1017.2	7.8	- 1.1	3.3	0.4	20.0	17	-10.0	23	0	20	- 1.1	75	72	9	21	16	0	378	76	1.7	22	19.2	SW	6	2	6	22	8.2	30
HOUGHTON LAKE	350	973.6	1016.5	5.0	- 2.8	1.3	0.2	18.3	17	-17.2	23	0	22	- 1.7	81	50	- 10	16	13	1	424	152	1.3	26	13.9	28	2	1	5	24	8.4	
LANSING	256	985.1	1017.4	8.3	- 1.1	3.5	0.2	20.6	17	-12.8	30	0	17	0.0	82	41	- 15	12	12	0	330	102	2.0	24	17.9	SW	5	3	6	21	8.0	36
MARQUETTE U	206			4.4	- 1.1	1.6	0.6	13.3	17	- 8.9	23	0	19			59	- 24	23	19		284	152			15.2	SW	8	0	1	29	9.4	18
MUSKEGON	191	993.6	1017.3	7.8	- 1.1	3.4	- 0.8	18.3	2	-10.6	23	0	18	- 1.1	74	47	- 27	11	17	0	513	178	1.3	25	16.5	18	5	1	6	23	8.4	
SAULT STE MARIE	220	988.5	1015.6	2.8	- 3.3	- 0.2	- 0.9	14.4	18	-12.2	22	0	25	- 2.8	82	87	2	42	17	1	348	127	0.3	6	13.9	SE	5	1	5	24	8.9	21
MINNESOTA																																
DULUTH	435	963.1	1016.3	1.1	- 5.6	- 2.2	0.4	10.6	9	-16.7	25	0	24	- 5.0	81	53	7	22	12	1	163	102	0.8	28	17.9	W	5	1	8	21	8.1	23
INTERNATIONAL FALLS	359	971.6	1016.0	- 0.6	- 7.2	- 4.1	0.5	8.9	11	-19.4	22	0	28	- 5.6	89	31	- 6	10	14	0	259	127	0.8	25	11.6	24	5	2	5	23	8.6	
MINNEAPOLIS	254	985.8	1017.0	3.9	- 3.3	0.4	0.8	13.9	12	-13.3	30	0	25	- 3.3	76	68	32	21	10	0	340	178	0.9	27	15.2	NW	20	4	6	20	7.7	33
ROCHESTER	395	968.2	1017.2	5.6	- 3.3	1.2	1.5	16.1	11	-15.6	30	0	24	- 2.2	80	55	15	15	11	0	198	102	1.8	25	14.8	33	20	3	5	22	7.8	
ST CLOUD	315	978.0	1017.3	3.3	- 5.0	- 0.7	0.7	13.3	12	-14.4	30	0	26			65	31	34	11		226	178						5	6	19	7.6	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind				No. of days (sunrise to sunset)			Sky cover tenths (sunrise to sunset)	Possible sunshine
											No of days							No. of days		Snow, Ice pellets		Resultant speed	Resultant direction	Fastest mile (1.6 kilometers)			Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max 32.2 °C or above	Min 0 C or lower	Average dew point		Total	Departure from normal	Greatest in 24 hours	25 mm or more	With thunderstorms	Total	Maximum depth on ground			Speed	Direction	Date					
	M	Mb.	Mb	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M p.s		M.p.s							°%
MISSISSIPPI																															
JACKSON	94	1008.5	1020.6	20.6	4.4	12.6	- 0.4	31.1	2	- 3.3	8	0	4	7.8	77	65	- 35	44	7	2	T	0	0.7	8	13.0	SE	18	15	6	9	4.3	64
MERIDIAN	88	1009.5	1020.9	19.4	4.4	11.9	- 0.4	28.9	1	- 1.7	11	0	4	6.1	75	78	T	32	7	1	T	0	0.7	36	9.8	16	28	15	6	9	4.6	
MISSOURI																															
COLUMBIA REGIONAL	270	986.5	1019.2	12.8	2.2	7.6	1.3	25.6	12	- 9.3	7	0	13	0.6	64	61	4	19	9	1	211	102	1.9	22	15.2	SW	1	10	6	14	6.0	57
KANSAS CITY	226	990.5	1018.0	13.3	3.3	8.3	1.3	25.0	15	- 7.8	7	0	8	2.2	70	43	- 3	19	8	1	5	T	1.3	23	13.9	W	26	10	5	15	5.8	53
ST JOSEPH	247			12.2	0.0	6.1	0.9	25.0	15	- 8.3	7	0	18	0.0	71	98	55		10				0.8	22	10.3	29	26+	12	2	16	5.9	
ST LOUIS	163	998.6	1019.4	13.9	2.2	7.8	1.1	27.2	15+	- 8.9	7	0	14	1.1	68	42	- 23	13	9	1	33	25	1.6	22	15.6	SW	1	7	10	13	6.0	60
SPRINGFIELD	386	973.2	1019.3	13.9	2.2	7.8	0.6	25.6	1	- 6.7	7	0	14	1.7	69	68	- 3	35	8	1	71	25	1.8	20	13.0	SE	28	10	7	13	5.6	56
MONTANA																															
BILLINGS	1087	889.9	1016.2	7.2	- 2.8	2.2	0.4	17.2	11+	-13.3	6	0	25	- 5.6	61	4	- 12	2	5	0	28	T	3.5	25	17.9	NW	4	4	8	18	7.5	45
GLASGOW	696	932.3	1016.2	5.6	- 5.6	0.2	2.3	17.2	4	-16.1	6	0	26	- 6.1	68	1	- 11	1	2	0	15	25	0.2	35	16.1	31	5	3	8	19	7.7	
GREAT FALLS	1116	886.2	1016.2	7.8	- 3.3	2.4	1.1	20.0	11	-25.0	6	0	20	- 5.6	59	9	- 10	7	5	0	107	76	5.5	23	19.2	SW	4	3	5	22	7.9	44
HAVRE	788	921.4	1015.6	6.1	- 5.6	0.5	1.9	17.8	10	-16.1	7	0	27	- 6.7	64	6	- 7	6	1	0	T	T	2.2	25	17.4	NW	4	3	6	21	7.9	40
HELENA	1167	880.1	1018.4	7.2	- 5.6	0.9	1.1	17.8	10	-17.2	6	0	28	- 6.1	62	9	- 6	4	5	0	117	51	2.3	26	17.9	SW	1	1	6	23	8.4	44
KALISPELL	904	912.0	1018.9	4.4	- 3.3	0.6	1.2	11.7	20	-11.7	6	0	28	- 3.3	79	35	- 2	8	16	0	315	102	1.3	18	11.2	29	4	1	4	25	8.9	
MILES CITY	801	921.1	1016.1	6.7	- 3.9	1.4	1.1	18.9	4	-13.9	6	0	27	- 3.3	74	11	T		4	0	117		1.5	27								
MISSOULA	972	905.5	1020.1	5.6	- 3.9	0.9	1.8	16.1	10	-11.1	6	0	29	- 2.2	83	30	7	8	17	0	333	127	0.8	30	15.2	NW	4	2	2	26	8.9	29
NEBRASKA																															
GRAND ISLAND	561	949.9	1017.1	10.6	- 1.7	4.4	1.5	22.2	11	-11.1	7	0	23	- 2.2	66	46	27	33	5	0	104	76	1.4	25	13.4	33	26	6	9	15	6.8	
LINCOLN U	351			10.6	0.6	5.4	0.6	21.7	15	- 8.3	7	0	16			87	55	41	8		254	152			13.0	E	13	3	3	18	6.6	54
NORFOLK	471			8.9	- 2.8	2.9	0.8	22.2	11	-13.3	7	0	25			38	14	25	7		99	76						7	5	18	7.0	
NORTH PLATTE	846	917.7	1017.7	10.6	- 4.4	2.8	0.9	21.7	11+	-12.8	7	0	27	- 3.9	68	23	10	13	6	1	64	51	1.1	33	14.8	N	5	8	3	13	6.1	52
OMAHA	298	981.4	1017.3	10.6	- 0.6	5.1	1.3	22.8	15	-10.6	7	0	18	- 0.6	69	79	47	27	10	2	229	127	0.7	24	13.9	NW	26	8	4	18	6.9	43
SCOTTSBLUFF	1206	878.8	1017.2	10.6	- 4.4	3.3	1.2	22.2	4	-12.8	6	0	26	- 5.0	63	8	- 3	4	5	0	86	51	2.0	32	16.5	29	18	11	4	15	5.9	
VALENTINE	789			8.9	- 4.4	2.3	1.4	22.2	11	-14.4	7	0	26			8	- 4	7	5		25	51			15.6	NW	5	9	3	18	7.2	39
NEVADA																															
ELKO	1539	846.6	1021.1	7.2	- 5.0	1.1	- 0.2	18.3	10	-13.3	7	0	27	- 6.7	63	31	9	10	9	0	226	51	0.9	23	8.9	18	12	4	7	19	7.1	
ELY	1906	810.0	1020.5	7.8	- 7.8	0.0	- 0.9	16.1	4+	-16.7	1	0	27	- 6.7	68	15	0	5	6	1	152	76	2.0	20	15.2	S	12	10	10	10	5.6	69
LAS VEGAS	659	941.8	1019.2	17.2	3.3	10.5	- 0.9	22.8	10+	- 0.6	20	0	2	- 6.7	34	3	- 5	3	1	0	0	0	1.3	28	13.9	SW	13	14	9	7	4.1	76
RENO	1342	868.3	1020.6	12.2	- 6.1	3.1	- 0.4	22.2	4	-10.6	17	0	27	- 5.6	59	6	- 8	3	4	0	5	T	0.2	23	18.8	W	28	11	5	14	5.4	67
WINNEMUCCA	1311	871.0	1021.0	10.6	- 5.6	2.3	0.2	21.7	9	-16.7	6	0	27	- 5.0	65	28	8	9	9	0	140	51	0.7	19	11.6	SW	28	7	5	18	6.8	49
NEW HAMPSHIRE																															
CONCORD	104	1003.7	1016.7	6.1	- 5.6	0.2	- 2.9	22.2	1	-14.4	24	0	26	- 3.9	74	74	- 21	24	14	0	467	254	2.0	31	13.4	W	30+	6	7	17	6.9	49
MT WASHINGTON OBS	1909			- 3.9	-11.7	- 7.8	- 1.3	9.4	2	-21.1	8	0	28			259	91	115	21	3	1341	152			43.8+	W	7	5	3	22	7.9	9
NEW JERSEY																															
ATLANTIC CITY	20	1015.6	1018.1	12.8	1.1	6.9	- 1.2	24.4	2+	- 7.2	23	0	14	1.7	71	128	35	58	8	2	0	0	2.2	29	14.3	S	25	6	9	15	6.7	46
ATLANTIC CITY U	3			11.7	3.9	7.9	- 1.2	20.6	2	- 3.3	9	0	5			109	13	36	8						17.4	E	24					
NEWARK	2	1016.6	1017.6	11.7	3.9	7.9	0.4	25.6	2	- 1.7	9	0	5	1.7	66	98	12	30	11	1	T	T	2.2	29	13.0	S	25	4	9	17	6.4	
TRENTON U	17			11.1	3.9	7.3	- 0.4	25.0	2	- 2.2	23+	0	6			118	38	45	9		T	T			15.6	NE	25+	5	11	13	6.6	50
NEW MEXICO																															
ALBUQUERQUE	1619	839.1	1017.7	14.4	0.6	7.3	0.9	22.2	5	- 6.1	20	0	12	- 3.3	54	17	7	8	5	0	T	T	0.7	36	17.0	NW	27	14	5	11	4.4	77
CLAYTON	1515			13.9	- 1.1	6.2	0.8	27.2	12	- 7.8	6	0	23			22	14	15	3		13	25						16	6	8	4.0	
ROSWELL	1101			17.8	0.6	9.1	1.4	25.0	14+	- 4.4	24+	0	16			11	3	6	4		0	0			14.8	NW	28					66
NEW YORK																															
ALBANY	84	1006.8	1017.7	7.2	- 2.2	2.7	- 1.2	23.9	2	-11.7	9	0	23	- 2.2	74	96	27	43	15	1	610	457	1.4	29	14.8	W	30	6	5	19	7.5	58
BINGHAMTON	485	957.7	1017.8	5.6	- 1.7	2.1	- 1.2	23.3	2	-10.0	24+	0	21	- 1.7	79	81	17	21	17	0	455	203	1.7	26	13.0	W	7	2		28	8.6	29
BUFFALO	215	990.9	1017.2	7.8	0.0	3.9	0.0	21.7	2	-12.8	23	0	14	0.6	80	78	- 13	22	17	4	475	102	1.6	26	14.3	W	19+	1	8	22	8.1	41
NEW YORK U	40	1015.6	1017.2	10.6	3.9	7.3	- 1.1	23.9	2	- 3.3	24+	0	5	2.2	72	143	57	39	11	1	T	T	1.7	29	19.7	NE	25					43
NEW YORK KENNEDY	4	1016.9	1017.6	12.2	5.0	8.4	0.6	22.8	2	- 2.8	9	0	4	1.7	65	103	14	39	10	0	T	T	2.7	30	16.1	NW	29	5	13	12	6.5	
NEW YORK LA GUARDIA	3	1016.3	1017.3	10.0	3.9	6.9	- 1.6	24.4	2	- 2.8	24+	0	5	1.1	66	116	25	34	12	2	T	0	2.3	31	25.0	NE	25	4	12	14	6.7	
ROCHESTER	167	996.6	1017.3	7.8	- 0.6	3.6	- 0.9	26.1	2	-15.0	23	0	17	0.6	83	50	- 14	11	18	0	284	102	1.7	25	16.5	SW	2	1	9	20	8.4	32
SYRACUSE	125	1002.0	1017.3	6.7	- 1.1	2.7	- 1.8	24.4	2	-10.6	23	0	20	- 0.6	82	89	16	23	21	0	424	178	0.9	25	13.4	S	6+	2	8	20	8.1	27

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm. or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
NORTH CAROLINA	M	Mb.	Mb.	C	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s.		M.p.s							%
ASHEVILLE	652	943.1	1020.3	13.9	1.1	7.7	0.7	26.7	2	- 6.7	23	0	15	2.8	76	72	2	25	10	0	15	T	1.7	35	13.0	34	30+	15	7	8	4.3	76
CAPE HATTERAS R	2	1019.0	1019.2	17.2	9.4	13.3	- 0.1	27.2	1	2.2	12	0	0	8.9	74	61	- 43	22	9	0	3	0	2.0	36	15.6	18	24	13	7	10	4.7	55
CHARLOTTE	224	992.2	1020.2	15.0	3.9	9.4	- 0.8	27.2	2	- 3.3	26+	0	10	2.8	67	75	11	33	7	1	T	T	1.1	34	11.6	NW	21	16	6	8	4.2	69
GREENSBORO	273	987.8	1020.0	15.0	2.8	8.7	- 0.1	26.7	2	- 6.7	23	0	13	2.2	66	66	- 3	38	8	0	23	T	1.1	28	12.5	NW	30	15	3	12	4.8	64
RALEIGH	132	1004.1	1020.1	16.1	2.8	9.3	- 0.7	27.8	2+	- 7.8	23	0	12	2.2	67	46	- 24	25	6	0	T	0	0.9	30	10.7	30	21	16	8	6	4.0	80
WILMINGTON	9	1018.3	1019.8	19.4	6.1	12.8	- 0.2	28.3	1	- 1.7	23	0	4	6.7	73	56	- 22	27	6	1	0	0	1.1	34	13.4	W	21	16	9	5	3.6	68
NORTH DAKOTA																																
BISMARCK	502	955.0	1016.6	3.9	- 6.1	- 1.1	0.7	15.6	12	-17.8	7	0	29	- 5.0	76	15	0	8	10	0	163	102	1.0	31	18.8	W	5	4	5	21	7.8	38
FARGO	273	983.1	1016.9	2.8	- 5.6	- 1.3	0.8	13.3	9	-13.9	7	0	28	- 4.4	80	21	T	14	5	1	58	25	0.9	32	19.7	W	5	4	4	22	8.1	27
WILLISTON	579	945.8	1016.1	3.3	- 6.1	- 1.5	0.9	13.3	12	-17.8	7	0	30	- 5.0	78	10	- 5	7	6	0	109	102	1.3	28	17.4	N	5	4	7	19	7.6	31
OHIO																																
AKRON	368	972.9	1018.5	8.3	- 1.1	3.6	- 1.3	20.6	18+	-12.2	23	0	19	- 0.6	75	51	- 6	12	12	0	274	127	2.2	24	13.0	31	20	2	12	16	7.5	
CINCINNATI ABBE OB	232			11.7	2.8	7.1	0.1	23.9	14	- 7.2	8	0	12			41	- 34	13	9		25	T			9.8	NW	21					42
CLEVELAND	237	988.8	1018.4	9.4	1.1	5.2	0.1	21.7	2	- 6.7	23	0	12	- 0.6	68	51	- 15	19	16	1	135	51	2.7	22	14.8	W	19+	1	8	21	8.2	26
COLUMBUS	247	988.8	1019.4	9.4	- 0.6	4.7	- 0.4	21.7	15+	-11.1	23	0	19	1.1	78	44	- 20	12	9	0	127	25	1.5	23	15.2	NW	3	7	7	16	6.8	43
DAYTON	305	982.4	1019.1	10.6	1.7	6.0	0.6	21.7	18+	- 8.3	8	0	15	0.6	70	39	- 28	10	10	0	86	25	2.1	22	13.4	NW	19	7	6	17	6.9	46
MANSFIELD	395			10.0	0.0	4.8	0.7	21.7	18+	-10.0	23	0	17	0.0	75	28	- 40	10	11	0	71	25	3.0	23	13.0	26	2	3	11	16	7.4	
TOLEDO	204	992.2	1018.0	8.9	- 2.8	3.1	- 0.6	21.1	14+	-15.0	23	0	22	- 1.1	75	30	- 22	8	11	0	145	51	2.1	24	15.6	W	3	3	8	19	7.6	39
YOUNGSTOWN	359	974.6	1018.3	7.8	- 0.6	3.6	- 0.4	21.1	15	-15.6	23	0	17	0.0	77	83	11	25	16	0	511	330	2.2	24	12.1	32	21+	1	10	19	8.0	
OKLAHOMA																																
OKLAHOMA CITY	392	971.9	1018.9	15.0	3.9	9.4	0.3	25.0	13	- 2.8	19	0	4	2.8	67	7	- 32	6	7	0	13	T	1.4	17	14.8	NW	28	11	7	12	5.4	59
TULSA	198	994.2	1018.9	16.1	4.4	10.1	1.4	26.7	12	- 2.2	7	0	7	3.3	67	31	- 27	13	9	1	51	51	1.7	19	16.1	S	5	12	6	12	5.2	56
OREGON																																
ASTORIA	2	1017.3	1018.1	11.7	5.0	8.2	0.3	15.0	12	- 1.7	5	0	2	6.1	86	231	- 54	30	25	2	0	0	1.5	18	13.0	18	9	2	4	24	8.9	
BURNS U	1265	875.0	1020.6	7.8	- 5.0	1.6	- 0.7	15.6	9	-12.8	6	0	30	- 3.3	73	41	12	20	11		183	102	0.8	30				3	10	17	7.3	
EUGENE	109	1006.4	1020.1	10.6	2.2	6.4	- 1.1	15.0	3	- 5.6	6+	0	12	4.4	89	241	98	72	17	0	0	0	1.7	18	10.7	17	9	0	7	23	8.7	
MEACHAM	1234	877.4	1020.2	3.3	- 2.2	0.6	- 0.7	10.6	21	- 8.3	5	0	27			132	27	51	18		800	457			9.8	20	1	1	5	24	8.7	
MEDFORD	396	972.6	1021.2	10.0	0.6	5.3	- 0.5	17.2	11	- 7.2	6	0	12	1.7	81	87	21	27	14	0	T	T	0.1	27	13.4	16	11	2	5	23	8.1	
PENDLETON	452	964.8	1019.3	11.1	2.2	6.5	1.3	21.1	9	- 5.6	6	0	9	1.1	73	69	34	34	15	0	T	T	1.4	23	14.3	27	1	1	9	20	7.9	
PORTLAND	6	1018.0	1019.4	10.6	4.4	7.5	0.2	15.6	3	- 2.8	6	0	3	4.4	83	146	11	38	20	0	0	0	1.7	16	16.1	S	13	0	3	27	9.3	11
SALEM	60	1012.2	1019.6	11.1	3.3	6.9	- 0.4	14.4	3	- 4.4	6	0	7	5.0	88	159	14	30	17	0	0	0	2.4	19	13.0	18	13+	1	4	25	9.0	
SEXTON SUMMIT R	1169	885.9	1020.2	7.2	1.1	4.2	- 1.8	18.9	20	- 2.8	15	0	17			241	130	93	17		201	51			18.8	18	9	7	6	17	6.8	
PACIFIC AREA																																
GUAM TAGUAC R	110	997.0	1009.7	29.4	22.8	26.2	- 0.1	30.6	24+	20.0	12+	0	0	23.9	87	171	- 90	30	26	2	0	0	3.9	9	10.3	ESE	9					19
JOHNSTON	2	1012.2	1013.0	27.2	25.0	26.1	- 0.3	28.9	6	22.8	10+	0	0	21.7	77	39	- 13	14	13	0	0	0	7.3	9	15.2	SE	10	7	9	14	6.2	74
KOROR R	29	1004.4	1008.3	31.1	24.4	27.8	0.4	32.8	15+	22.8	5	2	0	24.4	86	261	- 68	78	25	8	0	0	0.1	12	11.6	SW	4	0	1	29	9.6	47
KWAJALEIN	2	1008.1	1009.0	30.0	25.0	27.5	0.1	31.1	12+	23.9	29+	0	0	23.9	81	123	-185	35	25	2	0	0	4.7	8	13.0	9	19	3	12	15	7.1	
MAJURO	3	1009.1	1009.6	29.4	25.0	27.3	0.3	30.6	11+	23.3	30+	0	0	23.3	80	240	-164	53	19	0	0	0	4.0	8	11.2	E	25+	1	17	12	7.3	60
PAGO PAGO	4	1010.2	1010.4	30.0	23.3	26.7		31.7	15+	20.0	21	0	0	22.8	80	235		128	20	3	0	0	2.2	8	11.6	E	12	5	14	11	6.1	67
PONAPE R	37	1002.7	1007.8	31.1	23.3	27.0	0.4	32.8	12	21.1	6	4	0	23.9	85	305	-123	76	27	5	0	0	1.7	14	9.4	NE	27	0	10	20	8.4	50
TRUK MOEN ISLAND	2	1008.1	1008.3	30.6	25.0	27.8	0.7	31.7	13+	23.3	21+	0	0	23.9	79	132	-182	39	19	2	0	0	2.5	6	9.8	NE	27	0	2	28	9.4	73
WAKE	3	1012.9	1013.1	29.4	24.4	26.8	- 0.1	30.6	23+	22.8	5+	0	0	21.1	74	127	49	57	18	0	0	0	6.0	7	12.5	NE	3+	14	8	8	4.6	62
YAP R	13			30.6	23.9	27.0	- 0.5	31.7	15+	21.7	4	0	0			261	- 23	94	24	5	0	0			13.9	W	10	0	8	22	8.4	62
PENNSYLVANIA																																
ALLENTOWN	118	1003.7	1018.2	9.4	0.6	4.9	- 0.6	25.0	2	- 5.6	9	0	17	1.1	80	160	76	56	11	1	155	152	2.1	30	15.6	1	25	3	7	20	7.4	
ERIE	223	990.5	1017.8	7.2	0.6	4.1	- 1.1	20.0	2	- 8.9	23	0	12	0.0	75	115	29	25	18	5	371	76	2.1	23	11.2	34	21	2	6	22	8.2	
HARRISBURG	103	1005.8	1018.7	10.6	2.2	6.4	0.1	27.8	2	- 3.9	9	0	7			132	57	60	13	1	224	152	1.7	29	14.8	W	10	3	12	15	6.9	32
PHILADELPHIA	2	1017.3	1018.2	12.2	3.3	7.8	1.0	26.1	2	- 3.9	23+	0	6	1.1	66	136	50	48	9	2	T	0	2.2	30	13.4	NW	30	5	7	18	7.0	57
PITTSBURGH	347	973.9	1018.8	8.9	0.6	4.7	- 0.2	22.2	15+	-12.8	23	0	15	- 1.1	69	49	- 8	12	12	0	267	152	2.6	27	11.2	30	21+	4	6	20	7.8	44
SCRANTON	283	982.7	1017.6	7.2	0.0	3.8	- 0.4	23.9	2	- 7.8	9	0	18	0.6	82	90	15	35	14	0	572	508	1.5	25	11.2	S	7	2	4	24	8.4	26
WILLIAMSPORT	160	999.0	1018.4	7.8	0.6	4.2	- 0.8	26.7	2	- 7.2	9	0	18	0.0	76	81	- 7	21	14	0	236	178	1.3	28	10.3	28	7	2	4	24	8.5	
RHODE ISLAND																																
BLOCK ISLAND	34			10.6	3.3	6.7	- 0.6	19.4	2	- 3.9	9	0	7			131	37	61	15		T	0						7	5	18	7.0	
PROVIDENCE	16	1014.2	1016.7	9.4	0.0	4.7	- 1.4	22.8	1	- 6.1	24+	0	22	0.0	73	131	27	43	16	1	T	T	2.2	32	14.3	1	25	9	0	21	7.0	39

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

NOVEMBER 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
SOUTH CAROLINA	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm	Mm	M.p.s.		M.p.s							%
CHARLESTON	12	1017.6	1019.7	21.1	7.2	13.9	0.7	30.0	2	- 2.2	22	0	2	7.2	71	41	- 12	21	6	1	0	0	1.2	33	17.9Y	SW	29	17	7	6	3.5	75
CHARLESTON U	3			19.4	10.0	14.8	0.1	28.9	2	1.7	23	0	0			69	20	35	6		0	0			13.0	N	8+					
COLUMBIA	65	1012.2	1020.3	19.4	4.4	12.1	0.1	28.3	1	- 4.4	9	0	8	5.0	68	60	T	29	7	0	0	0	0.8	31	10.3	30	21	17	5	8	4.1	67
GRNVLLE-SPRTNBG	292	985.1	1020.2	15.6	3.3	9.4	- 1.3	26.7	2	- 3.9	8	0	13	2.8	67	107	35	48	10	1	T	T	1.0	35	12.1	NW	3	16	6	8	4.0	65
SOUTH DAKOTA																																
ABERDEEN	395	968.5	1016.8	5.6	- 5.0	0.1	1.1	16.7	12+	-15.6	7	0	28	- 4.4	75	35	17	12	12	0	231	152	1.4	34	15.6	31	5	7	5	18	7.1	
HURON	397	968.8	1016.6	6.1	- 5.0	0.7	1.2	18.3	10	-16.1	30	0	28	- 3.9	74	52	35	20	12	3	300	178	0.8	31	15.6	NW	6+	5	6	19	7.7	53
RAPID CITY	964	903.5	1016.7	7.8	- 5.0	1.4	- 0.3	20.6	10+	-13.9	18	0	29	- 5.6	65	20	10	11	8	0	175	51	2.4	33	16.5	NW	20+	8	6	16	6.7	64
SIOUX FALLS	432	964.8	1017.4	7.2	- 5.6	0.7	0.4	20.0	11	-15.6	30	0	28	- 3.3	76	62	37	38	8	2	112	102	0.9	29	15.6	32	5	5	5	20	7.4	
TENNESSEE																																
BRISTOL	459	965.8	1020.7	14.4	1.7	8.1	0.3	26.7	2	- 6.1	23	0	14	1.7	69	62	- 2	24	11	0	18	25	0.8	28	9.4	27	21	11	8	11	6.6	
CHATTANOOGA	203	995.6	1020.8	15.6	3.3	9.3	- 0.4	26.1	2	- 2.8	8	0	11	3.3	70	49	- 44	14	10	1	T	T	0.4	31	10.7	NW	21	11	5	14	5.5	54
KNOXVILLE	299	985.4	1020.9	14.4	4.4	9.3	0.0	25.0	2	- 3.3	8	0	7	2.8	68	56	- 26	22	9	1	T	0	1.1	33	11.2	W	29	12	6	12	5.6	48
MEMPHIS	79	1010.2	1020.6	16.7	4.4	10.5	0.4	28.3	1	- 5.0	8	0	5	2.8	60	38	- 73	15	4	0	20	T	0.4	20	10.3	14	28	13	8	9	4.9	65
NASHVILLE	180	998.4	1020.4	16.1	3.9	9.9	0.8	28.9	1	- 5.6	8	0	9	2.8	65	30	- 53	8	8	0	T	T	1.1	23	12.5	N	21	9	9	12	5.5	57
OAK RIDGE P	276			13.3	2.8	8.2	- 0.3	23.3	1	- 4.4	8	0	9			57	- 39	21	9		5	T				13.4Y		29	11	6	13	5.9	
TEXAS																																
ABILENE	544	955.6	1017.7	18.3	7.2	12.8	1.1	27.2	1	- 1.1	19	0	1	5.0	64	19	- 9	15	2	1	0	0	2.4	18	14.8	W	28+	11	6	13	5.6	65
AMARILLO	1098	891.3	1016.1	14.4	1.1	7.6	- 0.2	26.7	12	- 4.4	19	0	14	- 1.7	59	53	36	33	5	3	T	T	1.9	22	17.0	W	4	15	6	9	4.6	68
AUSTIN	182	996.6	1018.6	21.7	10.0	15.8	0.9	28.9	2	3.9	24	0	0	9.4	70	77	23	61	6	3	0	0	0.9	8	12.5	NW	28+	13	7	10	5.0	61
BROWNSVILLE	6	1016.6	1017.0	26.1	15.0	20.7	3.9	30.0	1	8.9	20	0	0	16.1	78	19	- 15	7	5	0	0	0	1.2	9	12.5	SE	17	10	12	8	5.2	48
CORPUS CHRISTI	12	1016.3	1017.7	25.6	13.3	19.5	1.7	30.6	2	6.1	20	0	0	15.0	78	11	- 33	9	5	1	0	0	2.1	8	15.2	N	18	12	9	9	4.6	57
DALLAS	147	1001.7	1019.1	19.4	8.9	13.9	1.2	27.8	13	2.2	22	0	0	6.1	63	40	- 28	20	3	1	0	0	1.5	14	14.3	W	28	15	5	10	4.7	58
DEL RIO	313	981.4	1017.5	22.2	10.6	16.5	1.6	29.4	2	3.3	20	0	0	10.0	70	21	5	18	8	0	0	0	2.0	11	11.6	14	15	7	10	13	5.9	
EL PASO	1194	883.5	1016.5	18.3	3.9	11.2	0.5	25.0	5	- 0.6	24+	0	3	- 1.1	47	4	- 5	3	2	0	0	0	0.8	34	14.8	W	28	15	9	6	4.2	82
FORT WORTH	164	998.6	1019.3	20.0	7.8	13.9	1.2	28.3	14+	2.8	27+	0	0	7.2	69	45	- 18	23	3	1	T	0	1.3	17	14.3	31	28	13	5	12	5.0	
GALVESTON U	2			21.7	15.6	18.4	1.2	27.8	2	7.2	23	0	0			58	- 32	45	5		0	0			16.5	N	23					68
HOUSTON INTERCON	29	1015.6	1019.4	22.2	8.9	15.6	0.7	30.0	2	1.7	25	0	0	10.6	77	46	- 53	23	7	1	0	0	1.3	8	10.3	25	28+	10	9	11	5.1	61
LUBBOCK	992	904.5	1016.3	17.8	3.3	10.4	1.6	27.8	12	- 5.0	19	0	4	1.7	60	11	- 3	4	3	0	T	0	1.6	23	13.4	24	28	12	10	8	5.0	
MIDLAND	869	917.7	1016.7	19.4	4.4	11.8	0.4	27.8	13	- 1.7	19	0	6	3.9	67	11	- 1	6	5	3	0	0	1.5	17	15.4	25	22	15	6	9	4.3	
PORT ARTHUR	5	1019.0		21.7	8.9	15.2	- 0.2	29.4	2	1.7	25	0	0	10.0	75	67	- 21	32	6	3	0	0	1.7	7	16.5	SW	28	14	8	8	4.7	70
SAN ANGELO	580	950.6	1017.5	20.0	6.7	13.3	0.7	27.2	1	0.6	27+	0	0	6.7	70	7	- 13	5	3	1	0	0	1.3	10	13.0	32	28	12	6	14	5.4	
SAN ANTONIO	240	990.2	1018.2	23.9	11.1	17.3	2.1	29.4	2	2.8	24	0	0	10.0	66	70	35	59	4	1	0	0	3.6	6	11.6	NW	28+	10	9	9	5.0	53
VICTORIA	32	1014.2	1018.4	23.9	11.7	17.9	1.0	30.0	2	6.1	27+	0	0	12.2	73	35	- 25	19	4	2	0	0	1.7	7	19.7Y	N	18	11	8	11	5.2	
WACO	153	1000.7	1019.1	20.6	9.4	14.7	0.9	27.8	13+	3.3	24	0	0	8.3	69	42	- 14	21	3	3	0	0	0.9	14	11.2	24	28	12	5	14	5.2	
WICHITA FALLS	303	980.7	1017.7	18.3	5.6	11.7	0.3	28.3	1	- 1.1	19	0	3	6.7	76	23	- 13	10	3	1	T	T	1.4	16	16.1	31	28	13	7	10	5.1	
UTAH																																
MILFORD	1533	848.3		8.9	- 5.6	1.6	- 0.7	18.9	10	-15.6	1	0	28			5	- 8	3	5		71	102						13	6	11	5.0	
SALT LAKE CITY	1286	874.4	1021.1	8.3	- 1.7	3.1	0.5	19.4	12	- 8.9	1	0	24	- 2.8	69	26	- 7	13	8	3	137	178	1.3	17	12.5	NW	27	8	8	14	6.6	53
WENDOVER	1291	873.7	1021.8	6.7	- 3.3	1.6	- 1.6	12.2	12	- 9.4	7	0	27	- 5.0	65	9	2	6	4		T	T						9	7	14	6.3	
VERMONT																																
BURLINGTON	101	1004.4	1017.3	5.0	- 3.3	0.8	- 1.0	20.0	2	-11.1	24+	0	23	- 2.8	76	58	- 8	17	11	1	488	229	0.1	30	15.2	[illegible]	5	3	3	24	8.4	22
VIRGINIA																																
LYNCHBURG	279			12.8	1.7	7.2	- 1.2	27.8	2	- 8.3	23	0	14			79	13	37	7		150	127			11.6	NW	25	15	4	11	4.9	58
NORFOLK	7	1018.3	1019.2	16.7	6.1	11.3	0.6	28.9	1	0.6	23	0	0	4.4	63	25	- 53	11	5	2	T	0	1.4	29	19.2	NW	7	12	13	5	4.6	66
RICHMOND	53	1013.2	1019.6	15.6	2.8	9.2	0.0	28.9	2	- 5.6	23	0	8	2.8	70	70	- 7	44	6	0	T	T	0.9	29	14.0	NW	21	12	10	8	5.0	61
ROANOKE	350	977.0	1019.7	13.3	1.7	7.4	- 0.7	27.8	2	- 8.3	23	0	12	0.6	64	55	- 13	24	7	0	259	152	2.1	10	17.4	31	21	11	9	10	5.2	
WALLOPS ISLAND	3			15.0	5.6	10.2		26.1	2	- 3.3	23	0	4			62		34	7		0	0			21.5Y	WNW	25					
WASHINGTON																																
OLYMPIA	59	1012.5	1018.0	10.0	3.3	6.4	- 0.1	14.4	12	- 4.4	5	0	4	5.6	93	193	- 2	36	22	0	T	T	2.1	20	11.4	[illegible]	24+	1	5	24	8.5	
QUILLAYUTE	55	1009.1	1016.5	10.0	3.9	6.8	- 0.2	13.9	12	- 3.3	5	0	5	5.6	89	364	26	99	26	0	0	0	1.3	16	13.0	[illegible]	9	2	3	25	8.7	16
SEATTLE-TACOMA	122	1001.0	1017.8	10.0	5.0	7.6	1.0	12.8	20+	0.6	5	0	0	3.9	78	135	- 1	38	19	0	T	T	2.0	15	11.6	[illegible]	9	1	3	26	9.1	20
SPOKANE	718	933.0	1018.3	5.0	- 1.1	1.9	- 0.2	11.1	9	- 8.9	5	0	23	- 1.7	79	38	- 19	8	17	0	102	76	1.4	19	17.9	SW	4	2	2	26	8.7	17
STAMPEDE PASS R	1266	878.4		1.1	- 2.2	- 0.4	- 0.1	6.7	11	- 6.7	6+	0	26			280	- 40	90	23		1227	686						1	2	27	9.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

NOVEMBER 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm.			Mm.	Mm.	M.p.s.		M.p.s.							%
WASHINGTON																																
WALLA WALLA U	289			11.1	3.3	7.2	1.5	20.6	9	- 5.0	6	0	4			69	25	26	14		T	T			10.7	NW	1	1	5	24	8.7	20
YAKIMA	321	979.7	1019.1	10.0	- 2.8	3.6	0.6	16.7	3	- 9.4	6+	0	26	- 1.7	73	25	T	9	10	0	0	0	1.3	27	15.6	30	21	6	6	18	7.1	
WEST INDIES																																
SAN JUAN P.R.	4	1011.9	1014.6	30.0	23.9	27.0	1.3	31.1	13+	21.7	21	0	0	19.4	65	59	-106	18	16	1	0	0	1.9	9	9.8	E	4+	7	18	5	5.3	60
WEST VIRGINIA																																
BECKLEY	763	929.9	1020.3	10.0	0.0	5.1	- 0.6	23.9	1	-12.2	23	0	17	- 0.6	71	52	- 25	14	12	1	193	76	1.8	23	13.0	30	21	9	2	19	6.9	
CHARLESTON	286	985.1	1019.7	13.3	2.2	7.7	0.3	26.7	2	- 8.9	23	0	10	1.1	66	72	1	32	11	0	107	76	1.4	25	9.8	23	20	5	7	18	6.9	
ELKINS	594	947.5		10.6	- 1.7	4.3	- 0.6	24.4	2	-15.6	23	0	22			70	T	18	16		279	102						2	9	19	7.7	
HUNTINGTON	252	989.2	1019.9	11.7	2.2	7.1	- 0.4	24.4	2	- 9.4	23	0	12	1.1	68	50	- 13	13	9	0	102	102	1.3	23	9.8	23	29	7	7	16	6.8	
PARKERSBURG U	187			11.7	1.7	6.8	- 0.3	24.4	2	- 8.9	23	0	10			57	- 3	16	10		127	127			13.4	W	2					43
WISCONSIN																																
GREEN BAY	208	990.5	1016.6	5.6	- 2.8	1.5	0.3	18.9	17	-11.7	30	0	22	- 1.7	79	82	33	27	15	1	320	254	1.5	27	14.8	SW	5	2	12	16	7.7	28
LA CROSSE	198	992.9	1017.9	6.7	- 1.7	2.4	1.2	17.8	17	-11.7	30	0	21	- 1.7	79	56	7		12	0	97		0.5	24								
MADISON	262	984.8	1017.0	7.2	- 3.3	1.8	0.7	21.7	14	-13.9	30	0	22	- 1.1	81	88	34	59	13	0	224	152	1.7	25	15.2	SW	5	6	7	17	7.2	38
MILWAUKEE	205	991.5	1017.3	7.2	- 1.1	2.9	0.8	21.1	14	- 9.4	8	0	21	- 1.1	77	62	7	23	10	0	155	76	2.4	26	17.9	SW	5	5	6	19	7.0	46
WYOMING																																
CASPER	1627	836.4	1017.9	4.4	- 6.1	- 0.8	- 1.7	13.9	11	-17.8	6	0	27	- 5.6	73	15	- 3	7	8	0	246	127	5.0	22	17.0	21	19+	7	7	16	6.9	
CHEYENNE	1867	810.0	1016.4	8.9	- 4.4	2.2	1.0	21.1	11+	-11.1	5	0	26	- 9.4	47	1	- 14	1	2	0	23	25	4.5	29	26.8	NW	20	10	6	14	6.1	50
LANDER	1696	828.0	1019.6	2.8	- 8.3	- 2.8	- 2.2	12.2	4	-13.9	6	0	30	- 8.3	69	10	- 13	5	5	0	236	279	0.8	22	16.1	W	4	9	10	11	5.8	66
SHERIDAN	1208	877.4	1017.4	7.8	- 6.7	0.4	- 0.3	20.6	12	-17.8	7	0	29	- 5.0	68	18	- 2	5	9	0	236	152	1.7	30	13.4	N	4	4	6	20	7.2	42

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1 C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

V Sun below horizon November 19 - 30, inclusive.
X Sun below horizon November 24 - 30, inclusive.

HEATING DEGREE DAYS

(Base 65°F.)

NOVEMBER 1971

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	437	465	462
HUNTSVILLE	469	513	565
MOBILE	204	212	235
MONTGOMERY	343	361	398
ALASKA			
ANCHORAGE	1936	3558	3192
ANNETTE	766	2128	2082
BARROW	1966	6249	6149
BARTER ISLAND	1928	6192	5923
BETHEL	1500	3943	3801
BETTLES	2090	5057	
BIG DELTA	1904	4374	
COLD BAY	973	3421	3114
FAIRBANKS	1932	4080	4181
GULKANA	1973	4551	
HOMER	1166	3369	
JUNEAU	1001	2833	2768
KING SALMON	1296	3412	3346
KOTZEBUE	1757	4567	4527
MC GRATH	1929	4197	4154
NOME	1478	4245	4219
ST. PAUL ISLAND	972	3825	3581
SHEMYA	847	3340	3213
SUMMIT	1781	4865	
TALKEETNA	1631	3905	3484
UNALAKLEET	1642	4145	
YAKUTAT	1017	3155	2811
ARIZONA			
FLAGSTAFF	938	2163	1740
PHOENIX	185	264	256
TUCSON	249	369	256
WINSLOW	623	1024	962
YUMA	155	231	148
ARKANSAS			
FORT SMITH	441	490	589
LITTLE ROCK	437	452	601
CALIFORNIA			
BAKERSFIELD	329	508	319
BISHOP	648	1139	866
BLUE CANYON	703	1469	1130
EUREKA U	463	1598	1528
FRESNO	423	652	417
LONG BEACH	138	201	208
LOS ANGELES	180	275	292
LOS ANGELES U	153	247	169
MT SHASTA R	746	1564	1284
OAKLAND	355	729	584
RED BLUFF	368	613	371
SACRAMENTO	363	587	456
SANDBERG R	534	1044	712
SAN DIEGO	160	238	181
SAN FRANCISCO	349	802	668
SAN FRANCISCO U	275	934	817
SANTA MARIA	421	930	704
STOCKTON	382	574	437
COLORADO			
ALAMOSA	1098	2284	2147
COLORADO SPRINGS	806	1610	1447
DENVER	771	1547	1379
GRAND JUNCTION	792	1315	1129
PUEBLO	723	1277	1130
CONNECTICUT			
BRIDGEPORT	643	824	988
HARTFORD	756	1038	1188
DELAWARE			
WILMINGTON	585	703	909
DIST.OF COLUMBIA			
WASHINGTON DULLES	631	808	
WASHINGTON NATIONAL	518	591	769
FLORIDA			
APALACHICOLA U	125	126	169
DAYTONA BEACH	71	71	75
FORT MYERS	3	3	24
JACKSONVILLE	144	150	156
KEY WEST	M	0	0
LAKELAND U	38	38	57
MIAMI	0	0	0
ORLANDO	26	26	72
PENSACOLA	175	184	214
TALLAHASSEE	226	234	226
TAMPA	41	41	60
WEST PALM BEACH	0	0	6
GEORGIA			
ATHENS	415	448	532
ATLANTA	436	472	559
AUGUSTA	355	373	411
COLUMBUS	313	324	446
MACON	321	330	368
ROME	491	536	659
SAVANNAH	236	246	293
IDAHO			
BOISE	753	1471	1339
LEWISTON	748	1479	1282
POCATELLO	964	2054	1565
ILLINOIS			
CAIRO U	470	508	713
CHICAGO O HARE	693	921	1317
CHICAGO MIDWAY	683	892	1160
MOLINE	740	1049	1217
PEORIA	728	1021	1178
ROCKFORD	771	1094	1366
SPRINGFIELD	633	838	1059
INDIANA			
EVANSVILLE	571	679	892
FORT WAYNE	743	1002	1275
INDIANAPOLIS	648	830	1129
SOUTH BEND	716	1002	1266
IOWA			
BURLINGTON	711	1005	1183
DES MOINES	756	1048	1308
DUBUQUE	818	1264	1555
SIOUX CITY	807	1229	1553
WATERLOO	903	1454	1506
KANSAS			
CONCORDIA	669	998	1038
DODGE CITY	639	989	950
GOODLAND	756	1348	1278
TOPEKA	580	796	999
WICHITA	628	874	880
KENTUCKY			
COVINGTON	649	808	1035
LEXINGTON	536	613	902
LOUISVILLE	537	615	911
LOUISIANA			
ALEXANDRIA	316	333	329
BATON ROUGE	242	253	247
LAKE CHARLES	191	194	229
NEW ORLEANS	208	218	211
SHREVEPORT	282	293	344
MAINE			
CARIBOU	1106	2149	2255
PORTLAND	878	1429	1575
MARYLAND			
BALTIMORE	571	691	897
MASSACHUSETTS			
BLUE HILL OBS R	779	1099	1201
BOSTON	651	859	988
WORCESTER	844	1238	1411
MICHIGAN			
ALPENA	871	1632	1938
DETROIT	698	906	1185
DETROIT METRO	788	1092	1298
FLINT	782	1195	1397
GRAND RAPIDS	800	1166	1436
HOUGHTON LAKE	912	1587	1867
LANSING	792	1229	1410
MARQUETTE U	897	1642	1843
MUSKEGON	801	1220	1322
SAULT STE MARIE	998	2028	2011
MINNESOTA			
DULUTH	1099	2147	2273
INTERNATIONAL FALLS	1201	2345	2483
MINNEAPOLIS	962	1577	1761
ROCHESTER	917	1508	1724
ST CLOUD	1023	1796	1914
MISSISSIPPI			
JACKSON	328	347	361
MERIDIAN	359	376	420
MISSOURI			
COLUMBIA REGIONAL	582	772	956
KANSAS CITY	538	686	871
ST JOSEPH	653	972	1059
ST LOUIS	574	718	938
SPRINGFIELD	561	742	868
MONTANA			
BILLINGS	869	1865	1591
GLASGOW	973	1902	2060
GREAT FALLS	854	1847	1803
HAVRE	957	1974	2047
HELENA	936	2210	1987
KALISPELL	950	2332	2144
MILES CITY	905	1782	1666
MISSOULA	934	2107	2097
NEBRASKA			
GRAND ISLAND	743	1164	1329
LINCOLN U	693	1009	1108
NORFOLK	824	1314	1396
NORTH PLATTE	829	1523	1454
OMAHA	707	1036	1205
SCOTTSBLUFF	807	1600	1473
VALENTINE	861	1593	1621
NEVADA			
ELKO	928	1950	1753
ELY	983	2134	1836
LAS VEGAS	417	628	465
RENO	819	1693	1625
WINNEMUCCA	860	1797	1656
NEW HAMPSHIRE			
CONCORD	970	1606	1560
MT WASHINGTON OBS	1404	3852	4147
NEW JERSEY			
ATLANTIC CITY	620	829	839
ATLANTIC CITY U	560	747	766
NEWARK	569	677	903
TRENTON U	599	742	897
NEW MEXICO			
ALBUQUERQUE	587	1029	883
CLAYTON	649	1213	1081
ROSWELL	495	760	793
NEW YORK			
ALBANY	838	1323	1374
BINGHAMTON	872	1442	1569
BUFFALO	771	1100	1414
NEW YORK U	596	716	803
NEW YORK KENNEDY	532	626	848
NEW YORK LA GUARDIA	612	738	778
ROCHESTER	792	1110	1328
SYRACUSE	840	1256	1325
NORTH CAROLINA			
ASHEVILLE	576	711	981
CAPE HATTERAS R	289	295	351
CHARLOTTE	490	566	568
GREENSBORO	523	633	738
RALEIGH	496	560	635
WILMINGTON	318	329	365
NORTH DAKOTA			
BISMARCK	1043	1994	1944
FARGO	1052	1921	1965
WILLISTON	1063	2067	2058
OHIO			
AKRON	786	1074	1212
CINCINNATI ABBE OB	602	711	914
CLEVELAND	704	957	1192
COLUMBUS	733	974	1151
DAYTON	661	808	1090
MANSFIELD	722	961	1166
TOLEDO	813	1118	1331
YOUNGSTOWN	788	1127	1328
OKLAHOMA			
OKLAHOMA CITY	475	622	677
TULSA	446	559	698
OREGON			
ASTORIA	538	1420	1422
BURNS U	900	2027	1641
EUGENE	638	1364	1148
MEACHAM	949	2338	1994
MEDFORD	698	1258	1128
PENDLETON	633	1263	1172
PORTLAND	578	1127	1099
SALEM	607	1295	1111
SEXTON SUMMIT R	756	1798	1442
PENNSYLVANIA			
ALLENTOWN	719	970	1136
ERIE	763	1189	1385
HARRISBURG	643	832	1009
PHILADELPHIA	576	672	972
PITTSBURGH	729	961	1215
SCRANTON	783	1163	1347
WILLIAMSPORT	757	1023	1212
RHODE ISLAND			
BLOCK ISLAND	619	824	995
PROVIDENCE	736	966	1144
SOUTH CAROLINA			
CHARLESTON	261	274	341
CHARLESTON U	221	227	244
COLUMBIA	354	367	429
GRNVLLE-SPRTNBRG	492	568	550
SOUTH DAKOTA			
ABERDEEN	977	1748	1807
HURON	946	1675	1708
RAPID CITY	909	1799	1577
SIOUX FALLS	945	1572	1646
TENNESSEE			
BRISTOL	560	647	860
CHATTANOOGA	496	541	669
KNOXVILLE	496	547	690
MEMPHIS	432	454	595
NASHVILLE	462	501	683
OAK RIDGE R	551	624	762
TEXAS			
ABILENE	312	400	465
AMARILLO	575	941	793
AUSTIN	184	187	256
BROWNSVILLE	16	16	66
CORPUS CHRISTI	51	51	120
DALLAS	265	278	383
DEL RIO	135	150	249
EL PASO	381	524	498
FORT WORTH	270	289	389
GALVESTON U	91	91	138
HOUSTON INTERCON	195	203	250
LUBBOCK	421	628	705
MIDLAND	350	472	468
PORT ARTHUR	208	214	229
SAN ANGELO	289	345	386
SAN ANTONIO	129	130	235
VICTORIA	96	98	156
WACO	230	241	313
WICHITA FALLS	364	426	480
UTAH			
MILFORD	899	1735	1409
SALT LAKE CITY	817	1553	1349
WENDOVER	896	1582	1242
VERMONT			
BURLINGTON	938	1474	1730
VIRGINIA			
LYNCHBURG	613	736	814
NORFOLK	391	421	544
RICHMOND	512	592	745
ROANOKE	595	724	829
WALLOPS ISLAND	450	481	
WASHINGTON			
OLYMPIA	639	1587	1395
QUILLAYUTE	614	1739	1602
SEATTLE-TACOMA	570	1312	1304
SPOKANE	882	1903	1574
STAMPEDE PASS R	1004	2732	2666
WALLA WALLA U	593	1176	1078
YAKIMA	790	1694	1434
WEST VIRGINIA			
BECKLEY	714	988	1197
CHARLESTON	578	670	908
ELKINS	756	1061	1298
HUNTINGTON	606	703	905
PARKERSBURG U	622	741	930
WISCONSIN			
GREEN BAY	902	1474	1660
LA CROSSE	850	1328	1545
MADISON	885	1358	1643
MILWAUKEE	824	1308	1611
WYOMING			
CASPER	1026	2095	1680
CHEYENNE	863	1922	1727
LANDER	1133	2249	1804
SHERIDAN	963	2038	1762

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

COOLING DEGREE DAYS

(Base 65°F.)

NOVEMBER 1971

State and station	Current season: This month	Current season: Period January through this month	Normals January through this month
ALABAMA			
BIRMINGHAM	10	1740	
HUNTSVILLE	13	1638	
MOBILE	37	2824	
MONTGOMERY	22	2171	
ALASKA			
ANCHORAGE	6	1	
ANNETTE	0	53	
BARROW	0	0	
BARTER ISLAND	0	0	
BETHEL	0	0	
BETTLES	6	83	
BIG DELTA	0	22	
COLD BAY	0	0	
FAIRBANKS	0	89	
GULKANA	0	12	
HOMER	0	1	
JUNEAU	0	0	
KING SALMON	0	5	
KOTZEBUE	0	16	
MC GRATH	0	29	
NOME	0	4	
ST. PAUL ISLAND	0	0	
SHEMYA	0	0	
SUMMIT	0	0	
TALKEETNA	0	3	
UNALAKLEET	0	0	
YAKUTAT	0	0	
ARIZONA			
FLAGSTAFF	0	153	
PHOENIX	30	3651	
TUCSON	12	2510	
WINSLOW	0	1416	
YUMA	15	3595	
ARKANSAS			
FORT SMITH	9	1835	
LITTLE ROCK	10	1936	
CALIFORNIA			
BAKERSFIELD	0	2421	
BISHOP	0	1199	
BLUE CANYON	0	502	
EUREKA U	0	2	
FRESNO	0	1770	
LONG BEACH	11	1454	
LOS ANGELES	14	839	
LOS ANGELES U	17	1557	
MT SHASTA R	0	347	
OAKLAND	0	140	
RED BLUFF	0	1847	
SACRAMENTO	0	1274	
SANDBERG R	0	957	
SAN DIEGO	1	866	
SAN FRANCISCO	0	153	
SAN FRANCISCO U	0	108	
SANTA MARIA	0	104	
STOCKTON	0	1548	
COLORADO			
ALAMOSA	0	46	
COLORADO SPRINGS	0	464	
DENVER	0	653	
GRAND JUNCTION	0	1313	
PUEBLO	0	998	
CONNECTICUT			
BRIDGEPORT	2	829	
HARTFORD	4	882	
DELAWARE			
WILMINGTON	16	1173	
DIST.OF COLUMBIA			
WASHINGTON DULLES	19	1064	
WASHINGTON NATIONAL	22	1523	
FLORIDA			
APALACHICOLA U	51	2749	
DAYTONA BEACH	106	2867	
FORT MYERS	188	3500	
JACKSONVILLE	51	2631	
KEY WEST	334	4579	
LAKELAND U	128	3207	
MIAMI	274	4126	
ORLANDO	167	3677	
PENSACOLA	37	2690	
TALLAHASSEE	30	2298	
TAMPA	128	3258	
WEST PALM BEACH	249	3815	
GEORGIA			
ATHENS	18	1727	
ATLANTA	13	1629	
AUGUSTA	19	1944	
COLUMBUS	23	2189	
MACON	27	2436	
ROME	14	1700	
SAVANNAH	34	2501	
HAWAII			
HILO	271	2955	
HONOLULU	328	3884	
KAHULUI	322	3538	
LIHUE	365	3966	
IDAHO			
BOISE	0	911	
LEWISTON	0	847	
POCATELLO	0	396	
ILLINOIS			
CAIRO U	9	1774	
CHICAGO O HARE	0	1015	
CHICAGO MIDWAY	0	1145	
MOLINE	0	1080	
PEORIA	0	1073	
ROCKFORD	0	920	
SPRINGFIELD	2	1304	
INDIANA			
EVANSVILLE	0	1576	
FORT WAYNE	0	830	
INDIANAPOLIS	0	1011	
SOUTH BEND	0	769	
IOWA			
BURLINGTON	0	1105	
DES MOINES	0	1144	
DUBUQUE	0	657	
SIOUX CITY	0	1043	
WATERLOO	0	536	
KANSAS			
CONCORDIA	0	1261	
DODGE CITY	0	1431	
GOODLAND	0	928	
TOPEKA	0	1416	
WICHITA	0	1588	
KENTUCKY			
COVINGTON	0	1137	
LEXINGTON	10	1171	
LOUISVILLE	3	1287	
LOUISIANA			
ALEXANDRIA	22	2221	
BATON ROUGE	35	2661	
LAKE CHARLES	53	2914	
NEW ORLEANS	40	2664	
SHREVEPORT	28	2528	
MAINE			
CARIBOU	0	125	
PORTLAND	0	394	
MARYLAND			
BALTIMORE	20	1222	
MASSACHUSETTS			
BLUE HILL OBS R	0	637	
BOSTON	1	849	
WORCESTER	0	471	
MICHIGAN			
ALPENA	0	238	
DETROIT	0	892	
DETROIT METRO	0	702	
FLINT	0	555	
GRAND RAPIDS	0	672	
HOUGHTON LAKE	0	333	
LANSING	0	572	
MARQUETTE U	0	294	
MUSKEGON	0	505	
SAULT STE MARIE	0	93	
MINNESOTA			
DULUTH	0	164	
INTERNATIONAL FALLS	0	184	
MINNEAPOLIS	0	643	
ROCHESTER	0	542	
ST CLOUD	0	454	
MISSISSIPPI			
JACKSON	29	2292	
MERIDIAN	18	2131	
MISSOURI			
COLUMBIA REGIONAL	5	1387	
KANSAS CITY	3	1726	
ST JOSEPH	0	1233	
ST LOUIS	10	1526	
SPRINGFIELD	1	1465	
MONTANA			
BILLINGS	0	641	
GLASGOW	0	634	
GREAT FALLS	0	557	
HAVRE	0	541	
HELENA	0	210	
KALISPELL	0	227	
MILES CITY	0	874	
MISSOULA	0	381	
NEBRASKA			
GRAND ISLAND	0	1079	
LINCOLN U	0	1336	
NORFOLK	0	894	
NORTH PLATTE	0	634	
OMAHA	0	1272	
SCOTTSBLUFF	0	634	
VALENTINE	0	827	
NEVADA			
ELKO	0	342	
ELY	0	249	
LAS VEGAS	0	2906	
RENO	0	440	
WINNEMUCCA	0	666	
NEW HAMPSHIRE			
CONCORD	0	403	
MT WASHINGTON OBS	0	0	
NEW JERSEY			
ATLANTIC CITY	12	761	
ATLANTIC CITY U	2	668	
NEWARK	12	1365	
TRENTON U	10	1076	
NEW MEXICO			
ALBUQUERQUE	0	1153	
CLAYTON	0	691	
ROSWELL	0	1594	
NEW YORK			
ALBANY	0	456	
BINGHAMTON	0	346	
BUFFALO	0	508	
NEW YORK U	7	1335	
NEW YORK KENNEDY	8	1270	
NEW YORK LA GUARDIA	6	1138	
ROCHESTER	0	615	
SYRACUSE	0	552	
NORTH CAROLINA			
ASHEVILLE	8	923	
CAPE HATTERAS R	26	1728	
CHARLOTTE	16	1480	
GREENSBORO	13	1185	
RALEIGH	17	1397	
WILMINGTON	28	2024	
NORTH DAKOTA			
BISMARCK	0	423	
FARGO	0	375	
WILLISTON	0	440	
OHIO			
AKRON	0	694	
CINCINNATI ABBE OB	1	1174	
CLEVELAND	0	692	
COLUMBUS	0	771	
DAYTON	0	964	
MANSFIELD	0	705	
TOLEDO	0	680	
YOUNGSTOWN	0	532	
OKLAHOMA			
OKLAHOMA CITY	3	1810	
TULSA	7	1867	
OREGON			
ASTORIA	0	19	
BURNS U	0	414	
EUGENE	0	253	
MEACHAM	0	333	
MEDFORD	0	641	
PENDLETON	0	853	
PORTLAND	0	416	
SALEM	0	299	
SEXTON SUMMIT R	0	314	
PACIFIC AREA			
GUAM TAGUAC R	429	4698	
JOHNSTON	427	4600	
KOROR R	519	5631	
KWAJALEIN	500	5474	
MAJURO	492	5247	
PAGO PAGO	458	4791	
PONAPE R	476	5030	
TRUK MOEN ISLAND	517	5516	
WAKE	463	5207	
YAP R	474	5277	
PENNSYLVANIA			
ALLENTOWN	4	775	
ERIE	0	341	
HARRISBURG	6	1043	
PHILADELPHIA	14	1305	
PITTSBURGH	0	716	
SCRANTON	3	573	
WILLIAMSPORT	2	785	
RHODE ISLAND			
BLOCK ISLAND	0	513	
PROVIDENCE	5	890	
SOUTH CAROLINA			
CHARLESTON	31	2297	
CHARLESTON U	38	2409	
COLUMBIA	25	2214	
GRNVLLE-SPRTNBRG	15	1502	
SOUTH DAKOTA			
ABERDEEN	0	668	
HURON	0	755	
RAPID CITY	0	550	
SIOUX FALLS	0	732	
TENNESSEE			
BRISTOL	10	1153	
CHATTANOOGA	16	1745	
KNOXVILLE	13	1415	
MEMPHIS	14	2062	
NASHVILLE	16	1602	
OAK RIDGE R	9	1301	
TEXAS			
ABILENE	20	2226	
AMARILLO	0	1271	
AUSTIN	53	3087	
BROWNSVILLE	153	4057	
CORPUS CHRISTI	121	3689	
DALLAS	36	2874	
DEL RIO	43	2851	
EL PASO	0	2071	
FORT WORTH	36	2490	
GALVESTON U	103	2988	
HOUSTON INTERCON	52	2774	
LUBBOCK	4	1649	
MIDLAND	3	1831	
PORT ARTHUR	42	2748	
SAN ANGELO	23	2318	
SAN ANTONIO	81	3335	
VICTORIA	78	3312	
WACO	40	2955	
WICHITA FALLS	11	2525	
UTAH			
MILFORD	0	786	
SALT LAKE CITY	0	926	
WENDOVER	0	1183	
VERMONT			
BURLINGTON	0	454	
VIRGINIA			
LYNCHBURG	16	1078	
NORFOLK	23	1513	
RICHMOND	22	1340	
ROANOKE	13	1009	
WALLOPS ISLAND	16	1256	
WASHINGTON			
OLYMPIA	0	141	
QUILLAYUTE	0	26	
SEATTLE-TACOMA	0	219	
SPOKANE	0	558	
STAMPEDE PASS R	0	130	
WALLA WALLA U	0	931	
YAKIMA	0	564	
WEST INDIES			
SAN JUAN P.R.	473	5406	
WEST VIRGINIA			
BECKLEY	5	458	
CHARLESTON	11	1003	
ELKINS	3	440	
HUNTINGTON	7	993	
PARKERSBURG U	3	1006	
WISCONSIN			
GREEN BAY	0	484	
LA CROSSE	0	643	
MADISON	0	677	
MILWAUKEE	0	516	
WYOMING			
CASPER	0	395	
CHEYENNE	0	276	
LANDER	0	460	
SHERIDAN	0	442	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

STORM SUMMARY

NOVEMBER 1971

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE		DEATHS	INJURIES	†DAMAGE	
								PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS			PROPERTY	CROPS
Alabama*																													
Alaska												6																	
Arizona*																													
Arkansas*																													
California*																													
Colorado*																													
Connecticut												5								5									
Delaware												4																	
Florida	1	1			4						1	6																	
Georgia																							4						
Hawaii*																													
Idaho												3						1	?	4	?								
Illinois	2	1			4							3																	
Indiana*																													
Iowa																				5									
Kansas											1	4															5		
Kentucky*																													
Louisiana*																													
Maine	3	1			4							5				3				5							4		
Maryland												4								4									
Massachusetts	2	1			3					2		5								5							5		
Michigan											3	5																	
Minnesota																				?	5								
Mississippi*																													
Missouri	2	1			4							4															8		
Montana																											10	4	
Nebraska*																													
Nevada*																													
New Hampshire												4								5									
New Jersey*																													
New Mexico*																													
New York																				5									
North Carolina												4			1	3							4						
North Dakota*																													
Ohio												4								?									
Oklahoma								?	?																		?	?	
Oregon											1	4															5	4	
Pacific Area																												6	
Pennsylvania																				4									
Puerto Rico*																													
Rhode Island												4								4									
South Carolina*																													
South Dakota*																													
Tennessee*																													
Texas	4	3			5					1		5															4	6	
Utah*																													
Vermont												4								5									
U.S. Virgin Is.*																													
Virginia	1	1		11	6															4									
Washington*																													
West Virginia*																													
Wisconsin	1	1		1	5							4				4													
Wyoming*																													

Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:
1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
NOVEMBER 1971

Elmer R. Nelson, Office of Hydrology

Major flooding occurred along the lower reaches of the Pee Dee River in South Carolina during the first part of November. However, flooding in South Carolina was much less severe than during the previous 3 months.

Major flooding occurred on the extreme lower Nueces River in Texas during early November due to excessive rains during mid-October.

Significant flooding occurred on tributaries of the Arkansas River in the southwest quadrant of Kansas during mid-November. The Coon Creek tributaries flooded as much as one-half of Kinsley, Kans., with water up to 1 foot or more deep.

ATLANTIC SLOPE DRAINAGE

Minor flooding occurred in central New Jersey on Nov. 29-30 due to 1 to 1.5 inches of rain. The Assunpink Creek at Trenton, N. J., crested 2.4 feet above flood stage on the 30th. The Millstone River crested less than 2 feet above flood stage and the Raritan, 0.5 foot and less above flood stage on the 30th.

Reservoirs in New Jersey were near or at full capacity by the end of November due to above normal precipitation for the past 4 months. New York City's three reservoirs on the upper Delaware decreased storage during November by 5.5 billion gallons to an average of 43 percent of useable capacity at the end of the month.

The flooding on streams in eastern North Carolina in the beginning of November was due to heavy rains on Oct. 16-25. Heavy rain (around 1 inch) in south-central Virginia on the 3d-4th did not produce any additional overflow.

Flooding in South Carolina was much less severe during November than during the previous 3 months. Rainfall totalled 3 to 5 inches during the first 3 days of the month. Major flooding occurred along the lower reaches of the Pee Dee River from Peedee, S. C., to the coast. Minor flooding occurred along the upper Saluda River and the lower reaches of the Broad River. The Lumber River at Lumberton, N. C., continued above flood stage from Oct. 3 to Nov. 10, with the highest crest of 10.3 feet (flood stage 9 feet) occurring on Nov. 3. Minor flash flooding occurred on small streams in Greenville, S. C., but damage was minor. The elevation of Lake Marion rose about 1-1/2 feet during the month and had 1.8 feet of vertical storage left at the end of the month.

MISSISSIPPI SYSTEM

Upper Mississippi Basin - November precipitation was above normal in the Upper Mississippi Basin above Gutenberg, Iowa, except near normal over the northern sections. Precipitation fell in the form of snow during the last half of the month in northern sections and the last third of the month in southern sections. By the end of November, snow cover ranged from 2 to 10 inches with the heavier amounts in west-central Minnesota. There was little or no frost penetration prior to the snow.

Total precipitation for October and November reached 5 to 8 inches over the Minnesota, Upper Mississippi, Chippewa, and St. Croix Drainages. Some of the heavier amounts for the 2-month period were 8.35 inches at Minneapolis, 8.16 inches at Duluth, and 6.16 inches at St. Cloud, Minn.

Runoff from this precipitation resulted in rises on most streams of from 2 feet to 5 feet from the last week in October through the first 10 days in November. All were well below flood stage except that at Fort Ripley on the Upper Mississippi the peak was 9.7 feet, 0.3 foot below flood stage. Only minor rises occurred on the Wisconsin River. Flows on the Mississippi River above Minneapolis and the St. Croix River reached the highest flows on record for the month of November.

Arkansas Basin - Heavy rains over the Texas and Oklahoma panhandles on the 16th-17th caused minor flooding on the North Canadian River at Woodward and Seiling, Okla. No damage was reported.

Minor flooding occurred on the Arkansas River from Kinsley, Kans., to Great Bend, Kans., between the 18th and 20th. Flooding occurred on tributaries of the Arkansas in southeastern Hodgeman, northwestern Edwards, and southwestern Pawnee Counties in Kansas due to locally heavy rains during the late evening of the 16th and early on the 17th. The flooding began early on the 17th and was confined to the immediate area of the small streams except for an area of a few miles above Kinsley, Kans., on the Coon Creek tributaries. The Kinsley flooding resulted in shallow surface water over as much as one-half of the city with depths ranging from a few inches to a foot or more. There was no monetary damage from the Arkansas overflow. Damage from the Coon Creek overflow was estimated at $112,500, most of which occurred within the city of Kinsley, Kans.

Red Basin - The flooding on the Sulphur River in northeastern Texas was due to heavy thunderstorms during the night of Oct. 19-20. Flooding continued at Naples, Tex., from Oct. 23 to Nov. 2. The crest on Oct. 26 was 7.7 feet above flood stage.

WEST GULF OF MEXICO DRAINAGE

Minor flooding occurred in northeastern Texas on the upper Sabine River at Mineola, Tex., on Oct. 22 to Nov. 4. The crest at Mineola, Tex., on Oct. 24 was 3.5 feet above flood stage. Cattle along the Sabine River were moved to higher ground. The heaviest rainfall during November occurred during the middle of the month in the Sabine Basin.

The Trinity River at Long Lake, Tex., continues in flood from Oct. 26 to Nov. 1. The crest on Oct. 30 was 5.1 feet above flood stage. The damages during October were estimated at $896,000 by the Corps of Engineers.

The flooding along the Nueces River near Tilden, Tex., and below the Wesley Seale Dam, Tex., during the first 7 days of November was due to heavy rains that began during the early part of October with excessive rains during mid-October. Lake Corpus Christi was full before the rains and water from upstream flowed through unretarded to crests near Mathis, Tex., on Oct. 13, Oct. 18, and Oct. 23. Major flooding resulted along the extreme lower Nueces.

PACIFIC SLOPE DRAINAGE

Coquille Basin - Heavy rain (4 to 7 inches) on the 24th-28th in southwestern Oregon caused two periods of overflow along the South Fork Coquille from the 27th to the 30th. Rainfall amounts of 3 inches were common on the 26th. The South Fork Coquille reached flood stage at Myrtle Point, Oreg., late on the 26th and remained near or over flood stage until the afternoon of the 30th. Flooding along the Coquille River is frequent during the winter months and generally follows any period of prolonged rain in the coastal mountains of southwestern Oregon. Damage from the flooding was

minimal and restricted to pastureland siltation, river bank erosion, and some very minor road damage.

Columbia Basin - Measurable precipitation was observed in the Columbia Basin west of the Cascades on about 22 days during the month of November.

The month began with 2-inch rains along the north Oregon and southwest Washington coasts and less than 1-inch amounts in the Willamette Valley and Cascade range.

The second storm series, on Nov. 10-14, deposited 5 inches along the Oregon coast, 2-inch amounts in the Willamette Valley, and near 3.5 inches at Cascade range stations. This moisture wetted the Willamette and coastal basins but produced only minor streamflow rises.

The third monthly storm series, which began on Nov. 23 and lasted until the 29th, deposited 8 to 9-inch amounts along the Oregon coast, 4-5 inches in Willamette Valley, and 7-10 inches along the Cascade range.

By early on the 26th, all streams, coastal and Willamette Basin tributaries, were rising rapidly with the coastal Siletz, the Mary's, Santiam, and upper Tualatin Rivers cresting above bankfull by late evening on the 26th. In the local Portland area Johnson Creek at Sycamore exceeded flood stage (8 feet) with a crest of 9.5 feet at noon on the 26th. Other tributaries experienced sharp rises but crests were below bankfull.

Flows on coastal and Willamette tributaries did not recede very much from the crests of the 26th and, with continued rainfall occurring, secondary crests were noted by the 29th. These second crests were generally below bankfull, except for the Santiam River at Jefferson and the more sluggish Luckiamute, South Yamhill, and upper Tualatin Rivers.

The main stem Willamette River at Salem, Oregon, reached a high point of 20.4 feet early on the 29th but with continued runoff from tributaries was rising again by the morning of the 30th and attained a crest of 21.6 feet on Dec. 1 which slightly exceeded bankfull levels.

Damages from the flooding were estimated by the Corps of Engineers at $276,000.

Northern Coastal Basins - Minor flooding occurred in the Snohomish and Snoqualmie Rivers on Nov. 4-5 due to heavy rain (3-4 inches, locally 6 inches) and snowmelt. There was shallow overflow of farmlands and low-lying roads near both rivers. Damage was minor, estimated at $72,000 in the Snoqualmie Basin and $10,000 in the Snohomish.

FLOOD STAGE DATA

(All dates in November unless otherwise specified)

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft.			*Ft.*	
ATLANTIC SLOPE DRAINAGE					
Millstone:					
Blackwells Mills, N. J.	7	29	30	8.8	30
Raritan:					
Manville, N. J.	12	30	30	12.5	30
Bound Brook, N. J.	8	30	30	8.1	30
Assunpink Creek:					
Trenton, N. J.	5	29	30	7.4	30
Roanoke:					
Williamston, N. C.	10	Oct. 25	28	11.25	10-22
Tar:					
Tarboro, N. C.	19	Oct. 27	2	23.1	Oct. 30
Greenville, N. C.	13	Oct. 26	3	16.3	Oct. 31
Neuse:					
Smithfield, N. C.	13	Oct. 24	2	17.05	1
Goldsboro, N. C.	14	Oct. 27	7	16.4	Oct. 31
Kinston, N. C.	14	Oct. 31	7	15.0	3
Lumber:					
Lumberton, N. C.	9	Oct. 3	10	# 10.2	Oct. 4
				# 9.9	Oct. 12
				# 9.7	Oct. 20
				# 10.2	Oct. 29
				# 10.3	Nov. 3
Little Pee Dee:					
Galivants Ferry, S. C.	9	Oct. 28	1	9.0	Oct. 28-Nov. 1
Pee Dee:					
Peedee, S. C.	19	Oct. 19	10	# 20.9	Oct. 20
				22.9	1
Saluda:					
West Pelzer, S. C.	9	3	3	# 9.0	3
Broad:					
Blair, S. C.	14	4	4	# 14.6	4
MISSISSIPPI SYSTEM					
Arkansas Basin					
North Canadian:					
Woodward, Okla.	10	18	20	10.75	20
Seiling, Okla.	11	20	21	11.5	21
Arkansas:					
Kinsley, Kans.	9	18	19	9.8	18
Great Bend, Kans.	8	20	20	8.1	20
Red Basin					
Sulphur:					
Naples, Tex.	22	Oct. 23	Nov. 2	29.7	Oct. 26
WEST GULF OF MEXICO DRAINAGE					
Sabine:					
Mineola, Tex.	14	Oct. 22	4	17.5	Oct. 24
Trinity:					
Long Lake, Tex.	35	Oct. 26	1	40.1	Oct. 30
Moss Bluff, Tex.	4	25	1 1/	# 8.05	Dec. 29
Nueces:					
Tilden 11 S, Tex.	14	Oct. 7	6	24.0	Oct. 9
				23.0	Oct. 19
Mathis 3 SW, Tex.	15	Oct. 8	5	32.15	Oct. 13
				40.5	Oct. 18
				33.2	Oct. 23
Calallen, Tex.	7	Oct. 8	7	10.5	Oct. 14
				13.1	Oct. 19
				10.9	Oct. 24
PACIFIC SLOPE DRAINAGE					
Coquille Basin					
South Fork Coquille:					
Myrtle Point, Oreg.	35	26	28	38.0	27
		29	30	36.0	30
Columbia Basin					
Tualatin:					
Dilley, Oreg.	17	29	29	17.05	29
Johnson Creek:					
Sycamore, Oreg.	8	26	26	9.5	26
Northern Coastal Basins					
Snoqualmie:					
Carnation (nr), Wash.	54	4	5	55.3	4
Snohomish:					
Snohomish, Wash.	25	4	5	28.35	4

* Provisional

\# Highest stage observed

1/ Continued at the end of the month.

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	ALBANY, N. Y. 1008 MB						ALBUQUERQUE, N. MEX. 839 MB						AMARILLO, TEXAS 892 MB						* ANCHORAGE, ALASKA 1000 MB						* ANNETTE, ALASKA 1014 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	86	.6	-1.8	29	1.3	30	1,619	2.8	-3.8	02	1.3	30	1,095	3.8	-1.3	24	1.7	30	45	-8.2	-11..	02	1.8	30	37	3.9	1.6	12	2.1
1000	30	146			28	1.4	30	174					30	150					30	45			01	2.8	30	69			14	3.3
950	30	558	.0	-3.4	27	2.9	30	601					30	575					30	447	-5.8	-11.6	02	3.1	30	485	1.7	-1.0	16	6.2
900	30	990	-1.2	-5.6	28	5.2	30	1,046					30	1,018					30	871	-6.2	-12.3	04	2.7	30	919	-..	-3.3	18	7.3
850	30	1,446	-2.3	-9.4	28	7.1	30	1,513					30	1,487	7.1	-3.3	25	4.4	30	1,316	-8.0	-13.9	05	2.0	30	1,373	-3.7	-6..	20	8.2
800	30	1,927	-3.3	-10.9	28	8.0	30	2,007	4.3	-8.8	29	2.3	30	1,985	6.3	-5.5	26	6.2	30	1,785	-10.6	-16.0	09	1.3	30	1,849	-6.4	-8.9	21	8.7
750	30	2,435	-5.5	-13.8	27	9.7	30	2,531	2.1	-11.2	28	4.7	30	2,512	4.3	-8..	26	8.3	30	2,279	-13.6	-20.2	12	1.5	30	2,352	-9.1	-12.8	22	9.3
700	30	2,974	-7.9	-16.4	27	11.1	30	3,085	-.3	-15.0	28	7.2	30	3,072	1.9	-12.2	25	9.8	30	2,801	-16.0	-25.3	19	2.1	30	2,883	-12.1	-16.9	22	8.4
650	30	3,547	-10.7	-20.2	27	13.4	30	3,675	-3.2	-20.2	27	9.3	30	3,666	-1.7	-17.2	25	11.1	30	3,355	-19.8	-28.8	19	2.4	30	3,446	-15.5	-21.3	24	9.2
600	30	4,159	-14.0	-24.5	27	15.0	30	4,303	-6.9	-23.6	27	11.8	30	4,298	-5.8	-22.1	26	13.0	30	3,945	-23.1	-31.8	22	2.0	29	4,040	-19.6	-26.3	23	10.9
550	30	4,815	-18.3	-28.6	27	17.1	30	4,976	-11.5	-26.7	26	14.1	30	4,974	-10.4	-26.9	26	14.5	30	4,577	-27.0	-35.1	25	2.7	29	4,681	-23.3	-30.3	24	12.2
500	30	5,520	-22.7	-34.1	27	19.2	30	5,708	-16.4	-31.2	26	16.3	30	5,790	-15.6	-31.1	26	16.7	30	5,258	-31.7	-39.4	24	4.0	29	5,373	-27.7	-34.6	25	13.9
450	30	6,286	-27.7	-39.1	27	21.5	29	6,485	-22.0	-36.5	26	18.1	30	6,986	-21.3	-35.4	26	17.7	30	5,996	-36.3	-42.3	24	5.7	29	6,123	-32.8	-38.4	25	15.5
400	30	7,122	-33.7	-44.2	27	24.3	29	7,340	-28.4	-41.5	27	20.3	30	7,344	-27.7	-40.2	26	21.4	30	6,804	-41.7	-44.4	25	7.9	29	6,942	-38.6	-40.4	25	18.7
350	30	8,050	-39.5	-46.4	27	26.4	29	8,287	-35.4	-47.8	26	21.8	30	8,294	-34.4	-45.2	26	25.8	30	7,701	-46.9		26	10.2	29	7,850	-44.7		25	20.9
300	30	9,089	-45.2		27	29.8	29	9,342	-42.5		26	25.2	30	9,352	-42.3	-50.0	26	27.5	30	8,710	-51.2		26	11.9	29	8,865	-50.6		25	20.7
250	29	10,299	-49.8		27	30.5	29	10,552	-50.1		26	29.2	30	10,562	-50.6		26	32.0	30	9,889	-52.9		26	14.1	29	10,045	-52.8		26	21.7
200	28	11,730	-53.2		27	28.2	29	11,987	-56.9		26	30.8	30	11,992	-57.8		26	32.6	30	11,333	-51.4		26	15.2	29	11,498	-52.2		27	17.2
175	28	12,588	-54.4		27	27.5	29	12,828	-59.0		26	29.1	30	12,831	-59.8		26	29.3	30	12,202	-50.9		26	14.4	29	12,353	-52.1		27	17.3
150	28	13,575	-55.4		27	23.2	29	13,790	-61.7		27	25.0	30	13,788	-62.4		26	28.4	30	13,206	-50.7		25	14.3	29	13,352	-52.2		27	16.0
125	27	14,724	-57.4		27	18.7	29	14,911	-64.5		26	20.9	28	14,899	-65.1		26	25.6	30	14,393	-51.2		25	15.8	29	14,530	-52.7		27	14.6
100	26	16,122	-59.2		27	15.6	29	16,269	-66.7		27	16.7	26	16,249	-66.5		26	21.6	30	15,842	-51.8		25	15.6	27	15,965	-53.6		27	13.4
80	26	17,518	-59.8		27	10.5	29	17,616	-66.5		27	10.8	26	17,596	-67.6		27	14.3	30	17,288	-52.2		26	15.9	25	17,395	-54.2		27	11.3
70	25	18,349	-59.7		27	9.4	29	18,425	-65.6		28	7.4	24	18,406	-66.5		27	10.2	30	18,153	-52.3		26	15.8	25	18,251	-54.4		27	9.4
60	25	19,313	-59.8		26	8.5	28	19,362	-64.7		28	4.5	24	19,344	-64.6		28	6.5	30	19,149	-53.0		26	15.4	24	19,237	-54.8		27	8.5
50	25	20,455	-59.1		26	5.3	28	20,482	-62.2		28	4.1	22	20,466	-62.1		28	2.6	30	20,323	-53.6		26	15.8	24	20,403	-55.0		27	7.4
40	25	21,852	-59.5		26	5.4	28	21,871	-59.9		29	2.8	22	21,853	-59.7		30	2.6	29	21,758	-54.4		26	16.8	23	21,828	-55.8		27	6.9
30	23	23,659	-58.4		26	4.6	27	23,680	-57.3		28	3.9	18	23,657	-57.5		28	2.4	28	23,603	-54.3		26	17.3	23	23,661	-55.8		27	6.5
25	21	24,804	-58.5		28	6.6	27	24,837	-56.0		28	5.7	15	24,801	-56.5		28	2.8	23	24,778	-54.6		27	18.6	22	24,821	-56.2		28	7.1
20	18	26,202	-58.4		28	10.7	26	26,260	-56.7		28	7.6	15	26,223	-54.8		28	5.3	16	26,214	-54.6		27	20.5	20	26,238	-56.6		28	7.9
15	16	28,014	-56.9		28	12.3	19	28,097	-53.8		28	11.7	13	28,072	-53.3		27	11.3	8	28,076	-54.7				18	28,044	-57.7		30	10.3
10	9	30,808	-54.7				16	30,726	-50.1		28	19.8												14	30,622	-57.5			
7							8	33,043	-47.3															5	32,936	-56.5			

Standard pressure surface (mb)	ATHENS, GEORGIA 991 MB						* BARROW, ALASKA 1014 MB						BARTER IS., ALASKA 1013 MB						BETHEL, ALASKA 1002 MB						* BISMARCK, N. DAK. 955 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	246	6.8	2.5	34	1.4	30	8	-17.9	-21.6	08	4.4	30	15	-16.6	-20.1	11	2.3	30	39	-9.1	-10.7	01	2.0	30	503	-3.5	-6.1	30	.8
1000	30	170					30	114			09	5.2	30	110			10	3.2	30	53			34	2.0	30	136				
950	30	594	8.7	1.0	34	2.6	30	499	-16.1	-19.1	10	5.1	30	497	-15.7	-18.2	11	4.0	30	493	-6.6	-11.0	03	2.3	30	544			26	.1
900	30	1,041	7.8	-2.1	29	2.6	30	906	-16.3	-20.7	10	4.0	30	906	-14.5	-19.3	12	1.9	30	875	-7.6	-13.0	34	.6	30	973	-2.0	-8.3	28	4.1
850	30	1,512	7.1	-7.1	27	5.5	30	1,336	-16.6	-20.8	11	3.2	30	1,338	-15.0	-20.3	12	1.5	30	1,319	-9.2	-15.1	26	1.2	30	1,428	-2.5	-10.2	29	6.6
800	30	2,010	6.3	-10.1	27	8.0	30	1,792	-17.6	-23.6	10	2.9	30	1,795	-16.7	-22.6	11	1.1	30	1,787	-11.2	-18.6	25	2.3	30	1,907	-4.3	-12.7	29	8.5
750	30	2,537	4.3	-11.6	27	9.7	30	2,273	-19.8	-26.2	10	2.0	30	2,278	-18.5	-24.4	10	1.1	30	2,280	-13.8	-21.7	25	3.0	30	2,414	-6.8	-15.0	29	9.9
700	30	3,096	1.6	-15.0	28	11.4	30	2,782	-22.3	-29.9	10	1.1	30	2,791	-20.8	-27.5	11	.3	30	2,801	-16.8	-25.5	25	3.7	30	2,949	-9.6	-18.8	30	11.5
650	30	3,690	-1.4	-18.6	27	13.1	30	3,324	-25.3	-31.9	11	.2	30	3,336	-23.6	-30.6	24	.5	30	3,354	-20.0	-27.9	25	4.3	30	3,519	-12.2	-22.3	30	13.4
600	30	4,323	-5.0	-21.8	27	13.1	30	3,901	-28.7	-35.5	23	.5	30	3,917	-27.0	-33.9	27	1.8	30	3,943	-23.8	-31.6	24	5.1	30	4,127	-15.5	-24.4	29	14.8
550	30	5,001	-9.4	-25.0	27	15.1	30	4,519	-32.7	-39.3	25	1.8	30	4,539	-30.8	-37.7	28	2.0	30	4,574	-28.0	-35.8	25	6.5	30	4,779	-19.6	-28.2	29	16.4
500	30	5,731	-14.4	-30.6	28	16.5	30	5,184	-37.1	-42.7	25	1.8	30	5,218	-35.0	-41.3	27	2.6	30	5,252	-32.6	-39.2	25	7.7	30	5,481	-24.2	-32.4	29	18.3
450	30	6,522	-19.8	-35.9	28	17.6	29	5,909	-41.8	-44.9	26	3.0	30	5,938	-39.7	-43.5	25	2.9	30	5,987	-37.4	-42.0	25	9.4	30	6,241	-29.4	-36.8	29	20.3
400	30	7,385	-26.3	-41.6	28	20.9	29	6,698	-47.2		25	3.1	30	6,735	-45.0		25	3.8	30	6,791	-42.4	-43.9	24	7.6	30	7,071	-35.5	-40.0	29	21.6
350	30	8,339	-33.7	-47.0	28	23.7	29	7,574	-52.5		25	4.3	30	7,619	-50.3		26	4.7	30	7,686	-47.8		24	8.3	30	7,992	-41.3	-46.3	28	24.6
300	30	9,398	-42.1	-52.5	28	23.1	29	8,556	-57.0		25	6.9	29	8,613	-54.9		26	7.2	30	8,690	-52.3		23	10.6	30	9,022	-47.3		29	27.0
250	30	10,610	-50.4		27	28.4	29	9,707	-57.7		26	8.7	29	9,772	-56.4		26	9.0	30	9,863	-54.0		23	12.2	30	10,214	-52.3		28	28.6
200	30	12,040	-58.1		28	29.4	29	11,126	-55.1		25	9.7	28	11,199	-53.2		26	11.4	30	11,301	-52.0		24	13.9	30	11,653	-53.7		28	26.0
175	30	12,876	-60.9		27	27.8	28	11,976	-54.8		25	10.5	27	12,068	-52.8		26	12.5	29	12,166	-51.6		24	14.0	30	12,511	-53.7		28	24.1
150	30	13,829	-62.8		27	27.6	28	12,963	-54.4		25	11.8	27	13,036	-52.6		26	13.8	29	13,166	-51.5		24	15.3	30	13,501	-54.1		28	20.8
125	30	14,963	-66.5		28	25.0	27	14,125	-54.9		25	12.5	26	14,236	-52.7		26	15.2	28	14,346	-51.1		24	16.1	30	14,666	-56.0		29	16.6
100	30	16,285	-69.1		28	17.8	27	15,550	-55.7		25	15.7	25	15,681	-53.5		26	16.7	26	15,787	-51.3		24	16.8	30	16,081	-57.2		29	13.3
80	28	17,627	-68.4		28	13.3	25	16,969	-56.4		25	18.9	25	17,114	-54.2		26	18.8	24	17,239	-51.9		24	17.1	29	17,488	-58.2		29	9.5
70	27	18,433	-68.9		27	8.5	21	17,819	-56.8		25	20.5	24	17,976	-54.8		26	19.7	23	18,094	-52.6		24	17.9	29	18,328	-58.4		29	7.3
60	25	19,374	-64.4		27	6.6	21	18,794	-57.7		25	22.0	24	18,962	-55.0		26	21.7	23	19,088	-53.6		24	17.9	29	19,297	-58.7		30	6.2
50	25	20,496	-61.9		28	5.5	21	19,941	-59.1		25	23.8	24	20,124	-56.0		26	23.2	21	20,264	-53.3		24	18.5	29	20,442	-58.7		31	4.9
40	20	21,891	-59.5		28	4.5	17	21,363	-59.0		25	26.9	23	21,540	-57.1		26	26.0	20	21,707	-53.4		24	19.5	29	21,845	-58.6		33	3.9
30	17	23,703	-56.8		28	8.6	9	23,242	-58.8				20	23,396	-57.4		27	30.2	20	23,561	-53.2		25	21.5	29	23,655	-58.4		35	3.9
25	16	24,861	-55.4		28	9.9							20	24,546	-58.4		27	32.0	19	24,723	-53.8		25	21.9	26	24,801	-58.4		35	4.8
20	13	26,273	-53.9		27	12.9							19	25,927	-59.3		27	34.4	16	26,196	-53.5		25	20.5	24	26,202	-58.6		34	5.8
15	9	28,132	-51.3										13	27,766	-59.7				11	28,094	-54.1				20	28,013	-58.1		33	8.2
10	7	30,809	-46.8																											

Standard pressure surface (mb)	BOISE, IDAHO 918 MB						BOOTHVILLE, LA. 1019 MB						* BROWNSVILLE, TEXAS 1016 MB						BUFFALO, N. Y. 991 MB						CAPE HATTERAS, N. C. 1019 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	871	2.2	-2.4	13	1.6	30	1	16.4	13.6	02	2.7	30	7	17.3	15.0	03	.6	30	218	2.7	.2	24	1.4	30	4	11.7	8.1	36	2.8
1000	30	175					30	159	16.9	12.2	04	2.7	30	142	20.4	17.2	09	1.4	30	142					30	161	12.6	6.8	35	3.3
950	30	595					30	595	14.5	8.8	07	2.4	30	585	18.3	14.4	13	4.5	30	538	2.0	-2.2	26	4.2	30	590	10.2	3.1	32	4.0
900	30	1,034	3.7	-3.2	12	1.5	30	1,051	13.1	4.2	19	.8	30	1,047	16.0	9.2	15	4.0	30	993	-.4	-3.9	27	6.4	30	1,038	8.0	-2.2	30	4.8
850	30	1,497	2.1	-6.3	22	1.5	30	1,531	12.2	-2.2	26	2.6	30	1,532	14.2	2.9	18	4.2	30	1,449	-2.6	-7.3	27	8.1	30	1,509	6.4	-7.4	27	6.7
800	30	1,985	-.4	-8.1	28	4.3	30	2,038	11.0	-7.1	27	4.1	30	2,043	12.9	-1.4	19	3.5	30	1,928	-4.6	-12.7	28	9.2	30	2,004	4.5	-9.8	27	8.6
750	30	2,498	-3.1	-11.6	29	6.8	30	2,574	8.6	-9.5	27	5.7	30	2,583	10.5	-6.9	22	3.2	30	2,435	-6.4	-15.8	28	10.6	30	2,528	2.9	-13.3	27	10.5
700	30	3,042	-6.0	-14.9	29	8.5	30	3,141	5.5	-13.4	27	7.1	30	3,154	7.8	-11.7	25	3.3	30	2,972	-8.6	-20.3	27	12.0	30	3,085	1.1	-14.6	27	12.8
650	30	3,619	-8.9	-18.0	29	9.9	30	3,743	2.3	-16.9	27	8.8	30	3,761	4.0	-14.5	26	4.3	30	3,544	-11.5	-22.6	27	13.4	30	3,678	-2.0	-16.7	27	14.7
600	30	4,235	-12.3	-21.2	29	11.8	30	4,383	-1.7	-20.2	27	10.0	30	4,406	.0	-20.6	26	5.3	30	4,154	-14.4	-26.3	28	15.0	30	4,310	-5.9	-20.3	27	17.1
550	30	4,896	-16.2	-25.5	29	12.8	30	5,072	-5.8	-24.7	28	11.4	30	5,097	-4.7	-24.7	26	7.1	30	4,809	-18.3	-30.9	27	16.3	30	4,986	-10.3	-24.5	27	19.5
500	30	5,606	-21.1	-29.9	29	14.0	30	5,811	-11.0	-29.7	27	13.3	30	5,840	-9.4	-30.3	26	8.2	30	5,514	-22.8	-35.6	27	18.1	30	5,713	-15.1	-28.9	27	21.9
450	30	6,376	-26.7	-35.4	29	15.5	30	6,612	-16.6	-33.4	28	15.2	30	6,646	-14.8	-34.8	27	10.1	30	6,279	-27.9	-39.3	27	19.6	30	6,502	-20.2	-34.3	27	23.6
400	30	7,216	-32.6	-40.7	29	17.8	30	7,486	-23.1	-38.9	28	17.3	30	7,527	-21.0	-41.2	27	11.9	30	7,115	-33.6	-44.6	27	21.8	30	7,356	-26.8	-38.3	27	26.0
350	30	8,146	-39.4	-45.8	29	18.9	30	8,453	-30.3	-43.6	28	19.2	30	8,502	-28.3	-47..	27	13.8	30	8,043	-39.6	-47.1	27	24.7	30	8,316	-33.9	-44.8	27	29.3
300	30	9,183	-46.4		29	21.6	30	9,528	-38.7	-50.2	27	21.5	30	9,585	-37.1	-53.9	26	14.6	30	9,080	-46.1		27	25.3	30	9,376	-41.8	-50.8	28	30.1
250	30	10,376	-52.9		29	23.7	30	10,755	-47.9		27	24.8	30	10,860	-46.8		26	18.5	30	10,278	-51.0		27	28.7	30	10,589	-50.2		28	33.7
200	29	11,794	-56.8		29	24.0	30	12,195	-57.8		27	28.3	29	12,261	-57.9		26	21.8	30	11,722	-53.5		27	25.3	30	12,022	-57.1		28	32.9
175	28	12,833	-57.1		29	21.1	29	13,028	-62.5		26	29.0	29	13,092	-63.6		25	22.4	29	12,566	-54.4		27	24.7	30	12,863	-59.3		28	31.7
150	28	13,607	-58.2		28	19.9	29	13,968	-66.7		27	26.2	29	14,027	-68.1		25	20.6	29	13,550	-56.0		27	20.9	29	13,826	-62.1		27	28.8
125	28	14,752	-59.2		28	17.0	27	15,057	-69.6		27	21.3	29	15,112	-71.4		26	19.1	27	14,697	-57.1		27	18.9	29	14,946	-64.6		28	26.5
100	27	16,145	-60.3		28	13.5	24	16,385	-72.7		27	15.8	27	16,417	-75.1		26	13.0	25	16,102	-58.9		27	13.3	29	16,302	-66.9		28	18.0
80	25	17,530	-60.8		28	8.9	22	17,692	-73.4		27	9.3	26	17,706	-75.5		28	6.6	25	17,498	-60.3		27	10.1	28	17,651	-66.1		28	12.6
70	25	18,362	-60.6		29	6.0	21	18,479	-70.3		26	5.6	26	18,485	-72.2		28	3.2	25	18,331	-60.0		27	8.7	24	18,468	-64.2		27	8.7
60	24	19,322	-60.7		29	4.9	21	19,403	-66.7		26	4.6	25	19,400	-67.5		21	1.9	25	19,294	-60.0		27	7.4	24	19,415	-62.5		27	7.1
50	24	20,499	-59.9		30	3.4	19	20,523	-61.9		26	4.6	24	20,512	-62.3		24	2.8	25	20,433	-59.7		27	6.2	23	20,545	-60.9		27	5.3
40	23	21,855	-59.3		35	2.9	18	21,916	-58.3		27	5.1	22	21,907	-58.6		27	3.2	25	21,828	-60.0		28	5.3	22	21,946	-58.1		26	4.3
30	20	23,665	-57.9		02	3.5	16	23,739	-55.3		28	5.2	20	23,734	-54.1		27	3.3	25	23,629	-58.9		28	4.9	22	23,767	-55.9		27	7.1
25	18	24,809	-57.6		04	4.5	15	24,914	-53.6		27	6.1	18	24,910	-52.5		28	4.7	24	24,780	-58.6		28	5.7	22	24,929	-55.2		27	8.8
20	17	26,221	-56.7		03	4.6	11	26,360	-50.5		27	10.4	17	26,357	-50.3		28	5.5	23	26,183	-57.5		28	7.6	20	26,351	-53.8		27	12.1
15	12	28,053	-56.5		35	4.7	10	28,247	-48.0				13	28,256	-45.6		27	9.2	21	28,991	-56.8		28	10.5	19	28,214	-51.9		27	17.5
10							8	30,940	-42.8				10	31,007	-39.8				18	30,579	-53.5		28	16.2	16	30,871	-48.3		27	27.5
7													6	33,443	-35.7															

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	CARIBOU, MAINE 992 MB					CHARLESTON, S. C. 1019 MB					CHATHAM, MASS. 1015 MB					CHIHUAHUA, MEXICO 858 MB					COLD BAY, ALASKA 1002 MB				
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	191	-4.3	-6.9	31	2.4	29	13	9.4	6.8	34	1.7	29	16	5.4	2.1	31	1.7	30	1,428	7.6	1.2	26	.2	30	30	.2	-2.8	27	2.6
1000	3	125					29	166	12.4	6.8	02	2.9	29	137	4.9	-.9	33	3.1	30	145					30	41			31	3.2
950	30	531	-3.5	-7.5	31	4.2	29	597	11.7	3.4	36	2.0	29	554	2.8	-2.2	31	3.3	30	578					30	452	-1.8	-4.6	27	4.3
900	30	958	-4.9	-8.9	32	4.5	29	1,048	9.8	-.1	27	1.9	29	990	.7	-5.0	29	5.4	30	1,031					30	880	-4.0	-7.9	28	5.0
850	30	1,407	-5.4	-13.5	32	4.5	29	1,522	8.3	-4.6	25	4.4	29	1,448	-.5	-9.1	28	7.1	30	1,506	10.4	1.8	23	.9	30	1,329	-6.7	-11.7	27	4.8
800	30	1,882	-5.9	-17.0	30	5.7	29	2,021	7.0	-9.5	26	6.9	29	1,932	-1.7	-11.7	27	9.3	30	2,013	11.4	.4	23	3.9	30	1,801	-8.8	-15.7	27	5.7
750	30	2,387	-7.6	-18.4	30	6.9	29	2,550	5.2	-13.6	27	8.9	29	2,444	-3.6	-15.0	27	11.0	30	2,550	8.7	-2.4	24	5.5	30	2,299	-11.1	-18.8	27	6.6
700	30	2,921	-10.0	-19.9	29	7.6	29	3,111	2.8	-15.7	27	10.6	29	2,987	-6.0	-17.2	27	13.1	30	3,118	6.2	-7.3	24	7.4	30	2,826	-13.9	-22.6	27	7.0
650	30	3,490	-12.3	-20.7	28	9.1	29	3,707	-.4	-18.7	27	12.0	29	3,564	-9.2	-21.0	27	14.4	30	3,722	3.0	-12.3	24	7.5	30	3,386	-17.2	-25.7	27	8.4
600	30	4,099	-15.3	-24.6	27	10.7	29	4,343	-4.3	-21.9	27	13.3	29	4,180	-12.6	-24.7	27	15.3	30	4,366	-.9	-17.1	25	8.3	30	3,982	-21.2	-29.7	27	9.1
550	30	4,752	-19.0	-28.7	26	12.2	29	5,023	-8.7	-26.1	27	15.3	29	4,839	-17.1	-28.3	27	17.1	30	5,054	-5.5	-21.5	26	9.8	30	4,619	-25.1	-34.2	26	10.4
500	30	5,455	-23.6	-32.6	26	13.0	29	5,755	-13.5	-31.1	27	16.9	29	5,548	-21.6	-33.7	27	17.9	30	5,794	-10.8	-25.7	26	10.9	30	5,305	-29.9	-39.1	26	11.8
450	30	6,217	-28.7	-37.4	26	14.7	29	6,548	-19.0	-35.0	27	18.5	29	6,316	-26.7	-38.0	27	20.4	30	6,596	-16.2	-30.1	27	11.6	30	6,048	-34.8	-43.0	26	11.3
400	30	7,050	-34.7	-42.4	26	16.1	29	7,414	-25.5	-40.6	27	21.3	29	7,157	-32.2	-43.0	27	22.7	30	7,472	-22.4	-35.2	27	13.3	30	6,861	-39.9	-42.9	26	12.7
350	30	7,973	-41.3	-45.5	25	18.9	29	8,371	-32.7	-45.6	27	23.5	28	8,087	-38.5	-47.3	27	24.3	30	8,441	-29.7	-40.5	26	15.0	30	7,766	-45.1		25	14.4
300	30	9,003	-47.3		25	20.5	29	9,436	-41.0	-51.7	27	26.8	28	9,128	-45.1		27	26.4	30	9,518	-38.3	-46.9	26	16.7	30	8,781	-50.2		25	16.8
250	30	10,197	-51.5		24	22.2	29	10,652	-49.9		27	30.7	28	10,332	-50.6		27	28.3	30	10,747	-47.9		26	17.5	30	9,964	-52.4		26	19.4
200	30	11,644	-51.4		26	19.9	29	12,084	-57.6		27	33.0	27	11,781	-54.1		27	25.6	30	12,185	-58.3		26	17.4	30	11,412	-50.9		25	17.5
175	30	12,509	-52.3		26	19.5	29	12,920	-61.1		27	30.6	27	12,636	-55.5		27	24.5	29	13,017	-63.0		26	18.2	28	12,273	-51.2		26	16.8
150	29	13,508	-53.7		26	16.5	29	13,871	-64.0		27	29.4	27	13,614	-57.2		27	22.8	29	13,957	-66.3		26	17.9	28	13,276	-51.1		25	17.1
125	29	14,675	-55.6		26	13.5	29	14,979	-67.0		27	25.5	25	14,764	-60.0		27	18.8	29	15,055	-69.1		26	15.2	27	14,466	-51.3		24	17.3
100	28	16,094	-57.3		25	11.2	29	16,318	-69.3		28	17.8	25	16,152	-61.3		27	13.6	29	16,380	-71.8		26	11.2	26	15,912	-51.6		24	16.4
80	28	17,496	-58.1		26	8.5	29	17,649	-69.0		28	11.4	24	17,536	-61.8		27	8.9	29	17,693	-71.9		26	8.0	26	17,358	-52.0		24	14.2
70	28	18,330	-57.8		26	6.7	28	18,452	-67.1		27	8.3	24	18,365	-61.1		26	7.4	29	18,484	-69.8		26	5.3	25	18,217	-52.0		24	13.5
60	28	19,321	-58.6		25	5.8	27	19,391	-64.3		27	5.7	23	19,319	-61.0		26	8.8	29	19,410	-66.5		26	5.3	24	19,208	-52.4		24	11.3
50	28	20,446	-58.6		26	5.5	27	20,516	-61.2		27	4.7	21	20,466	-60.0		26	6.4	29	20,526	-62.3		26	4.6	24	20,383	-52.8		23	10.5
40	28	21,845	-59.5		26	5.6	27	21,909	-58.6		27	5.5	20	21,858	-59.5		26	5.9	27	21,917	-59.3		26	4.2	24	21,825	-52.7		24	10.6
30	28	23,645	-59.6		28	4.9	26	23,731	-55.7		27	7.0	20	23,660	-59.1		26	5.7	27	23,737	-55.6		26	5.3	23	23,683	-51.8		24	9.9
25	25	24,784	-60.0		30	5.2	22	24,902	-54.3		27	9.3	19	24,805	-58.3		26	7.3	26	24,904	-54.1		26	6.4	22	24,872	-51.8		26	9.8
20	23	26,187	-59.1		30	6.3	20	26,344	-53.0		27	11.1	18	26,213	-57.7		28	6.9	25	26,348	-51.1		26	7.1	18	26,351	-50.8		25	8.9
15	21	27,987	-59.1		28	8.4	14	28,216	-50.4		27	16.8	16	28,023	-56.3		28	11.0	22	28,227	-48.4		26	11.1	16	28,242	-50.9			
10	17	30,576	-55.4		28	12.5	10	30,888	-47.1				13	30,585	-53.6		26	17.3	11	30,917	-44.2				10	30,898	-51.6			
7	12	32,906	-51.9		28	20.2							8	32,874	-51.4										5	33,218	-50.8			

Standard pressure surface (mb)	DAYTON, OHIO 983 MB					DEL RIO, TEXAS 981 MB					DENVER, COLO. 836 MB					DODGE CITY, KANS. 925 MB					EL PASO, TEXAS 883 MB				
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	299	2.8	-.7	23	1.6	30	314	12.7	10.0	11	2.3	30	1,611	-.5	-6.9	21	2.0	30	791	2.7	-1.6	23	1.6	29	1,193	7.2	-.9	35	1.7
1000	30	160					30	151					30	156					30	149					29	158				
950	30	578	4.1	-1.8	25	4.9	30	593	13.4	9.5	15	4.6	30	577					30	569					29	589				
900	30	1,017	2.3	-3.9	26	7.1	30	1,039	13.1	6.2	17	6.2	30	1,017					30	1,010	5.7	-3.2	24	3.2	29	1,039				
850	30	1,477	.8	-6.7	27	8.8	30	1,520	12.8	1.0	20	5.0	30	1,478					30	1,479	6.8	-7.2	26	4.6	29	1,513	10.2	-1.6	29	2.1
800	30	1,963	-.9	-11.0	27	9.4	30	2,028	10.8	-2.9	22	4.8	30	1,969	4.2	-10.6	27	4.1	30	1,976	5.2	-9.2	26	5.7	29	2,015	8.1	-3.6	26	5.1
750	30	2,477	-2.7	-15.7	28	10.5	30	2,564	9.2	-7.1	25	6.8	30	2,492	2.1	-14.3	29	6.7	30	2,500	2.3	-11.0	27	7.7	29	2,545	5.1	-7.6	25	7.4
700	30	3,022	-5.1	-18.1	27	12.3	30	3,133	5.9	-11.9	25	8.5	30	3,045	-1.7	-16.9	29	7.8	30	3,055	-.6	-14.3	27	9.2	29	3,106	2.4	-13.0	25	9.3
650	30	3,601	-8.0	-19.6	27	14.3	30	3,735	2.1	-14.8	26	8.9	30	3,631	-5.4	-19.7	29	9.2	30	3,643	-3.8	-18.0	27	11.5	29	3,702	-.7	-17.3	25	11.6
600	30	4,219	-11.4	-22.8	27	15.9	30	4,376	-1.9	-21.4	25	9.8	30	4,254	-9.4	-23.5	29	10.6	29	4,271	-7.3	-22.6	26	13.5	29	4,336	-4.6	-21.5	25	12.4
550	30	4,882	-15.1	-28.5	28	18.6	30	5,062	-6.5	-24.9	26	11.5	30	4,921	-13.7	-27.0	29	12.5	29	4,944	-11.7	-28.0	26	15.2	29	5,016	-9.0	-25.7	25	14.6
500	30	5,596	-19.6	-31.9	27	21.6	30	5,800	-11.3	-28.8	26	13.9	30	5,638	-18.7	-31.8	28	14.7	29	5,666	-16.9	-32.0	26	17.2	29	5,746	-13.8	-29.5	26	18.0
450	30	6,370	-25.0	-36.5	27	23.6	30	6,600	-16.8	-33.0	26	16.4	30	6,415	-24.5	-36.8	28	15.6	29	6,448	-22.9	-36.6	26	18.7	29	6,538	-19.4	-33.7	25	19.9
400	30	7,216	-31.1	-43.1	27	25.8	30	7,474	-23.0	-39.0	26	19.2	30	7,261	-30.9	-42.4	27	16.8	29	7,301	-29.2	-41.8	26	21.6	29	7,403	-25.7	-39.3	25	23.0
350	30	8,153	-37.4	-45.9	27	28.8	30	8,441	-30.1	-43.7	26	22.0	30	8,198	-37.9	-47.1	27	17.4	29	8,243	-36.6	-46.7	26	23.8	29	8,360	-32.7	-45.1	25	26.2
300	30	9,198	-44.7		27	31.2	30	9,517	-38.6	-50.1	26	24.1	30	9,240	-45.4		27	20.3	29	9,291	-44.3		26	26.2	29	9,425	-40.7	-48.2	25	29.1
250	30	10,401	-50.8		27	33.7	30	10,744	-48.4		26	27.2	30	10,437	-52.6		27	23.8	29	10,494	-51.3		26	29.6	29	10,643	-49.3		26	31.3
200	30	11,839	-55.6		28	33.3	30	12,177	-58.8		26	28.9	30	11,864	-56.4		27	24.8	29	11,924	-57.1		26	32.2	28	12,070	-58.2		26	32.3
175	30	12,686	-57.3		28	30.6	30	13,006	-63.6		26	28.4	30	12,711	-57.2		27	24.0	28	12,774	-59.3		27	28.7	28	12,904	-61.6		26	29.9
150	30	13,687	-59.2		27	26.5	29	13,951	-66.6		26	24.9	30	13,682	-59.2		27	22.7	28	13,736	-60.8		27	25.8	27	13,845	-64.6		26	25.3
125	30	14,796	-60.9		27	23.2	29	15,047	-69.3		26	20.4	30	14,818	-61.5		27	19.0	28	14,863	-63.7		27	21.0	26	14,956	-66.9		26	21.6
100	30	16,174	-62.9		27	18.1	28	16,363	-72.7		26	15.6	29	16,199	-63.5		27	13.8	27	16,223	-64.9		27	16.9	24	16,297	-70.0		27	16.4
80	30	17,547	-63.1		27	12.1	26	17,673	-73.1		27	9.5	28	17,570	-64.1		27	8.7	26	17,578	-66.0		27	10.8	24	17,622	-70.0		26	11.4
70	30	18,371	-62.4		27	9.3	26	18,460	-70.7		27	6.8	28	18,390	-63.0		28	6.4	25	18,387	-64.4		27	7.8	24	18,420	-68.3		27	7.1
60	30	19,323	-62.0		27	7.1	26	19,386	-66.4		26	3.9	28	19,340	-62.5		27	2.5	24	19,334	-63.1		27	4.8	24	19,349	-66.3		27	5.6
50	30	20,454	-60.9		27	5.9	26	20,501	-62.6		26	4.0	28	20,467	-61.4		30	2.2	24	20,460	-61.8		27	3.3	24	20,463	-62.8		27	3.9
40	28	21,844	-60.0		28	4.5	26	21,890	-59.2		28	4.5	28	21,857	-60.3		34	1.7	23	21,844	-60.3		29	2.9	24	21,847	-60.3		27	4.1
30	25	23,641	-58.6		28	5.6	26	23,709	-55.5		27	6.6	28	23,656	-59.2		34	2.1	21	23,654	-58.5		29	4.0	22	23,653	-57.0		28	4.2
25	24	24,790	-57.6		28	6.9	26	24,874	-54.4		27	7.8	28	24,803	-57.9		32	2.9	20	24,806	-57.2		28	5.0	21	24,812	-55.6		28	4.7
20	22	26,209	-56.6		28	7.3	26	26,311	-52.4		27	10.0	26	26,212	-56.9		31	5.2	19	26,221	-56.2		27	7.3	18	26,247	-53.4		27	9.5
15	18	28,044	-54.8		27	11.8	25	28,184	-49.3		27	16.4	19	28,043	-55.7		29	8.6	11	28,030	-55.8		27	10.9	17	28,110	-51.2		27	13.6
10	12	30,690	-49.9				18	30,886	-44.3		27	27.6	10	30,634	-52.3				6	30,612	-53.0				9	30,755	-48.3			
7							5	33,339	-39.3																					

Standard pressure surface (mb)	ELY, NEV. 810 MB					EMPALME, MEXICO 1013 MB					FAIRBANKS, ALASKA 994 MB					FLINT, MICH. 988 MB					FORT WORTH, TEXAS 997 MB				
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	1,908	-5.4	-9.1	21	3.5	30	12	13.1	5.8	34	1.1	30	135	-17.5	-22.9	01	.4	30	236	2.2	-1.1	25	1.8	30	180	10.2	5.2	19	1.2
1000	30	222					30	123	17.6	6.0	33	1.8	30	85					30	137					30	157			07	.8
950	30	637					30	563	19.2	2.2	33	2.4	30	473	-12.9	-16.1	10	1.6	30	552	1.6	-2.1	27	5.1	30	586	11.0	3.6	20	3.2
900	30	1,071					30	1,026	16.7	-.7	26	1.2	30	887	-12.1	-16.2	13	2.1	30	987	-.2	-5.2	27	6.9	30	1,037	10.7	.6	22	5.5
850	30	1,525					30	1,510	13.7	-4.8	22	3.4	30	1,324	-12.1	-16.3	18	1.2	30	1,444	-1.7	-9.5	27	8.9	30	1,513	9.8	-3.2	24	6.2
800	30	2,005	-1.0	-7.7	21	2.8	30	2,018	11.7	-8.7	23	4.2	30	1,787	-13.6	-18.4	21	1.4	30	1,925	-3.6	-13.4	27	10.7	30	2,015	8.4	-7.0	26	7.0
750	30	2,521	-1.3	-9.8	27	1.5	30	2,555	8.8	-11.9	24	5.5	30	2,275	-16.1	-21.6	22	2.2	30	2,433	-5.4	-17.7	28	12.0	30	2,546	6.3	-11.3	26	8.0
700	30	3,069	-3.5	-13.0	29	4.5	30	3,122	5.7	-16.3	24	6.8	29	2,792	-18.8	-25.6	23	2.6	30	2,972	-8.1	-19.7	27	12.5	30	3,109	4.0	-15.5	26	9.0
650	30	3,652	-6.0	-16.8	29	6.8	30	3,724	2.4	-19.2	25	8.2	29	3,341	-22.0	-29.1	25	3.0	30	3,545	-10.5	-21.3	27	14.8	30	3,708	.9	-18.0	26	11.6
600	30	4,275	-9.6	-19.9	29	8.3	30	4,366	-1.5	-22.1	25	9.3	29	3,926	-25.2	-33.0	25	3.7	30	4,157	-13.8	-23.0	27	15.8	30	4,347	-3.1	-20.7	26	13.1
550	30	4,942	-13.7	-24.7	30	10.1	30	5,053	-6.1	-26.1	25	12.4	29	4,553	-29.2	-37.1	25	4.0	30	4,814	-17.8	-26.3	28	17.6	30	5,030	-7.5	-25.1	26	14.9
500	30	5,666	-18.9	-28.5	29	11.3	30	5,791	-11.3	-29.8	25	14.5	29	5,228	-33.6	-41.1	25	4.9	30	5,521	-22.4	-33.0	28	19.9	30	5,764	-12.9	-29.3	26	16.8
450	30	6,436	-24.4	-34.1	29	12.7	30	6,590	-17.0	-34.1	25	17.0	29	5,960	-38.5	-42.8	25	5.4	30	6,286	-27.6	-36.9	28	21.7	30	6,559	-18.4	-34.7	26	19.6
400	30	7,284	-30.2	-40.2	29	13.7	30	7,463	-23.4	-39.7	25	20.0	29	6,760	-44.0	-45.1	25	7.0	30	7,124	-33.5	-42.2	28	23.1	30	7,427	-24.6	-39.1	26	22.8
350	30	8,224	-37.2	-45.4	29	14.8	30	8,429	-30.6	-44.5	25	24.2	29	7,868	-49.3		26	8.1	30	8,051	-39.8	-46.9	28	25.5	29	8,384	-31.8	-44.4	26	26.2
300	29	9,270	-44.8		29	16.7	30	9,503	-38.8	-50.1	25	25.9	29	8,646	-53.6		26	9.2	30	9,087	-46.3			28.9	28	9,449	-40.2	-50.0	26	30.3
250	29	10,471	-51.7		29	17.5	30	10,729	-48.2		26	28.7	29	9,813	-55.1		26	10.7	30	10,284	-51.3		29	32.8	28	10,669	-49.2		27	32.7
200	29	11,899	-56.9		29	18.8	29	12,167	-58.0		26	28.1	28	11,248	-52.4		25	12.8	30	11,725	-54.3		28	30.8	28	12,102	-58.3		27	34.3
175	28	12,735	-57.8		29	17.9	29	13,000	-62.5		26	27.0	27	12,110	-51.8		25	13.3	30	12,581	-54.8		28	27.8	28	12,937	-61.1		27	31.7
150	28	13,704	-59.3		29	17.3	29	13,943	-66.0		25	22.8	27	13,109	-51.8		25	13.8	30	13,564	-56.5		28	24.5	28	13,888	-63.5		26	28.1
125	28	14,842	-61.2		29	14.4	28	15,040	-69.0		26	19.7	26	14,291	-52.4		25	14.2	30	14,718	-57.9		28	21.1	28	14,999	-66.7		27	25.2
100	28	16,223	-62.5		29	9.8	28	16,364	-71.7		26	16.0	26	15,732	-53.0		26	15.9	30	16,118	-59.7		28	15.5	26	16,333	-69.4		27	18.8
80	28	17,595	-63.9		28	5.7	27	17,680	-71.9		26	9.8	26	17,171	-53.3		26	16.8	30	17,510	-60.4		28	11.6	24	17,661	-68.9		27	12.9
70	27	18,415	-63.1		29	4.7	26	18,476	-69.6		26	6.6	25	18,032	-53.8		26	16.7	29	18,347	-60.4		28	8.4	22	18,462	-66.7		28	9.2
60	28	19,365	-62.8		31	2.7	26	19,401	-66.7		27	3.9	25	19,020	-54.6		26	17.7	29	19,309	-60.2		29	6.0	19	19,401	-64.2		27	6.2
50	28	20,493	-61.1		34	2.0	26	20,514	-62.8		27	3.7	25	20,185	-55.5		26	18.7	28	20,448	-60.2		28	5.6	18	20,526	-61.2		28	4.5
40	28	21,885	-59.6		03	1.8	26	21,901	-59.3		27	3.9	23	21,610	-55.5		26	19.8	26	21,844	-59.9		29	4.5	18	21,918	-59.1		27	4.7
30	27	23,696	-57.5		02	1.7	22	23,722	-56.1		25	5.0	21	23,437	-56.9		27	22.2	23	23,645	-59.4		28	4.9	16	23,735	-56.1		28	6.0
25	25	24,849	-56.6		01	2.4	20	24,890	-54.0		27	6.0	21	24,591	-57.2		27	23.8	22	24,787	-58.8		29	5.0	15	24,893	-55.1		27	8.6
20	25	26,289	-55.2		35	3.5	19	26,333	-51.3		26	10.2	19	26,015	-57.4		27	25.9	22	26,191	-58.2		29	6.3	14	26,323	-52.9		28	10.4
15	23	28,105	-54.5		32	4.1	14	28,218	-48.5		27	15.4	15	27,801	-58.9		27	31.9	20	28,005	-57.0		28	9.2	12	28,193	-51.4		27	17.2
10	13	30,727	-51.4				10	30,894	-45.0				6	30,421	-58.5				14	30,580	-54.2		28	14.6						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT. 933 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	696	-2.5	-6.2	08	.3
1000	30	138				
950	30	549				
900	30	980	-.3	-6.4	29	4.3
850	30	1,437	-1.0	-10.1	30	8.2
800	30	1,919	-3.2	-11.7	30	10.0
750	30	2,428	-6.3	-13.8	30	10.8
700	30	2,964	-9.7	-16.4	30	11.6
650	30	3,533	-12.3	-20.4	30	12.8
600	30	4,141	-16.0	-24.7	30	14.1
550	30	4,791	-20.0	-29.4	30	17.0
500	30	5,492	-24.7	-33.3	30	18.4
450	30	6,251	-29.7	-38.2	30	19.3
400	30	7,081	-35.5	-42.9	29	20.9
350	30	8,001	-41.9	-45.3	29	23.0
300	30	9,027	-48.6		29	23.6
250	30	10,213	-52.9		29	24.5
200	30	11,650	-53.5		29	23.1
175	30	12,509	-53.5		29	20.9
150	30	13,499	-54.4		29	17.4
125	29	14,667	-55.5		29	15.4
100	29	16,086	-56.8		29	11.7
80	28	17,499	-57.2		29	8.3
70	28	18,343	-58.0		29	6.5
60	27	19,316	-57.9		30	5.4
50	26	20,467	-58.0		31	3.9
40	26	21,874	-57.7		33	2.6
30	25	23,689	-57.6		36	3.2
25	24	24,842	-57.8		36	4.1
20	24	26,248	-58.3		35	5.0
15	22	28,062	-57.9		35	5.9
10	18	30,629	-57.0		32	8.3
7						

GRAND JUNCTION, COLO. 855 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1,472	-.9	-4.1	12	2.0
1000	30	197				
950	30	616				
900	30	1,054				
850	30	1,514			13	2.1
800	30	2,002	.4	-8.5	15	2.6
750	30	2,518	-1.5	-10.8	22	2.8
700	30	3,065	-4.3	-14.2	25	5.8
650	30	3,646	-6.9	-17.6	27	7.4
600	30	4,266	-10.6	-22.3	28	9.0
550	30	4,931	-14.4	-26.7	28	10.9
500	30	5,648	-18.6	-31.0	28	12.3
450	30	6,425	-24.0	-35.7	28	13.9
400	30	7,274	-30.6	-41.7	28	15.3
350	30	8,211	-37.7	-46.2	28	16.1
300	30	9,254	-45.1		28	18.4
250	30	10,455	-51.5		28	21.0
200	30	11,858	-55.8		28	20.9
175	30	12,736	-57.1		27	21.3
150	30	13,706	-59.4		27	19.0
125	30	14,844	-61.4		27	17.0
100	30	16,221	-63.5		27	13.1
80	29	17,584	-64.1		28	8.2
70	27	18,404	-63.5		28	6.1
60	27	19,353	-62.7		28	5.1
50	25	20,481	-61.5		30	3.1
40	24	21,871	-59.8		32	2.0
30	21	23,673	-58.5		36	2.1
25	21	24,823	-57.2		33	3.3
20	18	26,254	-56.0		32	3.9
15	12	28,076	-55.7			
10						
7						

*** GREAT FALLS, MONT. 885 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	1,118	.8	-5.9	23	5.7
1000	30	126				
950	30	546				
900	30	985				
850	30	1,447	1.8	-8.8	24	10.1
800	30	1,933	-.8	-9.8	26	10.2
750	30	2,446	-4.3	-11.5	27	10.7
700	30	2,986	-7.5	-15.0	28	12.4
650	30	3,560	-10.5	-19.7	29	14.0
600	30	4,172	-14.2	-24.8	29	14.7
550	30	4,827	-18.3	-28.2	29	15.9
500	30	5,532	-22.6	-30.9	29	17.7
450	30	6,297	-28.0	-36.7	29	18.9
400	30	7,132	-34.3	-41.1	29	20.9
350	30	8,055	-41.5	-43.5	29	21.4
300	30	9,082	-48.3		29	23.5
250	29	10,260	-52.9		29	23.2
200	29	11,694	-54.6		29	22.6
175	28	12,546	-54.6		28	20.8
150	28	13,532	-54.9		28	18.7
125	28	14,695	-55.9		29	15.8
100	28	16,110	-57.8		29	10.9
80	26	17,517	-57.5		28	8.2
70	25	18,361	-57.7		28	6.8
60	24	19,332	-58.2		30	4.9
50	23	20,477	-57.5		33	3.2
40	23	21,887	-57.6		35	2.7
30	22	23,702	-56.9		02	4.9
25	22	24,857	-56.9		03	6.0
20	22	26,270	-57.2		03	7.5
15	15	28,108	-56.4		01	7.7
10	6	30,623	-57.8			
7						

GREEN BAY, WIS. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	210	.4	-2.0	28	1.6
1000	30	131				
950	30	542	-.4	[illegible]	28	3.5
900	30	974	-1.7	[illegible]	28	5.2
850	30	1,428	-3.0	-10.4	29	6.1
800	30	1,907	-4.6	-13.6	28	7.9
750	30	2,413	-6.7	-16.7	28	9.3
700	30	2,950	-9.2	-18.9	29	11.2
650	30	3,520	-11.0	-22.1	28	13.1
600	30	4,129	-15.2	-25.5	28	15.5
550	30	4,782	-19.1	-29.5	27	16.5
500	30	5,485	-23.8	-35.2	27	18.1
450	29	6,243	-29.2	-39.2	27	20.2
400	29	7,075	-35.1	-44.2	27	22.4
350	29	7,996	-41.2	-45.9	27	24.9
300	29	9,028	-47.1		28	28.0
250	29	10,221	-51.9		28	31.1
200	29	11,661	-53.9		28	28.8
175	28	12,522	-54.6		28	28.0
150	28	13,576	-55.7		28	21.2
125	28	14,664	-57.3		28	19.4
100	27	16,073	-59.0		28	14.6
80	25	17,471	-59.9		28	10.2
70	25	18,304	-60.3		28	8.7
60	23	19,262	-60.2		30	6.5
50	23	20,400	-60.3		31	5.0
40	23	21,790	-60.4		32	3.3
30	23	23,587	-59.4		33	3.3
25	23	24,729	-59.0		33	4.2
20	22	26,129	-58.9		33	5.2
15	19	27,945	-57.8		31	8.2
10	15	30,515	-55.0		29	11.5
7	5	32,812	-51.7			

GREENSBORO, N.C. 988 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	275	[illegible]	[illegible]	[illegible]	[illegible]
1000	30	170				
950	30	593	[illegible]	[illegible]	[illegible]	2.9
900	30	1,037	5.4	-2.7	29	4.4
850	30	1,503	4.6	-7.2	[illegible]	[illegible]
800	30	1,996	3.5	[illegible]	[illegible]	[illegible]
750	30	2,518	[illegible]	[illegible]	[illegible]	10.8
700	30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
650	30	3,664	-2.9	-19.3	27	[illegible]
600	30	4,294	-6.5	-21.6	[illegible]	[illegible]
550	30	4,969	-10.7	-24.8	27	[illegible]
500	30	5,696	-15.3	-29.6	28	20.8
450	30	6,484	-20.6	-34.1	28	23.2
400	30	7,343	-27.3	-39.4	27	[illegible]
350	30	8,294	-34.5	-44.9	28	[illegible]
300	30	9,349	-42.9	[illegible]	28	25.2
250	30	10,557	-50.6		28	27.9
200	30	11,991	-56.7		28	29.5
175	30	12,832	-59.0		28	29.7
150	30	13,795	-61.2		28	27.5
125	30	14,919	-64.0		28	24.4
100	30	16,278	-66.4		28	18.4
80	30	17,630	-65.5		28	11.8
70	30	18,445	-64.0		27	9.4
60	30	19,391	-63.0		28	7.2
50	30	20,519	-60.9		27	5.6
40	30	21,912	-59.4		27	5.3
30	29	23,724	-57.0		27	7.7
25	27	24,880	-56.4		28	8.9
20	27	26,301	-55.0		27	11.6
15	26	28,153	-52.7		28	17.1
10	23	30,789	-49.4		27	24.7
7	5	33,220	-44.9			

GUADALUPE IS., MEXICO 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	23	15.1	12.5	34	5.6
1000	29	154	14.7	9.7	33	6.1
950	29	586	12.6	3.8	31	5.1
900	29	1,040	13.1	-4.2	29	3.6
850	29	1,528	11.9	-9.2	29	3.7
800	29	2,025	10.1	-12.5	29	4.4
750	29	2,559	7.8	-15.3	28	4.5
700	29	3,124	4.5	-18.0	28	4.9
650	28	3,723	1.3	-20.8	28	6.7
600	28	4,363	-2.4	-24.5	27	7.5
550	28	5,048	-6.4	-28.9	26	8.5
500	28	5,786	-11.5	-32.4	27	9.3
450	28	6,584	-17.5	-36.1	25	11.1
400	28	7,455	-24.2	-41.4	24	12.5
350	28	8,417	-31.2	-47.4	24	16.6
300	28	9,489	-39.2	-52.0		
250	28	10,716	-47.7			
200	28	12,168	-56.3			
175	27	12,996	-60.6			
150	26	13,958	-64.0			
125	26	15,059	-66.6			
100	25	16,402	-69.2			
80	24	17,735	-68.8			
70	24	18,538	-66.9			
60	21	19,471	-65.2			
50	21	20,591	-62.0			
40	21	21,981	-59.1			
30	19	23,809	-54.5			
25	19	24,980	-53.2			
20	17	26,421	-50.4			
15	15	28,286	-48.5			
10	9	31,011	-44.5			
7						

*** GUAM, MARIANA IS. 998 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	111	25.3	22.9	09	3.6
1000	30	94				
950	30	546	23.5	20.9	09	10.4
900	30	1,018	20.8	16.3	09	10.3
850	30	1,511	18.2	11.9	10	9.3
800	30	2,029	15.6	6.8	10	8.7
750	30	2,575	13.2	1.5	10	8.4
700	30	3,153	10.2	-3.4	09	8.7
650	30	3,765	6.8	-7.8	10	9.2
600	30	4,418	3.0	-11.7	10	9.3
550	30	5,118	-1.1	-16.6	10	9.3
500	30	5,872	-5.7	-22.3	10	9.8
450	30	6,690	-10.4	-27.6	10	10.1
400	30	7,587	-16.3	-33.2	10	10.7
350	30	8,581	-23.6	-39.6	09	9.8
300	30	9,686	-32.0	-46.7	09	8.6
250	30	10,946	-42.2		08	6.3
200	30	12,416	-54.3		07	3.2
175	30	13,259	-61.0		06	2.5
150	30	14,200	-68.6		07	3.2
125	28	15,274	-75.6		09	5.1
100	25	16,540	-82.6		09	10.4
80	16	17,784	-80.5		09	10.6
70	16	18,548	-74.5		09	8.6
60	15	19,461	-67.7		09	5.7
50	15	20,575	-62.4		11	3.8
40	15	21,963	-59.1		10	2.5
30	15	23,784	-55.3		09	4.3
25	14	24,958	-52.1		09	6.3
20	14	26,415	-48.5		08	9.3
15	12	28,331	-44.8		08	12.7
10	10	31,073	-40.2		09	15.9
7	8	33,534	-36.3			

HILO, HAWAII 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	10	20.6	18.1	24	1.9
1000	30	151	21.2	17.9	19	1.3
950	30	595	18.2	16.0	12	3.6
900	30	1,057	15.2	13.2	11	4.8
850	30	1,540	11.9	10.4	10	4.6
800	30	2,046	9.8	6.5	10	4.5
750	30	2,581	7.4	.1	10	4.7
700	30	3,148	5.7	-12.0	10	5.0
650	30	3,751	2.9	-17.5	09	5.2
600	30	4,395	-.5	-21.6	08	5.5
550	30	5,084	-5.0	-24.9	07	4.9
500	30	5,826	-10.0	-27.3	05	4.0
450	30	6,631	-15.4	-32.6	03	3.5
400	30	7,509	-21.9	-38.6	35	4.3
350	30	8,481	-28.8	-44.5	33	5.4
300	30	9,563	-37.1	-52.0	32	8.4
250	30	10,798	-46.7		31	11.6
200	30	12,244	-56.9		31	13.5
175	30	13,080	-62.2		31	12.7
150	30	14,020	-67.5		30	11.4
125	30	15,104	-72.5		31	8.0
100	30	16,404	-75.7		34	3.7
80	28	17,699	-73.2		04	.9
70	28	18,489	-69.3		08	1.0
60	28	19,415	-66.7		11	1.5
50	28	20,527	-63.6		10	2.6
40	28	21,912	-59.0		11	3.3
30	28	23,735	-55.2		09	3.6
25	28	24,905	-53.0		08	3.6
20	28	26,356	-49.3		09	4.0
15	24	28,244	-45.9		07	3.3
10	23	30,978	-41.3		23	1.5
7	13	33,394	-38.8			

HUNTINGTON W. VA. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	246	4.4	.7	21	.8
1000	30	166				
950	30	587	6.2	.1	25	5.0
900	30	1,029	3.9	-2.6	26	7.1
850	30	1,492	1.7	-6.2	27	8.6
800	30	1,980	.2	-9.4	27	9.8
750	30	2,496	-1.2	-14.4	27	10.8
700	30	3,043	-3.7	-17.1	27	13.2
650	30	3,627	-5.9	-18.9	27	15.7
600	30	4,250	-9.0	-23.0	29	18.3
550	30	4,918	-13.1	-27.5	28	20.2
500	30	5,638	-17.7	-30.9	28	22.9
450	30	6,418	-23.0	-36.5	27	24.3
400	30	7,271	-28.9	-42.1	27	27.0
350	30	8,216	-35.7	-45.0	27	29.3
300	30	9,269	-43.1	-52.3	27	32.2
250	30	10,477	-50.3		28	33.9
200	29	11,910	-55.3		28	31.8
175	29	12,759	-57.3		27	30.6
150	29	13,729	-59.3		28	27.5
125	29	14,865	-61.9		28	23.5
100	28	16,234	-63.8		29	18.4
80	28	17,604	-63.3		28	11.5
70	27	18,429	-62.4		27	8.4
60	27	19,381	-62.1		27	6.5
50	27	20,513	-60.5		28	5.7
40	27	21,907	-59.5		28	5.4
30	26	23,716	-57.8		28	5.2
25	26	24,869	-56.8		28	7.8
20	24	26,290	-55.5		28	9.1
15	21	28,143	-53.5		27	14.0
10	14	30,769	-49.3		28	18.2
7						

*** INTERNATIONAL FALLS, MINN. 971 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	359	-5.2	-6.8	25	.9
1000	30	127				
950	30	532	-5.0	-7.0	28	1.3
900	30	957	-5.7	-9.1	28	3.0
850	30	1,404	-6.2	-11.5	29	4.9
800	30	1,878	-7.9	-13.6	29	5.9
750	30	2,378	-9.8	-17.3	29	7.9
700	30	2,908	-12.1	-20.5	29	9.2
650	30	3,472	-15.2	-24.6	28	11.0
600	30	4,073	-18.4	-27.2	28	12.3
550	30	4,718	-22.1	-31.2	28	14.4
500	30	5,412	-26.6	-36.3	29	15.2
450	30	6,165	-31.7	-39.8	29	17.6
400	30	6,988	-37.5	-43.6	29	20.0
350	30	7,901	-43.4	-48.5	28	22.1
300	30	8,924	-48.5		28	25.6
250	30	10,114	-51.9		28	27.7
200	30	11,559	-51.9		28	24.2
175	30	12,424	-52.4		28	21.5
150	30	13,420	-53.0		28	18.7
125	30	14,592	-54.4		28	15.2
100	30	16,018	-55.6		28	13.0
80	30	17,434	-57.2		29	10.3
70	30	18,278	-57.6		29	7.6
60	30	19,251	-58.1		29	7.0
50	29	20,399	-58.8		30	5.2
40	29	21,799	-59.2		31	4.2
30	27	23,601	-59.1		33	3.4
25	25	24,744	-60.1		33	3.7
20	21	26,140	-59.8		32	6.8
15	14	27,942	-59.3		31	8.0
10	10	30,468	-57.4			
7	6	32,746	-56.3			

JACKSON, MISS. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	108	7.6	5.6	04	.7
1000	30	173	9.8	4.6	05	.7
950	30	608	10.3	1.1	33	1.7
900	30	1,058	9.9	-2.3	30	2.9
850	30	1,524	9.4	-7.4	28	4.9
800	30	2,026	8.2	-10.6	28	6.9
750	30	2,557	6.1	-11.2	27	8.1
700	30	3,119	3.6	-15.2	27	9.4
650	30	3,718	.5	-17.6	27	10.8
600	30	4,356	-3.2	-21.9	27	12.8
550	30	5,038	-7.6	-25.6	27	14.3
500	30	5,772	-13.0	-30.5	27	16.2
450	30	6,567	-18.6	-35.3	27	18.3
400	30	7,434	-24.6	-40.8	27	21.2
350	30	8,396	-31.9	-46.4	27	24.9
300	30	9,463	-40.3	-53.1	27	28.7
250	30	10,683	-49.4		27	31.9
200	30	12,112	-58.8		27	32.0
175	29	12,945	-62.3		26	30.6
150	28	13,895	-64.4		26	28.0
125	28	15,000	-67.9		27	24.1
100	25	16,335	-71.0		27	17.4
80	24	17,649	-70.8		27	11.4
70	23	18,444	-68.4		26	7.6
60	23	19,375	-65.5		27	5.5
50	23	20,492	-62.5		27	4.8
40	22	21,880	-60.1		28	4.9
30	22	23,693	-56.3		27	7.7
25	22	24,856	-54.6		27	9.2
20	21	26,288	-52.8		27	13.3
15	19	28,148	-50.7		27	19.0
10	14	30,802	-45.1		27	33.5
7						

JOHN F. KENNEDY INT. AP NY 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	29	5	6.6	-.2	31	2.4
1000	29	137	5.9	-.5	32	2.9
950	29	556	3.5	-2.4	30	5.3
900	29	993	1.4	-5.5	30	7.2
850	29	1,452	-.2	-8.4	29	7.0
800	29	1,937	-1.4	-10.6	27	8.4
750	29	2,450	-3.2	-13.9	27	10.9
700	29	2,993	-5.8	-15.1	27	13.3
650	29	3,571	-8.8	-19.2	27	15.4
600	29	4,187	-12.2	-24.0	27	17.4
550	29	4,848	-15.8	-30.6	27	19.8
500	29	5,560	-20.4	-34.0	27	22.3
450	29	6,332	-25.8	-36.6	27	26.8
400	29	7,175	-31.6	-42.3	27	28.2
350	29	8,110	-37.9	-47.0	27	31.7
300	29	9,155	-44.3	-53.4	28	32.1
250	29	10,361	-50.3		28	34.3
200	29	11,803	-53.9		28	33.6
175	29	12,659	-55.1		28	30.9
150	29	13,638	-57.4		28	26.9
125	28	14,783	-59.8		28	23.9
100	28	16,172	-61.3		28	18.6
80	26	17,549	-61.2		27	10.4
70	26	18,379	-60.8		27	7.4
60	25	19,338	-60.2		27	6.5
50	25	20,477	-59.9		26	4.7
40	25	21,875	-58.9		26	5.3
30	24	23,690	-58.3		28	2.5
25	22	24,825	-57.6		28	4.6
20	21	26,232	-56.7		28	7.9
15	21	28,065	-54.6		28	11.3
10	13	30,673	-51.8			
7						

JOHNSTON IS., PACIFIC AREA 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	3	25.8	21.8	09	7.5
1000	30	116	24.5	21.0	09	7.9
950	30	565	21.0	18.8	09	9.1
900	30	1,032	18.0	15.2	09	8.6
850	30	1,520	15.3	10.4	09	7.6
800	30	2,033	13.2	4.7	09	6.5
750	30	2,574	10.5	-.6	09	6.2
700	30	3,146	7.7	-6.1	09	5.7
650	30	3,753	4.7	-13.6	08	5.8
600	30	4,402	1.4	-17.1	07	5.7
550	30	5,097	-2.8	-20.6	07	5.8
500	30	5,845	-7.7	-23.9	05	6.1
450	30	6,657	-12.9	-27.5	05	5.0
400	30	7,544	-19.3	-33.1	05	4.5
350	29	8,525	-26.6	-39.4	02	4.0
300	29	9,617	-34.9	-47.9	34	3.5
250	29	10,863	-44.8		32	5.0
200	29	12,318	-56.3		28	7.2
175	29	13,155	-62.3		29	9.3
150	29	14,092	-68.8		30	8.6
125	28	15,168	-73.7		30	7.8
100	28	16,456	-77.4		33	4.8
80	27	17,736	-75.4		04	2.6
70	27	18,519	-70.6		08	2.2
60	24	19,446	-67.3		10	1.9
50	24	20,555	-64.0		10	2.5
40	22	21,937	-60.2		09	3.1
30	22	23,750	-55.8		09	3.9
25	20	24,922	-52.5		08	5.6
20	20	26,378	-48.7		08	7.0
15	16	28,287	-44.6		09	7.5
10	14	31,023	-41.0		[illegible]	5.6
7	8	33,413	-41.0			

KEY WEST, FLA. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	3	22.9	20.0	06	4.5
1000	30	138	22.8	19.7	07	5.2
950	30	584	19.9	16.9	08	5.8
900	30	1,049	17.1	13.0	09	5.0
850	30	1,536	14.8	6.8	09	3.2
800	30	2,048	13.3	.4	07	1.5
750	30	2,589	11.2	-4.0	33	.6
700	30	3,162	8.1	[illegible]	32	1.0
650	30	3,770	4.8	-9.9	30	1.7
600	30	4,419	1.2	-12.6	29	3.2
550	30	5,114	-3.0	-16.7	29	4.8
500	30	5,861	-8.1	-21.8	28	5.4
450	30	6,671	-13.6	-24.6	28	7.4
400	29	7,558	-19.8	-31.3	27	9.7
350	29	8,538	-27.2	[illegible]	27	13.8
300	29	9,627	-35.5	-46.7	27	17.2
250	29	10,870	-45.2		28	20.4
200	29	12,322	-56.8		28	25.0
175	29	13,156	-63.0		26	26.3
150	29	14,091	-69.0		27	23.5
125	28	15,171	-72.1		27	16.6
100	[illegible]	16,473	-75.0		28	9.6
80	[illegible]	17,763	-74.4		29	3.8
70	[illegible]	18,547	[illegible]		26	1.5
60	[illegible]	19,471	-66.2		[illegible]	1.4
50	25	20,589	-61.6		26	1.3
40	25	21,985	-57.7		31	1.2
30	23	23,830	-52.9		34	1.2
25	23	25,018	[illegible]		[illegible]	1.1
20	[illegible]	26,486	-47.1		27	3.1
15	[illegible]	[illegible]	-43.5		28	[illegible]
10	[illegible]	31,153	[illegible]			
7	9	33,565	[illegible]			

KING SALMON, ALASKA 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed
SURFACE	30	15	-6.3	-9.7	05	1.2
1000	30	36			35	2.2
950	30	439	-5.3	-10.7	04	1.1
900	30	863	-6.4	-12.2	33	[illegible]
850	30	1,309	-8.1	[illegible]	32	2.4
800	30	1,778	-10.2	[illegible]	30	[illegible]
750	30	2,274	-12.6	-18.4	28	3.7
700	30	2,797	-15.6	[illegible]	28	[illegible]
650	30	3,353	-19.0	-25.8	27	[illegible]
600	30	3,945	-22.6	[illegible]	27	[illegible]
550	30	4,578	-26.9	[illegible]	27	[illegible]
500	30	5,260	-31.1	-39.3	27	[illegible]
450	30	5,999	-36.0	[illegible]	27	9.3
400	30	6,808	-41.0	-43.9	27	[illegible]
350	30	7,710	-45.9		25	11.7
300	30	8,722	-50.6		24	[illegible]
250	30	9,904	-52.6		24	[illegible]
200	30	11,349	-51.7		25	[illegible]
175	30	12,216	-51.4		[illegible]	[illegible]
150	30	13,219	-50.7		25	[illegible]
125	30	14,406	-50.9		25	[illegible]
100	30	15,858	-51.5		25	[illegible]
80	29	17,306	-51.9		25	[illegible]
70	29	18,170	-52.5		25	[illegible]
60	28	19,164	-52.3		24	[illegible]
50	[illegible]	[illegible]	-53.4		25	[illegible]
40	22	21,782	-52.5		25	[illegible]
30	20	23,648	-52.4		[illegible]	[illegible]
25	18	24,850	[illegible]		[illegible]	13.0
20	14	26,318	-51.5		[illegible]	[illegible]
15	12	28,209	-52.0			
10	9	[illegible]	-53.7			
7						

See reference note at end of table

RAWINSONDE DATA

Average monthly values

+ KOROR, CAROLINE IS. 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	30	27.7	24.6	08	.6
1000	30	83	26.7	22.[illegible]	08	.6
950	30	535	23.7	19.4	08	.9
900	30	1,007	20.8	15.9	08	1.6
850	30	1,500	18.0	12.0	09	2.1
800	30	2,018	15.5	8.6	09	2.6
750	30	2,564	12.7	4.5	08	2.6
700	30	3,140	9.3	.4	08	3.2
650	30	3,752	6.1	-3.8	09	3.9
600	30	4,404	2.3	-7.2	09	4.9
550	30	5,102	-1.5	-11.4	10	5.3
500	30	5,886	-5.5	-17.8	10	5.3
450	30	6,676	-10.1	-23.5	10	5.7
400	30	7,574	-15.6	-30.4	10	5.1
350	30	8,571	-22.5	-37.6	10	4.5
300	30	9,681	-31.1	-45.2	11	4.6
250	30	10,947	-41.4		11	4.9
200	30	12,421	-53.8		09	7.6
175	30	13,265	-61.0		09	8.0
150	30	14,205	-69.0		09	10.2
125	29	15,273	-77.0		09	13.4
100	29	16,531	-82.7		09	15.2
80	29	17,790	-77.1		08	6.3
70	29	18,569	-71.2		02	1.1
60	28	19,492	-66.0		28	3.6
50	28	20,610	-62.1		29	4.6
40	27	22,001	-58.8		26	4.6
30	27	23,825	-54.6		25	.9
25	25	24,992	-52.8		12	1.2
20	23	26,446	-49.1		11	4.4
15	21	28,357	-45.2		10	10.9
10	15	31,083	-40.0		08	20.6
7	8	33,561	-34.0			
5						

KOTZEBUE, ALASKA 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	5	-14.3	-17.3	09	5.4
1000	29	75			10	6.7
950	29	468	-11.5	-16.4	12	6.3
900	29	882	-12.2	-17.3	13	4.0
850	29	1,318	-13.4	-17.3	13	2.4
800	29	1,779	-15.3	-20.0	15	1.6
750	29	2,264	-17.7	-23.6	17	1.9
700	29	2,777	-20.2	-26.8	20	2.3
650	29	3,323	-23.4	-30.8	20	3.7
600	29	3,905	-26.7	-34.6	21	4.1
550	29	4,529	-30.2	-37.9	22	4.9
500	29	5,201	-34.7	-40.5	23	5.7
450	29	5,929	-39.6	-42.3	23	6.5
400	29	6,726	-44.6		23	7.5
350	29	7,612	-50.0		23	8.6
300	29	8,607	-54.0		24	10.6
250	29	9,771	-55.6		24	11.4
200	28	11,203	-53.8		24	11.5
175	27	12,058	-52.6		24	11.9
150	27	13,054	-52.6		24	13.0
125	25	14,236	-52.6		25	14.5
100	25	15,676	-53.3		25	16.8
80	23	17,117	-53.8		25	17.7
70	23	17,975	-54.2		25	19.8
60	23	18,962	-54.8		25	21.7
50	23	20,127	-55.3		25	23.5
40	23	21,548	-56.3		25	25.0
30	22	23,379	-57.1		25	30.1
25	21	24,524	-57.2		25	33.5
20	15	25,968	-57.7		25	33.3
15	11	27,820	-58.0			

KWAJALEIN, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	26.7	23.7	07	4.9
1000	30	88	25.9	23.0	07	5.8
950	30	539	22.3	20.2	08	7.5
900	30	1,008	19.3	16.3	08	7.9
850	30	1,499	16.8	13.0	09	7.6
800	30	2,015	14.6	9.0	09	7.1
750	30	2,560	11.9	4.8	09	6.8
700	30	3,135	8.6	1.0	09	6.4
650	30	3,745	5.2	-2.5	09	5.9
600	30	4,395	1.7	-8.0	09	5.9
550	30	5,092	-2.0	-13.7	08	6.3
500	30	5,843	-6.7	-18.5	08	6.3
450	30	6,659	-11.5	-25.4	08	6.0
400	30	7,552	-17.5	-30.7	07	4.9
350	30	8,539	-24.4	-36.7	06	1.2
300	30	9,643	-32.9	-44.0	29	2.0
250	30	10,898	-43.2	-53.4	26	4.9
200	30	12,360	-55.5	-64.3	27	7.7
175	30	13,198	-62.3		27	7.6
150	30	14,134	-69.6		29	5.8
125	30	15,201	-76.9		33	2.2
100	28	16,459	-83.9		06	6.0
80	24	17,699	-80.6		08	5.6
70	24	18,466	-73.7		09	.9
60	24	19,379	-68.6		26	1.9
50	24	20,483	-64.3		27	3.9
40	23	21,859	-61.2		28	2.6
30	22	23,663	-57.1		30	1.2
25	22	24,823	-55.0		14	1.2
20	22	26,260	-51.9		08	2.7
15	20	28,140	-47.4		09	9.8
10	18	30,841	-43.1		09	19.1
7	15	33,260	-37.8		10	21.4
5	8	35,587	-35.5			

LAKE CHARLES, LA. 1019 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	11.3	9.2	05	2.3
1000	30	162	13.6	7.7	08	3.3
950	30	594	13.6	3.9	12	2.2
900	30	1,050	12.7	1.3	22	2.2
850	30	1,528	10.9	-.8	25	3.5
800	30	2,033	9.9	-6.7	26	4.9
750	30	2,567	7.6	-10.5	26	6.8
700	30	3,133	5.1	-13.6	27	7.8
650	30	3,734	1.9	-17.5	27	9.2
600	30	4,375	-2.1	-20.9	27	10.4
550	30	5,060	-6.6	-25.1	26	12.0
500	30	5,798	-11.6	-29.2	27	14.1
450	30	6,597	-17.2	-34.6	27	16.5
400	30	7,469	-23.4	-38.9	27	18.9
350	30	8,435	-30.6	-44.3	27	21.8
300	30	9,509	-38.9	-50.8	27	23.9
250	30	10,734	-48.4		27	25.9
200	30	12,171	-58.1		26	29.3
175	30	13,004	-62.5		26	28.8
150	30	13,947	-65.6		26	26.9
125	30	15,050	-68.3		26	22.5
100	30	16,375	-72.0		27	16.9
80	29	17,690	-71.8		27	9.9
70	29	18,482	-69.5		26	6.9
60	29	19,409	-66.0		26	4.1
50	29	20,527	-62.0		27	4.4
40	28	21,923	-58.5		27	5.7
30	28	23,747	-55.2		27	7.0
25	28	24,917	-53.4		27	8.1
20	28	26,358	-52.0		27	11.5
15	23	28,230	-49.0		27	15.8
10	21	30,922	-43.8		27	26.7

LANDER, WYO. 828 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,697	-5.4	-10.0	22	1.6
1000	30	188				
950	30	602				
900	30	1,034				
850	30	1,487				
800	30	1,967	-.5	-10.3	22	.7
750	30	2,482	-1.9	-12.8	29	2.0
700	30	3,028	-5.0	-15.8	29	6.8
650	30	3,607	-8.2	-19.1	29	9.3
600	30	4,224	-11.9	-22.3	29	12.1
550	30	4,885	-15.9	-27.6	29	12.5
500	30	5,597	-21.0	-31.6	28	13.2
450	30	6,366	-26.5	-37.2	28	15.1
400	30	7,206	-33.0	-41.1	28	16.4
350	30	8,135	-40.0	-44.8	28	19.1
300	30	9,168	-47.1		28	21.2
250	30	10,359	-53.0		28	22.7
200	30	11,787	-56.1		28	20.8
175	30	12,634	-57.3		28	20.3
150	30	13,608	-57.7		28	20.1
125	30	14,755	-59.3		28	15.8
100	30	16,146	-61.2		28	10.7
80	30	17,526	-61.7		28	8.2
70	30	18,354	-61.6		29	5.7
60	30	19,310	-61.3		30	3.3
50	30	20,443	-60.7		32	1.9
40	30	21,835	-59.7		34	2.3
30	30	23,640	-58.6		36	2.6
25	29	24,789	-57.8		36	3.9
20	28	26,201	-57.1		01	4.5
15	24	28,025	-56.2		35	5.5
10	11	30,643	-54.0			

* LIHUE KAUAI, HAWAII 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	36	24.0	19.6	08	4.5
1000	30	158	22.7	18.4	08	5.8
950	30	603	18.9	16.4	08	7.4
900	30	1,066	15.5	13.2	08	7.6
850	30	1,549	12.4	8.8	08	6.8
800	30	2,056	10.8	.9	08	6.7
750	30	2,593	9.2	-10.4	09	6.6
700	30	3,163	7.2	-13.3	09	6.2
650	30	3,768	3.7	-17.5	08	5.3
600	30	4,413	-.2	-21.5	08	4.4
550	30	5,104	-4.5	-25.1	08	4.0
500	30	5,847	-9.4	-29.8	06	3.8
450	30	6,653	-15.0	-33.4	05	3.9
400	30	7,532	-21.6	-37.8	03	4.8
350	30	8,505	-28.7	-44.7	36	4.5
300	30	9,587	-37.1	-51.3	34	6.9
250	30	10,821	-47.1		31	9.2
200	30	12,263	-57.9		31	12.9
175	30	13,095	-63.2		30	12.5
150	30	14,031	-68.3		31	9.3
125	29	15,114	-72.8		32	5.7
100	29	16,412	-75.8		34	2.9
80	22	17,712	-73.5		03	1.6
70	22	18,500	-70.1		07	2.1
60	16	19,429	-66.0		09	3.2
50	16	20,543	-63.3		10	3.1
40	15	21,928	-60.1		11	2.7
30	14	23,742	-56.0		10	3.2
25	14	24,910	-53.2		10	3.8
20	14	26,359	-49.8		08	3.8
15	13	28,265	-45.4		07	2.0
10	13	30,989	-43.0		25	.9
7	12	33,404	-40.2			
5	7	35,722	-39.3			

LITTLE ROCK, ARK. 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	6.2	3.3	31	.6
1000	30	166	8.0	2.2	33	.5
950	30	591	8.4	.0	26	2.8
900	30	1,037	6.9	-3.2	27	4.7
850	30	1,506	6.8	-7.9	27	6.9
800	30	2,004	5.6	-11.3	27	8.7
750	30	2,529	3.7	-13.3	28	9.6
700	30	3,087	1.2	-14.2	27	11.0
650	30	3,680	-1.8	-20.0	27	12.8
600	30	4,313	-5.1	-23.4	27	14.6
550	30	4,991	-9.5	-26.4	27	17.3
500	30	5,720	-14.4	-30.6	27	19.0
450	30	6,511	-19.8	-35.8	27	21.4
400	30	7,374	-26.2	-41.5	27	24.2
350	30	8,329	-33.5	-47.3	27	26.6
300	30	9,389	-41.6	-50.2	27	29.9
250	30	10,603	-50.1		27	33.3
200	29	12,038	-58.2		27	34.7
175	28	12,870	-60.8		27	32.9
150	28	13,823	-63.3		27	29.6
125	28	14,937	-66.1		27	26.1
100	28	16,281	-68.5		27	18.8
80	28	17,619	-67.7		27	12.4
70	28	18,426	-66.1		28	8.5
60	28	19,366	-63.9		27	5.2
50	28	20,490	-61.6		27	4.5
40	27	21,879	-59.3		28	4.7
30	27	23,695	-56.5		28	6.9
25	27	24,855	-55.3		27	9.5
20	27	26,286	-53.4		27	12.0
15	27	28,149	-50.9		27	16.6
10	24	30,811	-47.0		27	24.8

MCGRATH, ALASKA 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	103	-16.9	-18.3	29	.5
1000	30	73			35	.9
950	30	463	-12.5	-14.4	07	1.7
900	30	879	-10.7	-13.3	12	1.6
850	30	1,318	-11.2	-16.0	18	1.3
800	30	1,782	-12.7	-18.0	20	1.4
750	30	2,273	-14.9	-20.6	22	1.2
700	30	2,793	-17.5	-24.0	24	1.8
650	30	3,344	-20.8	-27.1	26	2.2
600	30	3,932	-24.3	-30.9	26	3.1
550	30	4,561	-28.3	-34.8	26	3.5
500	30	5,238	-33.2	-38.9	26	5.0
450	30	5,971	-38.0	-42.6	25	6.0
400	30	6,773	-43.0	-42.6	25	7.2
350	30	7,666	-48.1		25	9.4
300	30	8,669	-52.5		26	10.9
250	30	9,843	-54.0		25	12.9
200	30	11,281	-52.3		25	12.8
175	30	12,148	-51.3		25	13.9
150	30	13,148	-51.5		25	13.7
125	30	14,332	-51.2		25	15.0
100	30	15,783	-51.6		25	15.3
80	28	17,234	-52.0		25	16.1
70	28	18,098	-52.7		25	15.7
60	28	19,093	-53.3		25	16.7
50	28	20,266	-53.7		25	17.9
40	28	21,699	-54.2		25	19.0
30	27	23,539	-54.5		26	20.4
25	27	24,705	-55.2		26	23.1
20	20	26,147	-55.5		26	26.2
15	9	28,008	-55.5			

+ MAJURO, MARSHALL IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	3	28.7	24.1	07	4.3
1000	29	93	27.3	19.8	08	4.9
950	29	545	23.6	17.6	08	6.0
900	29	1,016	20.6	14.1	09	6.3
850	29	1,509	17.8	10.3	09	6.2
800	29	2,026	15.5	6.9	09	5.2
750	29	2,572	13.1	1.5	08	5.2
700	29	3,149	10.2	-2.2	08	4.5
650	29	3,762	6.7	-5.7	08	4.9
600	29	4,415	3.0	-9.5	08	5.3
550	29	5,115	-.8	-14.3	08	4.4
500	29	5,870	-5.1	-19.2	07	4.6
450	29	6,691	-9.9	-24.9	06	4.1
400	29	7,590	-15.3	-31.4	04	3.6
350	29	8,588	-22.2	-37.9	35	2.7
300	29	9,699	-30.9	-45.8	32	3.9
250	29	10,966	-41.0	-53.7	29	6.2
200	29	12,443	-53.3		29	8.7
175	29	13,290	-60.1		29	9.2
150	29	14,235	-67.6		30	7.2
125	29	15,314	-74.7		32	3.8
100	29	16,588	-81.2		02	3.3
80	29	17,845	-77.7		04	2.5
70	29	18,625	-70.1		28	2.3
60	29	19,553	-65.1		27	6.1
50	29	20,677	-61.0		27	6.6
40	29	22,073	-58.1		26	5.9
30	29	23,901	-53.8		26	2.7
25	29	25,081	-50.7		26	.6
20	27	26,546	-47.7		12	2.1
15	23	28,462	-43.9		09	10.2
10	22	31,215	-38.2		09	18.3
7	15	33,701	-31.7		09	18.9
5	6	36,082	-28.6			

* MEDFORD, OREG. 973 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	401	2.6	.4	29	.5
1000	30	178				
950	30	595	3.6	1.5	26	.4
900	30	1,036	4.6	-.5	19	1.7
850	30	1,501	3.5	-5.3	23	3.1
800	30	1,991	1.6	-7.7	26	4.3
750	30	2,509	-.9	-9.8	27	6.6
700	30	3,058	-3.7	-13.7	28	8.4
650	30	3,640	-6.9	-17.7	28	10.1
600	30	4,260	-10.3	-20.5	29	12.7
550	30	4,925	-14.4	-26.2	29	14.9
500	30	5,642	-19.0	-30.8	29	16.7
450	30	6,419	-23.9	-35.5	29	18.2
400	30	7,268	-30.2	-41.4	29	19.7
350	30	8,208	-36.9	-46.4	29	21.5
300	30	9,255	-44.6		29	23.5
250	30	10,454	-52.6		29	26.4
200	30	11,873	-57.7		29	24.0
175	30	12,718	-57.7		28	19.3
150	30	13,687	-59.4		28	18.2
125	30	14,824	-60.8		28	16.4
100	29	16,205	-61.6		28	12.0
80	28	17,582	-61.5		28	8.8
70	28	18,411	-61.0		29	6.2
60	28	19,370	-60.8		30	3.8
50	26	20,506	-59.8		35	3.3
40	25	21,906	-58.4		02	2.8
30	22	23,717	-57.4		04	4.0
25	19	24,885	-56.3		03	4.8
20	19	26,305	-55.7		03	5.5
15	14	28,145	-54.6		02	5.7
10	10	30,771	-52.2			
7	5	33,060	-50.9			

MERIDA, MEXICO 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	11	20.4	19.6	05	.9
1000	30	126	22.8	20.2	07	3.4
950	30	574	20.9	17.3	08	5.1
900	30	1,040	18.1	14.2	07	4.5
850	30	1,529	15.6	9.0	07	3.3
800	30	2,042	13.4	4.3	07	2.3
750	30	2,584	11.0	-1.4	05	2.2
700	30	3,157	8.5	-6.3	04	2.8
650	30	3,766	5.0	-10.6	04	2.5
600	30	4,415	1.3	-15.2	03	3.0
550	30	5,110	-2.7	-22.0	02	2.7
500	30	5,859	-7.2	-26.9	35	1.5
450	30	6,672	-12.5	-31.5	29	2.1
400	30	7,561	-18.3	-36.1	28	3.0
350	30	8,547	-25.6	-41.6	26	7.1
300	30	9,642	-34.2	-48.6	25	9.0
250	30	10,892	-44.0		24	12.8
200	30	12,352	-55.8		24	15.4
175	30	13,190	-62.1		23	15.5
150	30	14,127	-69.0		24	14.2
125	30	15,208	-72.0		26	9.9
100	29	16,506	-76.7		27	4.5
80	28	17,788	-76.6		05	.3
70	27	18,562	-73.3		08	.6
60	27	19,480	-67.1		12	1.5
50	27	20,594	-62.0		13	1.0
40	27	21,989	-57.7		09	2.0
30	24	23,825	-53.4		08	3.5
25	24	25,006	-50.6		08	2.6
20	22	26,471	-47.1		07	2.6
15	20	28,390	-43.9		07	1.8
10	14	31,123	-39.5			
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MIAMI, FLA. 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	4	20.7	17.0	02	2.3
1000	30	144	22.2	18.1	06	3.6
950	30	590	19.3	15.6	08	5.3
900	30	1,053	15.9	12.8	09	4.0
850	30	1,537	13.4	7.3	09	2.4
800	30	2,048	12.3	.1	09	.4
750	30	2,587	10.2	-5.2	29	1.1
700	30	3,158	7.4	-8.9	29	2.0
650	30	3,764	4.0	-12.0	29	3.2
600	30	4,411	.2	-15.7	28	3.4
550	30	5,103	-4.0	-19.7	28	5.2
500	30	5,848	-9.1	-24.9	28	7.3
450	30	6,656	-14.3	-30.1	28	8.5
400	30	7,538	-20.6	-34.4	28	11.3
350	30	8,515	-27.7	-40.6	28	14.8
300	30	9,602	-35.7	-47.8	27	18.1
250	30	10,845	-45.3		27	23.5
200	30	12,297	-56.7		27	27.8
175	30	13,132	-62.7		27	29.7
150	30	14,068	-68.3		27	25.5
125	30	15,153	-71.6		28	19.7
100	30	16,461	-74.6		29	12.0
80	30	17,756	-74.6		29	5.0
70	30	18,541	-70.5		28	2.7
60	30	19,466	-66.0		24	1.6
50	30	20,588	-60.7		28	1.2
40	29	21,987	-57.5		36	1.2
30	29	23,825	-52.8		36	1.1
25	28	25,008	-50.9		30	1.3
20	27	26,477	-47.2		28	3.5
15	27	28,394	-44.2		27	8.0
10	18	31,149	-39.6		27	15.5
7	7	33,626	-37.0			

MIDLAND, TEXAS 918 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	874	6.3	2.3	17	1.1
1000	30	159				
950	30	586				
900	30	1,033	10.0	3.1	19	2.4
850	30	1,510	11.3	-.7	23	4.7
800	30	2,016	10.0	-5.5	25	6.8
750	30	2,549	7.2	-9.4	26	8.9
700	30	3,113	3.9	-13.2	26	10.7
650	30	3,711	.5	-16.8	26	12.2
600	30	4,349	-3.2	-22.5	25	13.7
550	30	5,032	-7.6	-26.5	26	15.7
500	30	5,766	-12.8	-31.3	26	17.3
450	30	6,561	-18.5	-35.3	25	19.0
400	30	7,429	-25.1	-40.0	26	22.6
350	29	8,390	-32.0	-45.2	26	24.8
300	29	9,458	-40.3	-51.0	26	28.4
250	29	10,676	-49.8		26	32.4
200	29	12,106	-58.7		26	33.1
175	29	12,937	-62.5		26	31.1
150	28	13,882	-64.7		26	27.4
125	28	14,990	-67.2		26	22.4
100	27	16,323	-70.7		26	18.3
80	26	17,642	-70.1		27	9.9
70	26	18,441	-68.2		28	6.6
60	26	19,372	-65.5		28	4.4
50	26	20,489	-62.5		27	3.0
40	25	21,874	-59.6		28	4.4
30	25	23,687	-56.4		27	5.7
25	24	24,849	-55.1		27	7.9
20	23	26,281	-53.2		27	11.3
15	17	28,137	-51.3		27	18.6

MONTERREY, MEXICO 964 MB

INSUFFICIENT OBSERVATIONS

MONETT, MO. 967 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	438	4.9	1.8	18	1.4
1000	30	163				
950	30	584	6.0	-.4	21	2.1
900	30	1,027	5.8	-3.2	25	5.9
850	30	1,495	5.0	-6.1	27	7.1
800	30	1,989	4.0	-8.6	27	8.5
750	30	2,512	2.2	-12.1	28	9.5
700	30	3,067	-.5	-14.9	28	11.4
650	30	3,656	-3.6	-17.8	27	13.2
600	30	4,285	-6.9	-21.4	27	15.6
550	30	4,959	-10.9	-25.8	27	17.9
500	30	5,685	-15.7	-30.2	27	20.0
450	30	6,471	-21.4	-35.2	27	22.1
400	30	7,328	-27.8	-40.0	27	24.1
350	30	8,277	-35.0	-45.3	27	26.2
300	30	9,331	-43.0	-46.8	27	30.2
250	30	10,539	-51.2		27	32.9
200	29	11,965	-57.1		27	34.7
175	29	12,805	-59.5		27	32.9
150	29	13,764	-61.7		27	28.4
125	28	14,896	-63.8		27	23.2
100	27	16,255	-66.5		27	18.5
80	27	17,603	-67.1		27	12.4
70	27	18,413	-65.3		27	8.0
60	26	19,356	-64.1		27	5.6
50	26	20,478	-62.3		28	5.0
40	26	21,862	-60.5		28	4.3
30	24	23,668	-58.3		29	4.7
25	23	24,816	-57.2		27	5.5
20	19	26,237	-55.2		28	9.8
15	17	28,084	-53.1		28	14.1
10	12	30,718	-49.2		28	19.5
7	5	32,992				

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NOVEMBER 1971

Standard pressure surface (mb)	MONTGOMERY, ALA. 1014 MB						NASHVILLE, TENN. 999 MB						• NOME, ALASKA 1007 MB						NORTH PLATTE, NEBR. 918 MB						OAKLAND, CALIF. 1019 MB					
	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	57	6.9	4.1	34	1.6	30	180	6.3	3.0	19	.7	30	5	-8.4	-11.7	06	2.4	29	847	-2.5	-5.7	33	1.6	30	6	8.8	5.3	28	.2
1000	30	173	9.8	5.2	02	1.6	30	170			12	.6	30	58			09	2.2	29	158					30	165	10.7	2.8	26	.1
950	30	601	10.3	3.9	01	1.4	30	593	7.1	-.2	28	4.2	30	456	-9.3	-12.3	08	2.7	29	570					30	593	10.1	-1.7	36	.8
900	30	1,051	10.1	-.9	29	3.0	30	1,037	5.7	-3.6	26	5.7	30	873	-10.8	-13.9	10	1.4	29	1,002	1.9	-6.9	31	2.8	30	1,041	8.8	-4.5	34	2.7
850	30	1,526	9.6	-7.2	27	5.0	30	1,503	3.9	-7.3	27	5.9	30	1,311	-12.7	-16.9	10	.4	29	1,465	2.8	-8.5	30	5.4	30	1,513	7.2	-8.8	31	3.2
800	30	2,028	8.4	-8.8	27	6.7	30	1,995	2.8	-11.0	28	6.9	30	1,772	-14.7	-20.3	24	.3	29	1,955	1.4	-10.1	30	8.1	30	2,010	5.7	-12.3	30	4.2
750	30	2,560	6.4	-10.5	28	8.0	30	2,517	1.4	-14.7	27	9.2	30	2,259	-17.3	-23.4	24	1.5	29	2,472	-.9	-12.9	30	11.2	30	2,536	3.0	-14.7	31	5.4
700	30	3,122	3.3	-12.8	28	9.8	30	3,070	-.8	-15.7	27	12.3	30	2,773	-20.1	-26.1	24	2.7	29	3,020	-4.0	-16.4	30	13.1	30	3,099	.0	-17.4	31	6.5
650	30	3,720	.3	-15.9	28	11.4	30	3,660	-3.2	-19.5	27	14.7	30	3,319	-22.9	-29.7	26	3.7	29	3,602	-7.0	-19.7	29	13.7	30	3,681	-3.2	-20.9	31	7.8
600	30	4,357	-3.3	-20.5	28	13.6	30	4,289	-6.9	-23.5	27	17.3	30	3,902	-26.4	-33.5	26	4.3	29	4,222	-10.3	-23.1	29	14.4	30	4,310	-7.1	-23.6	31	9.6
550	30	5,040	-7.6	-24.7	28	15.0	30	4,962	-11.1	-27.9	27	20.2	30	4,526	-30.1	-37.3	26	4.4	29	4,887	-14.5	-26.2	29	15.3	30	4,982	-11.6	-25.9	30	10.6
500	30	5,774	-12.9	-29.7	28	17.1	30	5,687	-15.9	-33.4	27	21.9	30	5,198	-34.6	-38.7	26	5.9	29	5,602	-19.6	-31.2	29	16.3	30	5,706	-16.6	-29.5	30	11.2
450	30	6,569	-18.5	-34.8	28	19.1	30	6,473	-21.2	-37.8	27	24.3	30	5,928	-39.1	-41.0	27	6.3	29	6,376	-25.2	-36.1	29	18.8	30	6,490	-21.8	-35.6	30	12.4
400	30	7,437	-24.9	-40.3	28	21.7	30	7,332	-27.6	-42.9	27	27.0	30	6,727	-44.1	-44.4	26	8.1	29	7,221	-31.4	-42.3	28	19.6	30	7,346	-28.1	-41.9	30	13.3
350	30	8,397	-31.9	-45.6	28	23.7	30	8,281	-34.7	-48.0	28	30.3	30	7,615	-49.3		25	8.3	27	8,142	-38.6	-47.4	28	20.3	30	8,293	-35.3	-47.0	30	17.4
300	30	9,485	-40.1	-50.8	28	27.6	30	9,337	-42.8	-52.1	27	31.8	30	8,611	-54.2		24	10.0	27	9,182	-45.7		28	22.0	29	9,345	-43.3		30	19.6
250	30	10,686	-48.8		28	31.6	29	10,550	-50.3		28	34.2	30	9,775	-56.0		24	11.1	24	10,376	-53.0		28	27.1	29	10,549	-52.0		31	21.4
200	30	12,123	-57.9		27	34.1	27	11,983	-57.3		28	33.7	30	11,201	-53.5		23	12.0	24	11,802	-55.9		28	26.8	29	11,971	-58.4		30	18.9
175	30	12,959	-61.1		27	32.8	27	12,822	-59.7		28	32.2	30	12,062	-52.6		24	12.9	24	12,653	-56.4		28	27.8	29	12,807	-60.1		30	19.0
150	30	13,909	-63.8		27	29.4	27	13,781	-62.0		27	30.1	30	13,058	-52.9		24	13.4	24	13,628	-57.9		28	23.4	29	13,767	-61.0		29	17.4
125	30	15,019	-67.1		27	23.9	27	14,902	-64.7		28	26.1	30	14,235	-52.7		24	13.7	24	14,773	-59.7		29	19.8	29	14,895	-63.1		29	15.4
100	29	16,358	-70.0		28	18.2	27	16,255	-67.0		27	19.4	30	15,675	-53.2		24	16.4	24	16,164	-61.2		29	14.9	29	16,261	-65.1		29	11.4
80	28	17,681	-69.6		27	11.0	27	17,602	-66.6		28	11.9	30	17,113	-53.5		24	17.7	23	17,543	-61.8		29	8.8	28	17,622	-64.5		28	8.2
70	28	18,481	-67.4		27	7.2	27	18,411	-65.8		28	7.9	29	17,974	-53.8		24	18.7	23	18,371	-61.2		29	5.5	28	18,440	-63.9		28	5.4
60	28	19,416	-64.6		27	6.6	27	19,352	-64.0		27	6.2	28	18,968	-54.3		24	19.6	23	19,324	-61.0		29	3.4	27	19,387	-63.1		30	3.3
50	28	20,548	-61.3		27	4.5	27	20,475	-62.0		26	4.5	27	20,143	-54.8		24	20.5	21	20,460	-59.6		30	1.7	27	20,512	-61.7		33	2.2
40	27	21,937	-58.0		28	5.4	25	21,860	-60.2		28	4.7	26	21,574	-55.4		24	22.2	21	21,858	-59.5		35	1.5	27	21,900	-59.9		31	2.1
30	27	23,763	-54.7		27	6.8	24	23,663	-57.9		28	5.3	24	23,389	-56.3		25	27.3	27	23,661	-58.5		33	2.1	25	23,710	-57.1		03	2.2
25	25	24,939	-53.3		27	7.6	23	24,814	-56.7		27	8.6	23	24,537	-56.7		25	29.7	21	24,808	-58.0		34	2.1	24	24,878	-55.7		02	2.2
20	24	26,385	-51.6		27	11.5	20	26,235	-54.8		28	10.0	22	25,948	-56.6		25	34.4	19	26,217	-57.4		31	2.8	19	26,303	-54.3		34	2.4
15	19	28,258	-49.0		27	19.2	19	28,092	-52.1		28	14.8	19	27,817	-56.6		25	34.2	17	28,047	-56.1		30	5.4	18	28,155	-52.3		32	4.6
10	12	30,924	-45.1				14	30,739	-48.9		27	22.1	8	30,305	-58.0				6	30,687	-52.5				11	30,782	-49.7			

Standard pressure surface (mb)	OMAHA, NEBR. 968 MB						PAGO PAGO, AMERICAN SAMOA 1010 MB						• PEORIA, ILL. 994 MB						• PITTSBURGH, PA. 975 MB						PONAPE, CAROLINE IS. 1004 MB					
	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	403	1.2	-1.7	23	1.5	30	5	29.1	23.5	08	3.2	30	200	1.5	-2.6	21	1.2	30	359	2.5	-.9	24	2.6	30	39	28.9	24.3	09	2.4
1000	30	139					30	97	27.1	19.9	08	3.3	30	151					30	153					30	74	27.5	20.6	09	3.0
950	30	554	3.2	-1.7	25	2.5	30	549	23.4	17.0	07	4.4	30	566	3.2	-3.4	25	4.5	30	569	3.1	-1.4	26	4.4	30	526	23.8	17.9	09	5.9
900	30	994	4.0	-5.0	28	5.8	30	1,019	20.0	13.5	06	4.3	30	1,004	2.5	-6.0	27	6.9	30	1,007	1.5	-4.7	28	7.5	30	998	20.6	14.6	09	6.7
850	30	1,458	2.6	-7.6	28	7.2	30	1,510	16.9	9.3	06	4.6	30	1,466	1.4	-10.7	28	8.5	30	1,465	-.6	-8.9	28	9.1	30	1,490	17.7	10.0	08	6.9
800	30	1,947	.7	-9.4	28	9.0	30	2,026	15.0	4.8	06	4.6	30	1,953	-.6	-14.1	28	8.9	30	1,949	-3.0	-11.9	28	10.9	30	2,007	15.6	6.3	08	6.3
750	30	2,463	-1.8	-12.2	28	10.8	30	2,570	12.6	-.6	06	3.8	30	2,466	-2.9	-15.3	28	10.2	30	2,460	-4.3	-14.9	28	11.8	30	2,553	12.7	1.9	08	5.2
700	30	3,009	-4.9	-15.6	28	12.9	30	3,146	9.4	-4.2	07	2.9	30	3,010	-5.3	-16.4	28	11.7	30	3,002	-6.6	-18.2	28	13.2	30	3,129	9.3	-1.6	09	5.5
650	30	3,589	-7.4	-19.9	28	13.8	30	3,757	5.9	-7.1	07	2.5	30	3,590	-8.0	-19.1	28	13.8	30	3,578	-9.0	-20.4	28	15.4	30	3,740	6.1	-6.1	08	6.7
600	30	4,209	-10.5	-22.9	28	15.3	30	4,408	2.4	-12.0	06	1.4	30	4,208	-11.3	-23.5	28	16.2	30	4,195	-12.1	-24.3	28	17.5	30	4,392	2.3	-10.0	08	6.4
550	30	4,875	-14.3	-26.3	28	17.6	29	5,108	-1.4	-17.2	06	1.2	30	4,871	-15.4	-27.7	28	18.4	30	4,856	-15.8	-29.0	28	19.3	30	5,090	-1.2	-14.2	09	6.7
500	30	5,591	-19.4	-31.4	28	20.4	29	5,861	-5.7	-22.5	06	.6	30	5,584	-19.9	-31.4	28	20.8	30	5,568	-20.3	-34.0	28	21.9	30	5,845	-5.3	-20.3	09	6.6
450	30	6,366	-24.6	-36.1	27	21.8	29	6,679	-10.8	-27.5	28	1.1	30	6,358	-25.0	-36.1	28	23.7	30	6,341	-25.3	-38.0	28	24.6	30	6,665	-10.1	-25.8	09	6.3
400	30	7,213	-30.7	-41.0	27	23.4	29	7,574	-16.9	-32.9	25	1.4	30	7,204	-31.2	-40.8	28	27.3	30	7,186	-31.2	-43.0	27	26.6	30	7,563	-15.7	-31.9	09	4.0
350	30	8,151	-37.7	-44.7	27	24.8	29	8,565	-23.9	-39.2	25	2.8	30	8,139	-38.0	-45.7	28	29.5	30	8,122	-37.9	-47.8	27	28.8	30	8,559	-22.6	-38.4	12	1.3
300	30	9,195	-44.9		27	26.6	29	9,669	-32.4	-47.5	24	4.9	30	9,183	-44.7		28	32.9	30	9,165	-44.9	-51.0	28	32.3	30	9,669	-31.0	-46.5	26	1.6
250	30	10,394	-52.4		27	29.7	29	10,927	-42.9		23	7.2	30	10,385	-51.3		28	35.0	30	10,367	-50.8		28	33.8	30	10,935	-41.3		26	3.1
200	30	11,827	-55.6		27	29.1	29	12,392	-55.0		23	10.1	30	11,817	-56.3		28	34.3	30	11,804	-54.9		28	32.6	30	12,410	-53.5		26	3.8
175	29	12,674	-56.6		27	27.8	29	13,233	-61.4		23	10.3	30	12,663	-57.5		28	31.6	30	12,655	-56.5		28	28.9	30	13,256	-60.3		28	3.6
150	29	13,648	-58.0		27	24.8	29	14,175	-67.4		22	9.0	30	13,634	-58.7		28	27.1	30	13,630	-58.1		28	27.4	30	14,199	-68.0		28	2.2
125	28	14,789	-59.3		28	20.0	29	15,256	-73.9		23	7.2	29	14,782	-60.7		27	22.5	30	14,772	-60.3		28	23.6	30	15,275	-75.3		05	2.9
100	28	16,180	-61.3		27	14.3	29	16,539	-79.1		22	3.6	29	16,164	-62.8		28	17.1	30	16,157	-61.7		27	16.7	30	16,542	-82.7		07	7.8
80	28	17,561	-62.0		28	9.8	29	17,810	-76.2		13	2.4	28	17,531	-62.9		28	17.1	30	17,536	-62.0		27	11.4	30	17,792	-78.7		08	5.6
70	28	18,388	-61.8		28	7.1	28	18,591	-70.4		11	2.6	28	18,336	-62.1		28	7.7	30	18,363	-61.9		27	8.5	29	18,566	-71.4		25	.6
60	28	19,344	-61.2		29	5.7	28	19,517	-66.2		09	1.6	28	19,312	-61.3		28	5.8	30	19,318	-61.5		27	6.7	29	19,491	-66.1		27	5.4
50	28	20,486	-60.4		31	3.4	28	20,634	-62.5		07	1.3	26	20,445	-61.0		30	4.5	30	20,452	-60.5		27	6.8	29	20,608	-62.3		27	6.4
40	28	21,871	-59.9		31	1.7	28	22,020	-69.4		06	2.4	24	21,831	-59.9		29	3.4	29	21,848	-59.7		28	5.0	26	21,996	-59.4		27	4.9
30	24	23,662	-58.3		32	2.3	28	23,843	-54.6		07	3.4	21	23,637	-58.4		30	4.5	28	23,650	-58.5		28	5.5	24	23,817	-54.6		28	2.6
25	24	24,812	-57.7		31	4.8	25	25,017	-51.6		08	4.4	20	24,782	-57.6		30	5.0	27	24,799	-58.1		28	6.3	21	24,994	-51.6		21	.8
20	21	26,226	-57.4		31	5.0	23	26,475	-48.0		08	5.6	18	26,195	-56.7		29	6.3	26	26,211	-56.9		28	6.8	18	26,447	-48.2		15	3.9
15	18	28,039	-56.3		29	6.6	21	28,395	-42.9		10	7.7	16	28,034	-54.8		28	9.0	21	28,053	-54.9		28	11.7	17	28,357	-46.3		09	7.7
10	10	30,671	-51.9				16	31,148	-38.9				15	30,644	-50.6		28	13.5	17	30,687	-50.2		27	17.5	16	31,103	-39.1		09	19.5
7							5	33,654	-32.1				13	32,989	-46.6		28	20.9	12	33,076	-45.5				9	33,567	-34.6			
5													7	35,242	-41.8															

Standard pressure surface (mb)	PORTLAND, MAINE 1014 MB						• QUILLAYUTE, WASH. 1009 MB						RAPID CITY, S. DAK. 903 MB						ST CLOUD, MINN. 978 MB						• ST PAUL IS., ALASKA 1003 MB					
	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.	No of observations	Dynamic height	Temperature	Dew Point +	Resultant Wind Direction	Resultant Wind Speed M.P.H.
SURFACE	30	28	.0	-5.8	34	2.0	30	58	6.1	4.9	15	1.2	30	966	-.8	-6.1	33	2.5	30	316	-2.8	-5.8	32	.5	29	10	.8	-1.0	23	.7
1000	30	132			34	2.3	30	131			16	1.8	30	142					30	136					29	32			16	2.3
950	30	545	.4	-6.8	34	3.2	30	551	4.8	2.9	19	5.5	30	537					30	545	-1.5	-5.2	29	1.6	29	442	-2.0	-6.4	18	3.3
900	30	977	-1.4	-6.8	33	3.3	30	991	2.5	-.2	21	6.2	30	992			33	3.0	30	975	-2.5	-7.1	30	3.1	29	870	-4.7	-7.4	21	4.0
850	30	1,432	-2.4	-11.7	31	4.3	30	1,452	.2	-3.8	24	6.4	30	1,453	1.8	-8.2	32	6.4	30	1,429	-2.9	-10.2	30	5.1	29	1,318	-7.0	-11.7	23	3.7
800	30	1,913	-3.5	-13.3	29	5.9	30	1,936	-1.7	-9.4	25	7.2	30	1,941	-.2	-10.9	32	8.3	30	1,907	-4.9	-13.5	29	7.0	29	1,789	-9.3	-16.4	24	3.7
750	30	2,422	-5.3	-15.7	28	7.8	30	2,448	-4.0	-12.7	26	9.8	30	2,455	-3.4	-12.8	31	9.3	30	2,413	-6.8	-17.5	28	8.6	29	2,286	-11.7	-20.3	24	4.3
700	30	2,961	-7.8	-19.4	27	9.7	30	2,990	-7.0	-15.2	26	11.5	30	2,997	-6.6	-16.5	31	11.4	29	2,946	-9.8	-21.5	28	9.9	29	2,812	-14.6	-24.0	27	5.1
650	30	3,534	-10.7	-23.2	27	11.4	30	3,565	-10.2	-18.7	27	12.2	30	3,573	-9.3	-18.9	30	12.9	29	3,514	-12.9	-24.1	28	11.4	29	3,369	-18.3	-26.8	25	5.6
600	30	4,146	-14.0	-26.5	27	13.6	30	4,178	-13.7	-21.8	27	14.6	30	4,188	-13.0	-22.7	29	13.4	29	4,121	-16.1	-27.3	28	12.9	29	3,963	-22.2	-30.0	25	5.1
550	30	4,801	-18.0	-30.6	27	15.8	30	4,834	-17.7	-25.6	27	16.1	30	4,846	-17.2	-27.0	28	15.7	29	4,772	-20.0	-30.9	28	15.6	29	4,596	-26.6	-33.9	25	5.6
500	30	5,507	-23.0	-34.6	27	17.1	30	5,541	-22.4	-29.5	27	17.6	30	5,554	-22.0	-30.4	28	17.4	29	5,472	-24.5	-34.6	28	17.8	29	5,278	-31.1	-37.8	25	6.2
450	30	6,271	-28.1	-37.9	27	18.0	30	6,307	-27.7	-35.6	27	19.0	30	6,321	-27.6	-36.0	28	19.0	29	6,232	-29.5	-39.1	28	19.7	29	6,018	-35.7	-40.6	25	6.6
400	30	7,106	-33.8	-43.6	26	19.3	30	7,144	-33.5	-40.9	27	20.7	30	7,158	-33.6	-40.9	27	19.7	29	7,062	-35.4	-44.7	28	23.0	29	6,828	-41.1	-44.3	25	6.4
350	30	8,034	-39.7	-46.2	26	21.3	30	8,072	-40.1	-43.3	27	21.9	30	8,085	-40.0	-44.8	27	20.2	29	7,984	-41.1	-48.2	28	26.3	29	7,727	-46.8		24	7.3
300	30	9,072	-45.4		27	23.8	30	9,104	-47.6		28	21.5	30	9,120	-46.6		28	22.3	29	9,013	-47.2		28	28.9	29	8,735	-52.0		25	8.8
250	30	10,279	-49.9		27	24.2	30	10,291	-53.8		28	23.1	29	10,308	-52.6		28	24.8	29	10,207	-52.3		28	30.7	29	9,909	-53.8		24	12.8
200	30	11,725	-52.6		27	23.9	30	11,717	-56.1		29	22.8	28	11,741	-55.6		28	22.9	27	11,842	-54.1		27	29.1	29	11,349	-51.9		24	14.7
175	30	12,586	-53.7		26	23.0	29	12,573	-55.2		29	20.5	28	12,591	-56.0		28	23.5	29	12,500	-54.0		28	25.0	29	12,216	-51.5		24	14.8
150	30	13,575	-54.9		26	20.4	29	13,555	-56.2		28	17.3	28	13,571	-56.2		28	21.0	29	13,486	-55.5		28	21.9	29	13,217	-51.6		23	15.7
125	29	14,738	-57.3		26	16.3	29	14,711	-57.4		28	14.6	28	14,723	-58.6		28	17.7	29	14,646	-56.8		28	18.5	29	14,401	-51.4		24	15.6
100	29	16,142	-58.8		26	12.0	29	16,120	-57.9		28	11.0	28	16,120	-60.2		28	12.9	29	16,055	-58.0		28	13.8	29	15,851	-51.2		24	15.4
80	27	17,537	-59.3		27	8.8	29	17,524	-58.6		28	8.3	27	17,507	-60.3		28	8.7	29	17,457	-59.4		29	9.8	28	17,296	-51.7		24	15.7
70	27	18,373	-59.7		27	7.0	28	18,363	-58.8		28	7.2	26	18,338	-60.2		28	7.1	29	18,293	-59.6		29	8.4	28	18,162	-52.0		24	15.2
60	27	19,338	-59.5		27	6.2	25	19,328	-58.6		29	4.8	26	19,300	-60.1		29	4.6	29	19,257	-59.7		30	6.4	27	19,167	-52.3		24	14.5
50	27	20,479	-59.7		27	5.7	25	20,476	-58.0		30	3.4	26	20,438	-60.1		30	3.9	29	20,397	-59.8		30	4.3	27	20,345	-52.5		24	14.6
40	27	21,876	-59.4		27	4.7	23	21,889	-56.9		32	3.2	26	21,831	-59.9		34	2.5	28	21,788	-59.8		33	3.3	27	21,787	-52.8		24	15.2
30	26	23,679	-59.3		28	4.6	19	23,721	-56.0		36	2.9	26	23,634	-58.4		01	2.6	27	23,590	-59.3		34	4.1	25	23,646	-52.0		24	15.1
25	25	24,827	-58.8		28	5.0	19	24,881	-55.9		02	4.3	24	24,784	-58.3		02	4.0	26	24,733	-59.5		34	4.2	25	24,827	-52.2		24	15.4
20	23	26,222	-58.2		27	9.4	14	26,318	-55.0		01	5.8	21	26,191	-57.9		36	5.0	25	26,127	-59.0		33	3.9	25	26,273	-52.0		24	17.3
15	20	28,034	-56.9		28	10.8	11	28,137	-56.4				17	28,004	-57.3		35	5.3	15	27,942	-58.0		31	5.8	23	28,133	-51.9		24	19.5
10	11	30,583	-54.4										7	30,621	-54.9				6	30,578	-52.2				20	30,773	-52.7		24	21.8
7																									19	33,020	-52.7		24	32.5

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALEM, ILL. 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	174	4.0	.0	26	.8
1000	30	157			04	.5
950	30	577	5.1	-2.3	26	5.0
900	30	1,017	3.7	-5.7	28	6.9
850	30	1,481	2.6	-9.1	28	7.5
800	30	1,970	1.0	-11.6	28	8.5
750	30	2,487	-1.0	-14.1	27	10.1
700	30	3,035	-2.9	-18.1	28	12.0
650	30	3,619	-5.7	-21.1	28	14.1
600	30	4,243	-9.1	-24.5	27	16.1
550	30	4,911	-13.0	-27.9	28	19.2
500	30	5,631	-17.7	-32.8	28	21.5
450	30	6,411	-22.9	-37.8	27	24.8
400	30	7,264	-29.4	-43.1	27	27.1
350	30	8,206	-36.4	-48.0	27	29.7
300	30	9,256	-43.6	-50.8	28	31.1
250	30	10,463	-50.3		27	32.7
200	30	11,897	-56.8		28	32.9
175	30	12,739	-58.8		28	31.2
150	30	13,704	-60.4		28	28.1
125	30	14,835	-62.5		27	24.0
100	30	16,204	-64.4		27	15.3
80	29	17,566	-64.3		28	11.2
70	29	18,384	-63.3		28	7.0
60	29	19,334	-62.6		27	4.8
50	29	20,462	-61.2		27	4.0
40	29	21,850	-60.3		29	4.1
30	29	23,653	-58.3		28	6.6
25	27	24,801	-57.3		28	6.5
20	26	26,213	-55.9		28	8.1
15	23	28,060	-54.1		28	11.9
10	23	30,684	-50.2		27	17.3
7	7	33,012	-47.7			

SALEM, OREG. 1012 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	61	6.1	4.8	19	2.6
1000	30	157			21	2.0
950	30	579	5.8	2.8	22	4.3
900	30	1,020	4.1	-2.0	24	5.8
850	30	1,484	2.5	-6.4	25	7.4
800	30	1,973	.1	-7.6	26	8.1
750	30	2,487	-2.5	-12.2	26	8.9
700	30	3,032	-5.4	-17.0	26	10.5
650	30	3,610	-8.8	-20.2	27	11.1
600	30	4,226	-12.2	-24.8	28	12.3
550	30	4,886	-16.2	-29.0	28	14.0
500	30	5,597	-20.8	-34.1	28	15.9
450	30	6,368	-25.8	-38.4	28	18.3
400	30	7,211	-31.8	-43.8	28	20.1
350	30	8,145	-38.5	-47.9	27	21.2
300	30	9,185	-45.9		27	25.1
250	30	10,378	-53.2		27	26.8
200	30	11,800	-57.0		27	24.0
175	30	12,646	-56.8		27	22.0
150	30	13,621	-58.0		27	19.4
125	28	14,763	-58.8		27	17.2
100	26	16,159	-60.0		27	13.0
80	24	17,552	-60.8		28	8.9
70	23	18,381	-60.1		28	6.2
60	21	19,343	-59.9		29	5.0
50	21	20,485	-59.0		31	2.9
40	21	21,887	-58.1		35	2.3
30	19	23,706	-56.8		02	3.6
25	19	24,863	-56.2		04	4.7
20	18	26,284	-55.4		03	5.9
15	16	28,130	-54.5		03	7.1
10	7	30,761	-52.8			

SALT LAKE CITY, UTAH 874 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,288	.8	-3.2	16	1.9
1000	30	192				
950	30	613				
900	30	1,052				
850	30	1,514	1.8	-5.6	18	2.5
800	30	2,002	.4	-8.9	21	2.8
750	30	2,517	-2.3	-10.8	25	3.6
700	30	3,062	-5.5	-14.1	27	5.8
650	30	3,641	-8.0	-17.3	28	8.7
600	30	4,259	-11.5	-20.9	28	10.6
550	30	4,921	-15.4	-25.0	28	12.3
500	30	5,635	-19.8	-30.0	28	13.7
450	30	6,408	-25.4	-35.2	28	15.7
400	30	7,252	-32.0	-40.8	28	17.5
350	30	8,185	-38.5	-45.9	28	19.0
300	30	9,225	-46.0		29	20.3
250	30	10,420	-52.7		29	19.7
200	30	11,847	-56.2		29	19.6
175	30	12,694	-57.0		28	18.5
150	30	13,666	-59.3		28	17.0
125	29	14,806	-60.9		28	15.8
100	29	16,187	-62.5		28	11.4
80	29	17,563	-62.8		28	8.1
70	29	18,387	-62.7		28	5.9
60	29	19,339	-62.0		30	4.1
50	27	20,471	-61.5		31	2.2
40	27	21,861	-59.6		35	2.1
30	25	23,669	-57.8		01	2.6
25	24	24,821	-57.4		36	3.3
20	24	26,235	-55.9		36	3.7
15	24	28,070	-55.1		32	4.6
10	7	30,672	-53.2			

SAN DIEGO, CALIF. 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	124	9.9	6.9	07	1.0
1000	30	146			04	.8
950	30	576	12.5	.7	30	.5
900	30	1,029	12.5	-6.0	30	1.3
850	30	1,506	10.1	-9.1	30	2.0
800	30	2,008	8.0	-11.9	30	3.4
750	30	2,538	5.4	-14.6	30	4.9
700	30	3,098	1.9	-17.1	29	6.0
650	30	3,691	-1.6	-19.8	29	7.0
600	30	4,324	-5.6	-23.3	29	7.6
550	30	5,000	-10.0	-27.7	29	8.4
500	30	5,728	-15.0	-33.1	28	9.9
450	30	6,515	-20.9	-36.3	28	11.8
400	30	7,374	-27.5	-41.2	28	14.5
350	30	8,324	-34.4	-47.5	28	15.9
300	30	9,384	-41.4	-49.7	28	19.1
250	30	10,600	-49.5		28	20.1
200	30	12,038	-56.5		27	23.8
175	30	12,879	-59.7		27	22.8
150	30	13,837	-62.6		27	19.6
125	30	14,954	-65.3		27	17.2
100	30	16,304	-67.2		27	13.2
80	29	17,646	-67.7		28	7.7
70	29	18,452	-66.9		28	5.7
60	29	19,386	-65.3		29	4.6
50	29	20,503	-62.6		30	3.0
40	29	21,888	-60.1		31	2.1
30	29	23,695	-57.1		28	3.2
25	29	24,853	-55.9		28	4.5
20	29	26,279	-54.0		28	6.6
15	26	28,144	-51.4		28	11.2
10	21	30,804	-48.3		28	16.7
7	10	33,148	-45.8			

SAN JUAN, P. R. 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	6	24.3	19.2	20	1.5
1000	30	126	24.2	19.7	10	5.8
950	30	574	21.2	16.9	08	4.1
900	30	1,041	18.1	13.4	08	4.7
850	30	1,529	14.9	9.6	07	3.5
800	30	2,040	12.3	5.5	08	2.8
750	30	2,579	10.1	-1.7	07	2.4
700	30	3,151	8.0	-10.1	06	2.0
650	30	3,760	5.3	-14.9	05	2.2
600	30	4,409	1.8	-17.7	04	2.0
550	30	5,106	-2.2	-21.5	02	1.8
500	30	5,856	-7.0	-26.4	35	2.8
450	30	6,668	-12.7	-31.1	35	3.8
400	30	7,556	-19.2	-36.7	33	5.0
350	30	8,539	-26.4	-42.9	32	6.0
300	30	9,630	-35.2	-49.8	31	8.3
250	30	10,874	-45.0		32	11.2
200	30	12,329	-56.2		31	13.4
175	30	13,166	-62.2		31	15.1
150	29	14,105	-68.8		30	13.5
125	29	15,181	-74.4		30	12.9
100	29	16,466	-77.5		31	8.2
80	29	17,747	-75.6		33	3.8
70	29	18,528	-70.9		35	2.7
60	29	19,452	-66.4		05	1.3
50	28	20,568	-62.3		08	1.9
40	27	21,965	-57.4		07	3.4
30	27	23,802	-53.0		08	4.0
25	25	24,988	-49.8		08	5.0
20	24	26,457	-47.2		09	6.0
15	23	28,378	-43.1		10	7.4
10	13	31,123	-39.7			

*** SAULT STE MARIE, MICH. 988 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	221	-1.3	-3.7	06	.7
1000	30	123				
950	30	533	-1.9	-5.2	20	.3
900	30	961	-4.3	-6.1	27	1.8
850	30	1,410	-5.7	-10.3	27	4.7
800	30	1,885	-6.7	-14.2	27	7.1
750	30	2,388	-8.6	-17.1	28	9.4
700	30	2,920	-11.2	-19.5	28	10.8
650	30	3,487	-13.7	-22.1	28	11.9
600	30	4,092	-16.8	-25.4	28	13.6
550	30	4,741	-20.4	-30.0	28	15.5
500	30	5,440	-24.9	-33.5	28	17.5
450	30	6,198	-30.4	-37.7	28	19.6
400	30	7,026	-35.7	-42.2	28	22.6
350	30	7,946	-41.9	-43.6	28	24.8
300	30	8,973	-48.0		27	26.5
250	30	10,165	-51.6		27	29.3
200	29	11,615	-52.3		27	28.3
175	29	12,478	-52.7		27	23.8
150	29	13,471	-53.8		27	21.1
125	29	14,639	-55.3		27	17.7
100	29	16,058	-56.4		27	13.4
80	29	17,472	-57.4		28	10.2
70	29	18,315	-57.7		28	7.3
60	29	19,287	-58.1		28	6.3
50	28	20,436	-58.7		29	4.9
40	28	21,838	-58.5		30	3.8
30	28	23,645	-58.6		31	3.0
25	28	24,792	-58.4		32	3.9
20	26	26,194	-58.1		31	5.1
15	20	28,000	-57.2		32	6.2
10	17	30,575	-55.1		29	9.7
7	11	32,819	-53.1			

*** SHEMYA, ALASKA 997 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	29	38	2.9	-1.0	24	2.6
1000	29	16			19	7.1
950	29	430	-.1	-3.6	23	3.4
900	29	861	-3.2	-6.0	23	4.8
850	29	1,311	-6.2	-9.2	23	5.1
800	29	1,783	-8.7	-13.4	23	6.0
750	29	2,281	-11.7	-16.5	23	6.7
700	29	2,806	-15.0	-20.9	24	7.3
650	29	3,363	-18.3	-25.6	24	7.9
600	29	3,956	-22.1	-30.5	23	9.5
550	29	4,591	-26.3	-35.1	23	9.8
500	29	5,274	-31.0	-40.1	24	10.3
450	29	6,013	-36.1	-43.1	24	10.9
400	29	6,821	-41.7	-41.3	24	12.5
350	29	7,719	-46.8		24	14.9
300	28	8,733	-51.2		25	18.5
250	28	9,911	-53.1		25	16.5
200	28	11,350	-52.7		25	18.2
175	27	12,225	-52.5		25	17.3
150	27	13,221	-52.7		25	17.3
125	26	14,404	-52.4		25	16.9
100	26	15,848	-52.3		25	16.3
80	25	17,284	-53.0		25	14.9
70	24	18,149	-53.2		25	13.3
60	20	19,143	-53.0		24	13.2
50	19	20,312	-52.7		24	13.6
40	17	21,760	-52.2		24	12.1
30	16	23,623	-51.0		24	12.2
25	15	24,819	-50.4		24	13.9
20	14	26,276	-50.2		24	13.4
15	12	28,155	-50.2		24	15.8
10	12	30,808	-49.4		25	18.1
7	7	33,145	-49.3			

*** SHREVEPORT, LA. 1011 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	79	8.1	4.2	11	1.1
1000	30	165	10.3	4.8	13	1.4
950	30	594	10.7	3.6	18	2.1
900	30	1,045	10.5	.6	26	3.5
850	30	1,520	9.1	-3.4	27	5.6
800	30	2,021	7.7	-6.5	27	6.3
750	30	2,551	5.9	-9.9	27	7.7
700	30	3,113	3.1	-12.1	27	9.2
650	30	3,710	.4	-17.4	27	11.2
600	30	4,348	-3.4	-20.9	27	12.2
550	30	5,030	-7.6	-24.9	26	14.0
500	30	5,765	-12.9	-29.1	27	15.9
450	30	6,560	-18.2	-34.1	27	17.8
400	30	7,429	-24.5	-39.5	27	21.8
350	30	8,389	-32.0	-44.8	27	23.5
300	30	9,457	-40.2	-49.6	27	27.3
250	30	10,677	-49.4		27	31.6
200	30	12,107	-58.9		27	33.2
175	30	12,938	-62.3		27	30.6
150	29	13,888	-64.6		27	26.6
125	29	14,993	-67.9		27	24.1
100	29	16,322	-71.2		27	18.2
80	28	17,639	-70.4		27	10.8
70	28	18,437	-68.1		27	7.8
60	28	19,368	-65.6		27	4.9
50	27	20,491	-62.4		27	4.7
40	26	21,884	-59.2		27	5.8
30	24	23,703	-56.1		27	7.6
25	23	24,865	-54.6		27	11.1
20	22	26,299	-52.7		27	12.4
15	20	28,162	-50.4		27	18.6
10	12	30,826	-45.8		28	24.4
7	5	33,213	-41.6			

SPOKANE, WASH. 932 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	720	.6	-2.0	19	2.0
1000	30	150				
950	30	566				
900	30	1,003	1.7	-2.2	21	4.3
850	30	1,462	.1	-6.2	23	6.3
800	30	1,947	-2.1	-8.7	25	7.3
750	30	2,457	-5.0	-11.0	25	8.7
700	30	2,997	-7.7	-13.9	26	10.7
650	30	3,571	-10.7	-19.0	27	11.9
600	30	4,183	-14.2	-23.7	27	13.1
550	30	4,838	-18.0	-26.5	28	14.3
500	30	5,545	-22.5	-32.0	28	16.0
450	30	6,310	-27.7	-36.9	28	18.0
400	30	7,147	-34.0	-41.4	28	19.7
350	30	8,073	-40.2	-44.0	28	21.1
300	30	9,106	-47.7		29	23.3
250	29	10,295	-53.1		29	24.4
200	29	11,724	-55.5		28	22.5
175	28	12,575	-55.7		28	21.3
150	28	13,557	-56.0		29	18.5
125	27	14,712	-57.1		28	15.9
100	27	16,120	-58.1		28	12.9
80	26	17,523	-58.5		28	8.7
70	25	18,363	-58.0		28	6.2
60	25	19,333	-58.4		28	5.4
50	25	20,481	-57.9		30	4.2
40	24	21,892	-57.5		35	2.9
30	22	23,716	-56.5		01	4.0
25	21	24,872	-56.3		02	4.9
20	18	26,282	-56.2		03	7.2
15	13	28,097	-57.0		02	7.0
10	6	30,662	-56.2			

*** SWAN ISLAND, W. I. 1011 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	10	26.0	22.6	07	2.3
1000	30	106	26.0	22.4	07	2.6
950	30	557	22.4	20.0	07	2.6
900	30	1,027	19.4	16.3	08	2.3
850	30	1,518	16.3	12.7	08	2.0
800	30	2,032	13.6	9.3	09	1.8
750	30	2,575	10.9	4.2	10	1.4
700	30	3,148	8.5	-2.0	10	1.3
650	30	3,758	5.2	-4.8	09	1.5
600	30	4,408	1.8	-10.7	09	1.7
550	30	5,105	-2.0	-16.8	09	1.6
500	30	5,856	-6.5	-21.5	08	2.1
450	30	6,672	-11.3	-26.7	09	1.3
400	30	7,566	-17.4	-30.8	08	.1
350	29	8,557	-24.5	-36.3	25	.9
300	29	9,657	-33.0	-44.7	24	2.9
250	29	10,912	-43.4		24	5.4
200	28	12,374	-55.8		23	6.3
175	28	13,211	-62.7		23	7.0
150	27	14,145	-69.7		23	7.6
125	27	15,217	-75.1		25	6.4
100	26	16,496	-79.4		30	1.6
80	25	17,766	-77.3		07	2.2
70	25	18,541	-71.9		07	2.1
60	24	19,461	-67.7		07	1.7
50	24	20,574	-62.5		09	2.6
40	23	21,965	-57.7		09	3.4
30	21	23,799	-53.3		09	4.3
25	20	24,981	-50.8		08	5.6
20	15	26,438	-48.0		09	5.7
15	14	28,362	-43.2		08	8.4
10	11	31,111	-39.1			

TAMPA, FLA. 1017 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	8	15.6	13.2	06	3.1
1000	30	153	17.5	12.5	07	3.9
950	30	592	16.8	9.9	10	2.8
900	30	1,052	14.3	6.8	18	.7
850	30	1,533	12.6	.9	27	1.5
800	30	2,041	11.1	-4.6	28	3.1
750	30	2,578	9.4	-9.5	28	3.9
700	30	3,147	6.4	-12.6	27	4.4
650	30	3,751	3.0	-17.4	27	5.6
600	30	4,394	-1.0	-20.2	28	6.6
550	30	5,083	-5.5	-24.0	28	8.0
500	30	5,823	-10.6	-28.2	28	10.2
450	30	6,625	-16.0	-33.2	28	12.7
400	30	7,502	-22.1	-38.5	28	14.9
350	30	8,473	-29.3	-44.3	28	17.0
300	30	9,553	-37.6	-51.2	27	21.0
250	29	10,789	-46.6		27	26.1
200	29	12,234	-57.4		27	29.1
175	29	13,067	-62.7		27	31.7
150	29	14,007	-67.1		27	27.6
125	29	15,097	-70.3		28	21.4
100	28	16,414	-72.9		28	14.2
80	29	17,717	-73.5		28	6.9
70	28	18,503	-70.6		27	3.6
60	28	19,427	-66.4		25	2.8
50	27	20,546	-61.2		28	2.3
40	27	21,944	-57.6		29	2.3
30	26	23,776	-54.6		27	2.3
25	26	24,950	-52.1		28	3.6
20	23	26,412	-48.9		28	6.3
15	22	28,311	-46.5		27	12.6
10	15	31,051	-41.2		27	19.2
7						

TOPEKA, KANS. 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	268	4.0	.3	21	1.4
1000	30	152				
950	30	571	5.5	-1.4	23	5.1
900	30	1,013	5.4	-3.5	25	7.2
850	30	1,480	4.4	-6.4	26	8.1
800	30	1,972	2.3	-8.2	27	8.5
750	30	2,491	-.3	-11.3	28	9.8
700	30	3,040	-2.9	-15.5	28	12.2
650	30	3,625	-5.6	-19.4	28	14.2
600	30	4,249	-8.8	-22.9	28	16.5
550	30	4,918	-12.9	-27.7	27	17.7
500	30	5,637	-18.0	-31.5	27	20.2
450	30	6,417	-23.4	-35.7	27	22.6
400	30	7,268	-29.6	-41.3	27	24.6
350	30	8,209	-36.5	-45.6	27	27.1
300	30	9,258	-44.2	-46.6	27	28.5
250	30	10,460	-51.6		27	29.6
200	30	11,890	-56.3		27	30.7
175	30	12,734	-58.4		27	29.6
150	29	13,693	-60.0		28	26.1
125	28	14,834	-61.7		28	22.4
100	28	16,209	-63.9		28	16.2
80	27	17,575	-64.0		28	9.6
70	27	18,394	-62.9		28	9.1
60	27	19,345	-62.4		29	6.0
50	26	20,477	-61.0		29	4.1
40	25	21,870	-59.8		29	3.3
30	24	23,674	-58.1		29	4.4
25	22	24,831	-57.2		28	5.3
20	22	26,248	-55.8		29	5.8
15	17	28,090	-54.3		28	11.0
10	13	30,695	-51.2		28	15.6
7	6	33,048	-44.8			

+ TRUK, CAROLINE IS. 1010 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	2	29.2	24.2	06	2.7
1000	30	88	28.1	21.3	06	2.9
950	30	542	24.3	18.7	07	4.4
900	30	1,014	21.1	14.8	08	4.3
850	30	1,507	18.3	11.1	08	4.1
800	30	2,026	16.2	6.7	08	4.6
750	30	2,573	13.2	3.1	08	5.3
700	30	3,150	10.1	-1.5	08	6.4
650	30	3,763	6.7	-6.4	09	8.0
600	30	4,416	3.0	-9.9	09	9.1
550	30	5,116	-.9	-15.2	09	9.0
500	30	5,870	-5.2	-20.2	09	8.0
450	30	6,691	-10.0	-26.3	09	6.8
400	29	7,589	-15.6	-32.5	09	5.3
350	29	8,588	-22.1	-38.5	07	4.0
300	29	9,699	-30.6	-45.5	02	1.5
250	29	10,967	-41.0		02	1.1
200	29	12,444	-53.1		05	.6
175	29	13,292	-59.9		02	1.2
150	29	14,237	-67.5		04	2.5
125	29	15,314	-75.7		07	4.2
100	29	16,579	-82.7		08	9.8
80	29	17,830	-78.0		09	7.5
70	29	18,608	-71.0		06	1.0
60	29	19,532	-65.9		26	4.0
50	29	20,650	-61.6		28	5.9
40	29	22,044	-58.3		28	5.0
30	27	23,871	-54.3		25	1.8
25	24	25,043	-52.0		14	2.3
20	23	26,498	-48.4		11	2.8
15	22	28,410	-44.6		09	8.4
10	21	31,154	-39.4		09	18.7
7	15	33,645	-33.1			

*** TUCSON, ARIZ. 926 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	789	7.8	.8	15	3.0
1000	30	147				
950	30	576				
900	30	1,026	12.9	-.4	14	2.9
850	30	1,505	11.3	-4.0	16	1.9
800	30	2,008	8.1	-7.0	22	3.0
750	30	2,538	5.0	-10.9	23	4.4
700	30	3,098	2.1	-15.0	25	5.6
650	30	3,692	-1.3	-19.4	26	6.7
600	30	4,326	-4.9	-22.6	26	8.3
550	30	5,004	-9.5	-26.5	26	9.8
500	30	5,733	-14.6	-30.8	26	13.1
450	30	6,522	-20.3	-34.6	26	15.6
400	30	7,383	-27.1	-39.6	26	18.3
350	30	8,336	-33.6	-44.7	26	21.5
300	30	9,398	-40.9	-48.8	26	26.1
250	30	10,617	-48.8		26	29.1
200	30	12,057	-56.7		26	29.5
175	30	12,896	-60.4		26	26.8
150	30	13,849	-63.6		26	23.5
125	30	14,961	-66.5		26	20.1
100	29	16,300	-68.8		27	15.0
80	28	17,634	-69.1		27	9.1
70	28	18,435	-67.8		27	6.8
60	28	19,368	-65.5		28	4.8
50	28	20,484	-62.6		28	4.3
40	28	21,869	-60.0		28	4.1
30	27	23,680	-57.1		27	4.6
25	27	24,840	-54.9		26	6.3
20	26	26,271	-53.8		27	8.2
15	25	28,124	-51.9		28	13.2
10	17	30,767	-48.4		27	17.3
7	8	33,126	-43.7			

*** VANDENBERG AFB, CALIF. 1007 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	100	8.3	5.7	05	.8
1000	30	158	10.0	5.2	01	1.5
950	30	587	12.6	-.4	35	3.9
900	30	1,040	11.3	-4.0	35	3.8
850	30	1,515	9.1	-7.8	35	3.7
800	30	2,015	6.6	-11.0	33	4.0
750	30	2,542	4.2	-14.5	32	5.7
700	30	3,101	1.6	-18.1	31	6.8
650	30	3,694	-1.9	-20.8	30	7.2
600	30	4,325	-6.2	-23.9	30	8.3
550	30	5,000	-10.5	-26.3	31	9.1
500	30	5,728	-15.2	-29.2	31	10.1
450	30	6,516	-20.7	-33.6	31	11.6
400	30	7,376	-27.1	-39.1	31	13.7
350	30	8,324	-34.4	-46.0	31	15.6
300	30	9,383	-42.4		31	17.8
250	30	10,593	-50.6		30	19.4
200	30	12,021	-58.2		29	21.0
175	30	12,858	-60.1		29	20.2
150	30	13,816	-62.1		28	16.0
125	30	14,935	-64.9		28	14.2
100	30	16,291	-66.4		29	12.1
80	30	17,640	-67.1		28	8.7
70	29	18,446	-66.0		29	4.9
60	29	19,385	-64.5		31	3.9
50	28	20,504	-62.8		32	3.0
40	27	21,888	-60.7		34	2.7
30	27	23,691	-57.7		32	1.6
25	26	24,847	-56.2		29	1.8
20	25	26,273	-53.9		29	3.9
15	23	28,125	-52.1		29	6.6
10	18	30,755	-49.2			
7	5	33,043	-48.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

NOVEMBER 1971

VICTORIA, TEXAS — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	33	13.9	11.6	05	1.7
1000	30	149	16.6	11.2	08	2.0
950	30	586	15.5	9.0	15	3.7
900	30	1,045	14.4	3.8	19	4.1
850	30	1,526	12.8	-.6	22	3.7
800	30	2,034	11.1	-5.4	24	4.3
750	30	2,570	9.0	-10.6	25	5.7
700	30	3,139	6.2	-13.0	26	7.3
650	30	3,742	2.8	-17.4	26	8.7
600	30	4,385	-1.3	-20.6	26	9.8
550	30	5,072	-5.7	-25.3	26	10.9
500	30	5,813	-10.5	-29.0	26	12.0
450	30	6,615	-15.9	-33.1	27	14.8
400	30	7,492	-22.2	-38.7	26	17.6
350	30	8,462	-29.5	-45.1	26	20.0
300	30	9,540	-38.0	-52.2	27	22.8
250	30	10,770	-47.7		27	25.3
200	30	12,209	-58.2		27	27.8
175	28	13,041	-63.3		26	27.8
150	28	13,979	-67.0		26	25.7
125	28	15,075	-69.4		26	22.1
100	27	16,394	-72.7		27	16.3
80	26	17,698	-73.3		27	9.8
70	25	18,486	-70.6		26	6.5
60	24	19,411	-66.4		26	4.4
50	24	20,527	-61.8		25	4.4
40	24	21,918	-58.8		27	4.4
30	24	23,739	-55.5		27	6.2
25	24	24,907	-53.7		27	7.4
20	24	26,347	-52.0		27	9.8
15	24	28,224	-48.8		27	14.2
10	19	30,925	-43.3		27	25.0
7						

* WAKE IS., PACIFIC AREA — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	5	26.4	22.6	07	6.2
1000	30	124	25.2	20.8	07	7.2
950	30	573	21.6	18.8	08	7.7
900	30	1,042	18.8	15.4	08	7.0
850	30	1,532	16.5	10.1	08	6.3
800	30	2,047	14.5	3.6	08	5.2
750	30	2,590	12.2	-.4	08	5.8
700	30	3,166	9.4	-5.2	07	5.8
650	30	3,777	6.1	-9.9	07	5.3
600	30	4,428	2.5	-14.8	06	5.5
550	30	5,126	-1.7	-18.6	06	5.4
500	30	5,878	-6.6	-24.3	05	5.8
450	30	6,694	-11.8	-29.3	04	5.7
400	30	7,585	-17.9	-35.6	03	7.2
350	30	8,572	-25.3	-41.5	03	7.6
300	30	9,668	-34.1	-48.3	02	7.3
250	30	10,919	-43.7		02	8.4
200	30	12,382	-54.9		01	7.2
175	28	13,224	-60.9		36	7.5
150	28	14,167	-67.8		36	7.2
125	28	15,248	-74.3		01	6.6
100	27	16,524	-80.0		04	4.3
80	26	17,791	-79.8		07	7.2
70	25	18,586	-74.0		08	7.6
60	24	19,474	-68.7		09	6.8
50	24	20,584	-63.7		10	6.0
40	24	21,966	-59.7		09	6.3
30	24	23,784	-55.5		09	6.4
25	24	24,959	-50.8		10	7.3
20	24	26,427	-46.9			
15	24	28,311	-45.6			
10	19	30,949	-41.3			
7						

* WALLOPS IS., VA. NASA — 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	4	7.7	3.7	28	2.3
1000	30	154	8.6	2.6	29	3.1
950	30	577	6.3	-.2	29	5.5
900	30	1,019	4.3	-2.9	29	7.2
850	30	1,483	2.4	-7.0	28	9.0
800	30	1,971	.7	-10.5	27	10.1
750	30	2,489	-.5	-14.4	27	11.5
700	30	3,038	-2.4	-16.0	27	14.2
650	30	3,624	-5.2	-17.6	27	17.0
600	30	4,248	-8.9	-20.4	27	18.5
550	30	4,917	-13.3	-24.7	27	20.8
500	30	5,636	-17.8	-28.8	27	22.3
450	30	6,416	-23.1	-34.8	27	23.9
400	30	7,268	-29.1	-40.1	27	27.3
350	30	8,212	-36.0	-45.1	27	29.2
300	30	9,263	-43.6	-50.9	27	31.1
250	30	10,469	-52.8		27	32.7
200	30	11,903	-56.2		28	30.6
175	28	12,748	-57.7		28	29.6
150	28	13,716	-60.0		27	25.9
125	28	14,848	-62.8		27	21.8
100	28	16,220	-64.6		28	15.8
80	27	17,582	-64.5		28	10.2
70	27	18,401	-63.2		27	6.8
60	27	19,355	-61.8		27	6.1
50	26	20,489	-60.7		27	5.5
40	25	21,873	-59.7		27	5.2
30	25	23,680	-57.7		27	6.8
25	24	24,832	-57.5		27	8.1
20	24	26,251	-56.1		27	10.5
15	23	28,088	-54.3		26	12.6
10	19	30,690	-51.1		27	23.3
7	10	33,029	-45.7			

WASHINGTON (DULLES INT. AP) — 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	85	2.9	-.3	29	2.7
1000	30	157	5.9	1.1	28	2.4
950	30	577	5.0	-1.4	28	5.8
900	30	1,016	2.9	-3.8	29	7.7
850	30	1,478	1.2	-7.5	29	9.1
800	30	1,965	..	-11.3	28	10.5
750	30	2,481	-1.4	-14.8	28	12.0
700	30	3,029	-3.3	-17.0	28	12.8
650	30	3,613	-6.1	-19.4	28	13.9
600	30	4,235	-9.6	-24.2	27	16.7
550	30	4,902	-13.9	-27.1	27	18.5
500	30	5,619	-18.7	-32.3	27	20.6
450	30	6,397	-23.8	-36.8	27	23.1
400	30	7,247	-29.9	-42.7	27	25.6
350	30	8,189	-36.5	-47.4	27	29.2
300	30	9,237	-44.0	-51.3	28	31.7
250	30	10,443	-50.6		29	34.2
200	30	11,879	-55.5		27	32.6
175	30	12,728	-57.1		27	30.1
150	30	13,699	-58.9		27	26.7
125	30	14,837	-61.1		27	22.5
100	29	16,215	-62.9		27	15.9
80	29	17,660	-63.4		27	11.3
70	29	18,456	-62.4		27	8.6
60	28	19,388	-61.6		27	6.1
50	27	20,408	-60.4		27	5.6
40	27	21,589	-59.4		28	5.2
30	26	23,692	-58.2		27	6.4
25	26	24,842	-57.6		28	7.0
20	26	26,261	-56.1		28	9.8
15	26	28,096	-54.3		28	12.6
10	15	30,690	-51.7		27	23.3
7	7	33,014	-47.4			

ABILENE, TEX. — 1014 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	44	9.5	7.3	35	.9
1000	30	98	12.0	6.6	00	1.0
950	30	544	12.7	5.4	01	1.4
900	30	1,019	11.4	1.3	26	3.4
850	30	1,519	9.8	-5.5	26	4.6
800	30	2,041	8.5	-9.3	27	5.1
750	30	2,589	6.7	-11.8	27	5.8
700	30	3,167	4.3	-16.6	28	8.9
650	30	3,776	.7	-19.0	27	10.7
600	30	4,434	-3.2	-21.5	28	12.9
550	30	5,137	-7.6	-27.1	28	15.0
500	30	5,877	-12.9	-31.0	27	17.1
450	30	6,666	-18.1	-36.8	27	18.3
400	30	7,535	-24.6	-40.5	27	20.4
350	30	8,496	-31.6	-45.6	27	22.3
300	30	9,556	-39.7	-51.4	27	24.1
250	30	10,688	-48.8		27	31.1
200	30	12,124	-57.9		27	34.1
175	30	12,969	-61.8		27	34.5
150	30	13,935	-64.9		27	31.8
125	29	15,009	-68.0		28	28.6
100	29	16,240	-70.8		28	24.6
80	29	17,660	-70.9		28	17.4
70	29	18,456	-68.4		27	7.6
60	28	19,388	-65.3		26	6.0
50	27	20,508	-61.9		27	3.8
40	27	21,839	-58.9		27	5.7
30	26	23,724	-55.5		27	7.0
25	26	24,891	-54.0		27	8.3
20	26	26,329	-52.2		27	11.9
15	26	28,208	-49.7		27	17.2
10	18	30,884	-45.7		27	27.8
7	10	33,264	-40.3			

WINNEMUCCA, NEV. — 873 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	1,312	-2.7	-7.0	19	.8
1000	30	214				
950	30	629				
900	30	1,063				
850	30	1,521	1.9	-5.9	19	1.6
800	30	2,018	.6	-7.4	24	3.3
750	30	2,525	-1.8	-10.1	26	5.3
700	30	3,072	-4.2	-13.0	28	7.0
650	30	3,653	-7.3	-17.6	28	8.3
600	30	4,273	-10.8	-20.7	29	10.5
550	30	4,937	-14.9	-25.5	29	11.8
500	30	5,651	-19.6	-28.8	29	11.7
450	30	6,425	-25.1	-34.3	29	12.3
400	30	7,270	-31.4	-39.7	30	13.7
350	30	8,206	-38.1	-45.4	30	15.6
300	30	9,247	-45.7		31	16.5
250	30	10,441	-53.2		30	15.1
200	29	11,869	-58.8		29	13.2
175	29	12,706	-59.3		28	13.5
150	29	13,670	-60.0		28	14.4
125	29	14,804	-61.9		28	12.9
100	29	16,177	-63.8		28	10.7
80	27	17,347	-63.6		29	7.3
70	26	18,368	-63.0		29	5.1
60	26	19,318	-62.7		30	3.8
50	25	20,444	-61.7		35	2.4
40	25	21,832	-59.8		01	2.4
30	24	23,637	-58.2		04	2.8
25	23	24,787	-57.1		03	3.9
20	22	26,208	-55.9		03	4.1
15	16	28,065	-54.3		01	5.3
10						
7						

WINSLOW, ARIZ. — 854 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	1,487	.5	-5.2	21	.5
1000	30	197				
950	30	618				
900	30	1,059				
850	30	1,521			18	.9
800	30	2,013	3.8	-7.0	24	2.1
750	30	2,535	2.1	-10.3	25	3.6
700	30	3,090	-.6	-14.7	26	6.1
650	30	3,678	-3.8	-18.2	27	7.6
600	30	4,306	-7.3	-21.6	27	8.8
550	30	4,980	-11.4	-25.8	27	10.0
500	30	5,704	-16.6	-31.1	27	11.1
450	30	6,487	-22.4	-36.2	28	13.3
400	30	7,341	-28.9	-40.9	27	17.5
350	30	8,286	-35.5	-45.5	27	20.8
300	30	9,339	-42.9	-50.3	27	24.4
250	30	10,550	-49.8		27	26.5
200	29	11,987	-56.7		27	28.3
175	29	12,829	-59.2		27	25.7
150	29	13,789	-62.0		27	22.6
125	29	14,911	-64.4		27	18.4
100	29	16,264	-66.7		27	13.9
80	27	17,608	-66.7		27	9.7
70	26	18,417	-65.8		28	7.1
60	26	19,356	-64.7		29	4.8
50	25	20,475	-62.3		29	2.7
40	25	21,862	-60.1		29	2.2
30	24	23,670	-57.2		28	3.3
25	23	24,819	-56.1		28	3.9
20	21	26,240	-54.3		29	6.3
15	19	28,088	-53.2		28	10.0
10	10	30,738	-49.2			

YAKUTAT, ALASKA — 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	12	-1.3	-3.3	09	2.4
1000	30	33			09	3.5
950	30	446	.8	-4.3	11	4.8
900	30	879	-2.0	-6.1	14	3.7
850	30	1,330	-5.3	-8.4	15	4.1
800	30	1,804	-8.2	-12.1	16	4.9
750	30	2,302	-11.2	-16.5	17	4.8
700	30	2,829	-14.6	-20.0	19	5.1
650	30	3,386	-18.4	-24.6	20	6.0
600	30	3,980	-22.0	-29.3	22	6.2
550	30	4,614	-26.1	-34.2	22	7.3
500	30	5,298	-30.4	-39.5	23	8.1
450	30	6,039	-35.4	-42.1	23	9.6
400	30	6,850	-40.9	-44.6	24	12.3
350	30	7,751	-45.8		25	13.0
300	30	8,764	-50.5		26	15.5
250	30	9,951	-51.1		27	16.8
200	30	11,405	-50.2		26	16.0
175	30	12,277	-50.3		26	15.6
150	30	13,283	-50.8		26	15.8
125	30	14,471	-50.9		26	15.9
100	30	15,921	-51.8		26	14.9
80	29	17,367	-52.1		26	14.0
70	29	18,231	-52.4		26	13.7
60	28	19,226	-53.2		26	13.3
50	28	20,400	-53.4		26	13.4
40	27	21,835	-53.9		27	13.2
30	27	23,680	-54.7		27	14.4
25	24	24,861	-54.5		27	14.9
20	23	26,287	-54.3		28	15.4
15	22	28,126	-56.0		28	17.6
10	15	30,680	-56.8			

YAP, CAROLINE IS. — 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	14	28.2	24.5	07	2.1
1000	30	80	26.9	22.4	07	2.4
950	30	532	23.7	19.9	08	4.3
900	30	1,004	20.8	16.1	08	4.9
850	30	1,497	17.9	12.3	09	5.3
800	30	2,015	15.4	8.4	09	5.6
750	30	2,561	12.8	4.0	09	6.0
700	30	3,138	9.7	-.2	09	6.6
650	30	3,750	6.3	-4.5	09	7.5
600	30	4,402	2.8	-8.8	10	8.2
550	30	5,102	-1.3	-12.8	10	8.6
500	30	5,856	-5.6	-18.1	10	8.5
450	30	6,675	-10.2	-22.8	10	8.7
400	30	7,573	-15.8	-28.7	10	8.8
350	30	8,570	-22.4	-36.0	10	8.3
300	30	9,681	-30.7	-44.0	09	7.0
250	30	10,947	-41.3		09	6.1
200	30	12,421	-53.9		10	5.5
175	30	13,266	-60.8		09	5.8
150	30	14,207	-68.4		09	6.8
125	30	15,280	-76.3		09	10.5
100	30	16,542	-82.7		09	14.1
80	30	17,797	-78.3		09	9.5
70	30	18,570	-72.3		08	3.9
60	30	19,491	-66.5		34	1.0
50	30	20,607	-62.4		30	2.0
40	29	21,996	-58.8		35	.6
30	29	23,820	-54.3		14	1.7
25	28	24,996	-51.3		11	3.1
20	27	26,454	-48.8		10	7.1
15	24	28,360	-44.9		09	11.2
10	21	31,086	-40.4		09	18.9
7	12	33,567	-34.8			

YUCCA FLAT, NEV. — 883 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.h.
SURFACE	30	1,198	-1.4	-11.1	30	1.0
1000	30	198				
950	30	614				
900	30	1,049				
850	30	1,512	6.0	-6.9	35	2.0
800	30	2,007	4.0	-9.1	34	1.0
750	30	2,529	2.0	-12.2	31	1.6
700	30	3,083	-1.8	-15.1	29	2.7
650	30	3,671	-4.1	-17.7	29	5.3
600	30	4,298	-8.2	-20.1	29	6.9
550	30	4,968	-12.7	-25.2	29	8.2
500	30	5,688	-17.5	-29.0	28	9.5
450	30	6,469	-23.0	-33.2	28	10.6
400	30	7,321	-29.4	-39.4	29	12.2
350	30	8,264	-36.2	-44.9	29	14.4
300	30	9,314	-43.6		29	18.6
250	30	10,519	-51.6		29	19.8
200	28	11,937	-56.7		28	20.6
175	28	12,782	-58.0		28	18.6
150	28	13,749	-60.3		28	17.7
125	27	14,878	-62.3		27	14.1
100	27	16,248	-64.3		28	11.8
80	27	17,610	-65.1		29	7.8
70	27	18,424	-65.0		29	4.8
60	26	19,366	-63.5		30	4.8
50	26	20,488	-62.2		34	1.6
40	25	21,875	-59.7		34	1.7
30	25	23,683	-57.5		36	2.5
25	24	24,838	-55.9		34	2.0
20	23	26,262	-54.8		33	4.6
15	21	28,109	-53.0		32	6.0
10	16	30,758	-49.7			

Note: [illegible] the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at [illegible] to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

[illegible] in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate [illegible] ations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

+ Observations for these stations are scheduled at 0000 G.c.t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun.

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Nov.									
1	0.91	0.98	1.08	1.19	1.27	1.21	1.09	0.98	0.89
2	(.98)	(1.08)	(1.19)	(1.36)	(1.43)	1.37	1.23	1.14	1.05
3	1.01	1.11	1.22	1.34	1.41	1.30	1.03	.84	.73
4	1.06	1.12	1.24	1.35	1.41	1.35	1.22	1.10	.99
5	(.95)	(1.09)	----	(1.31)	----	----	----	----	----
6	----	----	(.71)	(1.27)	1.41	1.31	1.15	1.02	----
7	.91	1.01	1.13	1.26	1.30	1.18	(.99)	(.81)	(.71)
8	----	----	----	----	1.25	1.13	.97	.83	.71
9	(.93)	(1.01)	----	----	----	(1.31)	----	----	----
10	(.94)	(1.04)	(1.13)	(1.26)	(1.31)	----	----	----	----
11	(.89)	(1.01)	(1.08)	(1.16)	(1.27)	(1.28)	(1.09)	(.98)	(.80)
12	(.75)	(.93)	----	----	----	----	----	----	----
13	.89	1.01	1.16	1.27	1.35	1.31	1.16	1.05	.94
14	.98	1.08	1.19	1.30	1.37	1.30	1.14	1.02	.91
18	----	1.09	----	1.33	----	----	----	----	----
19	1.05	1.12	1.23	1.35	1.39	1.33	1.17	1.05	.94
20	1.07	1.17	1.26	1.41	1.44	1.38	1.26	1.13	1.04
21	(.98)	(1.06)	(1.14)	----	(1.32)	1.29	1.11	.98	.84
22	----	(.94)	----	----	----	(1.26)	(1.14)	(1.02)	----
23	(.88)	1.03	1.19	1.28	1.35	1.34	1.17	1.05	.94
24	1.00	1.10	1.21	1.35	1.39	1.36	1.23	1.09	.99
25	1.01	1.10	1.20	1.36	1.38	1.34	1.18	1.04	.96
26	(1.02)	(1.04)	----	(1.10)	----	----	----	----	----
27	(.78)	----	(1.05)	----	(1.32)	----	(1.15)	----	----
28	1.06	----	----	----	----	----	----	----	----
30	----	----	----	----	(1.30)	----	----	----	----
Averages	1.00	1.08	1.19	1.32	1.36	1.30	1.15	1.02	0.92

TUCSON, ARIZ.

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.56	3.65	2.74	1.83	*	1.83	2.74	3.65	4.56
Nov.									
1	1.02	1.10	1.20	1.35	1.43	1.38	1.17	1.06	0.95
2	.98	1.08	1.16	1.31	1.42	1.36	1.14	1.07	.95
3	.95	1.06	1.17	1.33	1.46	1.36	1.20	1.10	.99
4	1.01	1.11	1.21	1.35	----	----	----	----	----
6	----	----	----	----	----	1.28	1.11	1.01	.92
7	.92	1.05	1.16	1.33	1.40	1.32	1.14	.99	.88
8	.90	.99	1.14	1.30	1.40	----	1.10	----	----
9	----	----	----	----	1.38	1.27	1.06	.96	.83
10	.99	1.09	1.21	----	1.42	----	1.14	.99	.86
11	----	----	----	1.34	----	----	----	----	.83
12	----	1.06	1.20	----	----	----	----	----	----
13	.80	.91	1.02	1.25	1.31	1.20	.96	.78	.64
14	.92	1.02	1.14	1.29	1.36	1.26	----	----	----
17	.89	.98	1.12	1.31	1.39	1.32	1.15	----	----
18	.92	1.03	1.16	1.34	----	----	----	----	----
19	----	----	1.21	1.39	1.47	1.38	1.20	1.09	.99
20	1.01	1.10	1.22	1.34	1.36	1.24	1.10	.94	----
21	.85	.94	----	1.28	----	----	1.12	----	----
22	.85	.97	1.12	1.29	1.37	1.24	1.12	1.03	.92
23	.78	.96	1.14	1.26	1.37	1.27	1.08	.95	.83
24	.94	1.05	1.14	1.34	1.41	1.34	1.17	1.05	.94
25	.90	1.02	1.15	1.33	1.39	1.26	1.09	.96	.85
26	.89	1.00	1.14	1.31	1.37	1.32	1.14	1.05	.90
27	----	----	----	----	1.42	1.32	1.20	----	.96
Averages	0.92	1.03	1.16	1.32	1.40	1.30	1.13	1.00	.89

OMAHA, NEBR.

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Nov.									
2	0.96	1.04	1.17	1.29	1.30	----	----	----	----
3	.98	1.07	1.20	1.30	----	----	----	0.53	0.40
5	.88	1.00	1.12	1.27	1.31	1.26	----	----	----
6	.89	1.05	1.19	1.32	1.33	----	----	----	.58
7	HS .91	HS1.04	HS1.15	1.26	HS1.23	1.20	1.04	.88	.79
9	1.02	1.11	1.23	1.37	1.38	1.34	----	----	----
10	----	----	----	----	HS1.32	----	----	----	----
14	82	.92	1.04	1.24	HS1.25	HS1.26	HS1.02	HS .92	HS .82
Averages	0.92	1.03	1.16	1.29	1.30	1.27	1.03	0.78	0.65

MADISON, WIS.

Date	Sun's zenith distance								
	A.M.				*	P.M.			
	78.7°	75.7°	70.7°	60.0°		60.0°	70.7°	75.7°	78.7°
	Air mass								
	4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Nov.									
3	S 0.84	S 1.02	S 1.11	----	----	----	----	----	----
5	S .78	S .87	S .99	----	----	----	----	----	----
6	S .94	S 1.05	S 1.17	S 1.36	S 1.35	S 1.33	S 1.14	----	----
7	S .95	S 1.05	S 1.16	----	----	----	----	----	S .93
9	----	----	----	----	----	----	M 1.06	M .93	M .83
10	----	----	----	----	S 1.22	----	----	----	----
14	----	----	----	----	S 1.10	----	M 1.02	M .90	M .80
15	M .68	M .83	M .87	----	S 1.14	----	S 1.00	S .88	S .82
22	----	----	S 1.21	----	S 1.36	----	----	----	----
Averages	0.84	0.96	1.09	1.36	1.23	1.33	1.06	0.90	0.85

( ) Clouds Present
* Values corresponding to true solar noon

BD Blowing Dust
BN Blowing Sand
D Dust
DI Intense Dust
DM Moderate Dust
DS Slight Dust
F Fog
GF Ground Fog
H Haze
HI Intense Haze
HM Moderate Haze
HS Slight
I Intense Haze-indeterminable
K Smoke
KI Intense Smoke
KM Moderate Smoke
KS Slight Smoke
M Moderate Haze-indeterminable
N Sand
S Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

NOVEMBER 1971

Station	Day of month																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	400	394	391	387	335	367	366	318	335	332	335	300	351	344	61	172	193	277	339	357	304	252	322	319	315	289	266	234	154	242		300
AMES IOWA	20	340	351	301	307	346	331	33	327	303	291	209	228	276	214	102	86	64	229	198	207	116	86	86	69	---	---	---	---	280*		207
ANNETTE ALASKA	116	16	74	157	94	13	28	73	116	38	16	6	129	59	4	50	15	5	100	16	33	26	21	85	8	32	41	26	7	7		47
APALACHICOLA FLORIDA	364	300	162	432	392	374	367	410	206	400	403	392	335	368	354	352	352	345	305	355	366	---	---	---	---	---	312	137	338	328		337
ARGONNE NAT. LAB.	153	185	261	295	220	271	288	215	72	242	208	128	174	215	233	151	209	34	128	103	146	231	59	187	96	29	6	38	18	6		162
ASTORIA OREGON	135	96	68	213	247	178	205	58	23	40	77	187	20	145	---	117	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---
ATLANTA GEORGIA	---	262	350	373	371	287	371	366	70	348	338	326	324	285	297	293	290	204	132	317	326	323	111	46	312	233	278	259	229	---		278
BARROW ALASKA	4	3	2	2	2	3	3	13	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		1
BETHEL ALASKA	78	108	47	28	34	36	61	66	25	---	47	103	29	35	32	57	34	39	26	34	67	29	38	50	74	85	85	85	78	79		55
BISMARCK N.DAK.	261	295	292	156	270	204	258	262	251	140	139	249	194	26	30	43	111	134	123	80	227	161	103	---	91	29	32	58	164	97		150
BLUE HILL MASS.	194	43	---	278	---	---	---	---	260	161	76	154	151	249	126	239	210	89	113	153	43	108	219	111	---	---	---	---	---	---		---
BOISE IDAHO	310	319	306	190	333	306	160	247	159	101	61	35	44	236	138	249	254	136	180	161	73	177	114	28	181	34	126	49	74	144		164
BROOKINGS SOUTH DAKO	92	224	299	154	233	246	276	251	270	225	208	216	152	37	175	22	31	104	115	110	114	43	156	196	54	146	38	62	124	137		153
BROWNSVILLE TEXAS	425	366	392	440	473	465	208	404	346	455	383	389	382	252	254	348	276	305	373	426	435	161	247	260	226	93	207	388	408	237		334
BURLINGTON VERMONT	220	113	78	152	261	227	141	90	259	121	29	61	153	299	81	228	114	40	44	140	58	92	112	93	23	145	74	29	30	27		113
CAPE HATTERAS N.C.	342	261	168	366	360	122	179	326	290	286	340	301	326	305	127	304	317	319	307	265	146	332	263	139	306	220	115	281	72	292		259
CARIBOU MAINE	218	170	153	171	229	192	31	127	124	209	164	107	176	196	216	163	136	107	15	116	81	68	152	167	55	60	150	88	69	39		132
CHARLESTON S.C.	249	288	162	374	336	261	267	372	249	339	339	326	328	276	242	289	281	273	273	314	317	329	191	38	---	273	197	279	207	297		274
COLUMBIA MISSOURI	239	356	360	343	184	309	348	80	218	319	318	271	273	228	185	234	242	41	299	276	298	200	82	69	268	7	111	65	89	95		214
DAVIS CALIFORNIA	303	374	358	357	328	356	287	317	257	245	69	172	269	327	324	327	308	297	299	260	208	246	206	184	252	80	156	63	277	286		262
EL CENTRO CALIF. NPF	409	401	386	369	280	345	383	350	357	350	264	207	350	348	353	348	345	159	249	214	324	317	324	327	307	282	281	237	287	193		312
EL PASO TEXAS	436	424	417	406	363	326	146	381	377	383	388	363	355	369	125	270	202	376	371	338	367	336	359	368	363	360	339	332	274	251		339
ELY NEVADA	402	382	358	349	336	361	346	332	292	264	134	163	274	281	310	319	244	295	312	320	104	270	287	190	226	212	191	141	215	291		272
EPPLEY NEWPORT R.I.	84	74	51	296	292	167	74	245	276	114	179	187	103	267	77	250	247	103	152	194	103	68	245	93	---	---	96	88	62	89		156
FAIRBANKS ALASKA	59	81	76	30	25	28	59	23	43	13	50	25	---	24	16	---	8	---	---	20	8	34	8	6	---	23	---	---	11	--		30
FLAMING GORGE UTAH	349	385	378	374	299	353	383	341	310	207	285	174	281	350	116	89	176	---	---	305	281	260	314	270	145	219	148	145	222	121		240
FORT WORTH TEXAS	350	380	392	377	359	91	342	54	333	---	341	346	335	245	156	131	---	237	341	341	260	62	53	233	253	311	319	293	296	94		261
FRESNO CALIFORNIA	326	356	347	320	329	309	299	268	273	291	85	198	128	203	302	295	294	264	289	277	267	266	244	251	195	111	214	114	251	146		254
GAINESVILLE FLORIDA	403	312	316	513	473	492	461	371	438	349	507	495	473	464	436	334	423	334	386	254	454	454	428	145	377	402	374	147	232	417		387
GENEVA NEW YORK	228	167	134	190	223	166	251	250	160	74	50	50	122	178	59	28	150	183	24	86	39	76	238	72	44	123	32	60	7	65		115
GENEVA 2 N.Y.	260	180	161	236	260	197	322	294	181	80	52	54	129	220	70	25	175	210	30	101	41	86	285	83	57	141	37	72	11	67		135
GLASGOW MONTANA	150	190	156	94	208	250	180	227	190	107	114	184	174	166	96	78	109	136	110	142	155	115	179	63	104	67	24	32	81	141		132
GLACIER POINT VA	---	253	91	348	343	307	211	344	266	320	309	327	251	284	203	278	278	276	272	233	247	283	250	47	272	252	55	267	46	256		245
GRAND JUNCTION COLO.	327	371	304	276	166	327	274	300	307	325	300	145	269	283	69	170	178	328	321	313	195	102	247	300	129	222	42	199	224	201		227
GREAT FALLS MONTANA	268	227	37	123	146	245	188	224	---	180	167	131	165	219	75	62	174	208	104	197	194	205	133	95	116	199	134	116	124	129		155
GREENSBORO N.C.	287	265	173	379	374	241	366	370	145	342	---	287	301	144	276	287	239	284	177	260	265	326	127	15	287	204	158	276	56	288		249
INDIANAPOLIS INDIANA	302	299	312	344	321	49	343	321	45	235	271	202	250	214	165	217	239	67	205	71	133	280	68	90	195	55	28	73	25	163		184
ITHACA NEW YORK	171	167	114	110	303	224	257	145	210	92	48	94	148	267	55	23	113	243	63	147	37	41	284	96	36	134	69	44	32	47		131
LAKE CHARLES LA.	471	458	415	414	376	258	304	381	166	396	399	366	333	176	352	296	207	65	367	362	384	77	111	280	35	207	448	187	441	144		287
LAKELAND FLORIDA	292	122	256	342	301	367	417	371	338	277	420	414	415	354	354	292	342	263	303	244	373	377	344	223	366	347	329	301	144	94		321
LANDER WYOMING	338	342	343	279	292	320	333	301	145	209	223	240	231	257	172	198	253	254	218	252	252	231	241	217	213	231	184	216	177	194		234
LAS VEGAS NEVADA	375	362	365	358	321	356	333	320	288	307	213	213	320	321	134	267	309	255	294	281	154	257	284	284	290	255	214	197	198	245		277
LEXINGTON KENTUCKY	182	234	336	338	328	72	336	328	52	225	278	213	256	229	214	211	259	177	45	82	94	253	72	33	247	81	22	183	87	99		174
LITTLE ROCK ARKANSAS	262	279	368	368	351	16	383	151	335	349	337	329	270	277	248	309	141	34	229	326	317	249	96	197	92	77	47	60	17	136		209
LOS ANGELES CALIF.	379	365	371	350	284	283	109	286	270	300	144	357	320	354	327	338	311	181	313	266	306	264	286	---	213	191	272	225	292	---		281
LOS ANGELES CALIF.	374	367	364	337	283	286	166	218	234	---	132	292	265	344	320	325	292	139	312	254	292	264	276	248	176	233	246	292	272	227		260
MARION WISCONSIN	40	14	197	278	136	301	297	158	169	255	201	162	174	236	241	145	196	96	41	105	116	184	120	84	78	87	42	118	116	142		124
MANHATTAN KANSAS	36	342	337	339	282	348	339	49	326	316	312	239	237	302	199	65	37	51	301	286	301	69	96	27	130	52	269	24	69	45		141
MATANUSKA ALASKA	41	102	131	57	41	57	77	84	22	13	32	27	69	19	17	26	5	28	14	18	---	---	---	42	38	27	54	14	---	---		41
MIAMI FLORIDA	273	266	176	249	211	276	376	343	316	338	372	378	264	281	149	187	366	330	359	337	350	342	228	3[illegible]	278	252	299	257	14	86		291
MEDFORD OREGON	[illegible]	247	240	120	283	311	227	85	79	97	146*	161	147	197	163	74	36	49	93	191	92	184	128	126	49	41	37	34	61	19		134
MIDLAND TEXAS	409	423	416	401	362	99	99	166	380	380	364	375	342	---	---	328	385	376	371	384	309	305	324	349	199	368	367	315	284	99		321
NANTUCKET MASSACHUSETTS	332	184	357	343	341	205	346	339	46	283	307	292	306	212	266	275	277	246	52	284	287	274	54	54	44	77	45	242	69	155		221
NEW YORK CENTRAL PARK	38	188	42	304	314	287	271	325	186	221	209	174	133	253	28	136	242	189	141	174	207	132	47	214	51	148	91	256	46	78		159
NORTH OMAHA NEBRASKA	47	327	317	259	316	---	320	47	315	309	296	232	212	283	168	61	14	95	216	198	282	96	81	183	42	83	99	48	158	189		177

SOLAR RADIATION TOTALS - Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

NOVEMBER 1971

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
OAK RIDGE TENNESSEE	163	151	358	383	343	163	360	349	96	286	318	287	296	271	282	266	267	151	62	278	185	292	62	47	160	113	62	253	90	61		213
OKLAHOMA CITY OKLA.	132	368	445	392	323	296	334	94	340	338	335	324	270	308	156	105	43	95	317	312	298	55	41	295	172	294	256	83	61	48		232
PALMER AAES ALASKA	42	93	93	55	46	59	75	77	25	21	34	37	51	20	20	25	7	28	15	24	20	53	52	48	44	38	58	33	24	34		42
PHOENIX ARIZONA	375	369	371	351	233	337	335	331	335	330	308	187	327	333	210	234	315	219	321	258	295	302	295	299	292	293	281	242	118	166		289
PORTLAND MAINE	216	20	101	244	259	132	32	251	253	169	133	213	186	239	199	232	187	121	67	156	56	89	207	110	23	180	103	144	43	58		147
RAPID CITY S.DAK.	288	---	---	---	---	---	---	326	214	202	184	179	94	181	136	88	196	126	132	151	149	133	161	117	155	178	87	81	105*	105		157
RENO NEVADA	295	298	290	287	279	279	192	270	280	267	135	112	158	160	64	254	252	45	254	230	165	222	147	171	177	85	143	98	130	94		194
RICHLAND 25 NW WASH.	295	221	109	221	289	198	203	132	140	103	62	82	150	196	212	213	129	85	163	175	68	208	50	74	97	44	167	73	89	181		148
RIVERSIDE CALIFORNIA	454	444	444	418	335	403	345	326	374	359	221	339	368	389	400	383	385	140	318	231	357	334	336	341	297	313	159	258	244	279		333
RUSTON LOUISIANA	357	337	412	415	379	230	373	380	327	384	375	363	299	197	304	291	247	17	255	324	327	124	133	277	255	121	308	57	293	210		279
SAINT CLOUD MINN.	27	116	105	110	102	197	254	228	250	204	107	218	65	18	192	11	24	70	98	110	142	58	50	201	143	68	82	84	174	212		124
SALT LAKE CITY	306	370	338	341	324	323	324	289	248	269	183	244	271	41	260	155	284	214	181	248	201	103	209	224	110	90	81	40	93	63		214
SAN ANTONIO TEXAS	245	301	363	362	337	126	85	83	293	339	337	340	320	237	186	142	132	321	339	378	329	102	211	372	221	356	365	355	345	100		267
SANTA MARIA CALIF.	377	380	375	346	361	308	315	265	328	296	60	297	169	327	336	332	340	305	296	301	307	303	303	286	300	269	284	100	334	284		295
SAULT STE MARIE MICH	155	44	206	201	94	183	130	190	56	109	90	76	142	48	11	20	52	51	49	64	104	199	81	90	147	73	73	52	61	155		100
SEATTLE TACOMA WASH.	220	116	39	143	242	119	148	76	43	57	63	73	136	31	73	111	76	70	39	112	58	163	32	65	50	75	83	50	48	32		83
SEATTLE WASH. UNIV.	186	113	92	185	231	123	97	89	51	81	64	43	138	60	93	128	77	83	38	117	55	131	39	45	52	84	86	73	56	50		92
SPOKANE WASHINGTON	255	213	96	157	248	178	70	147	146	67	118	24	48	116	39	119	145	35	128	72	95	167	45	62	45	37	56	52	48	36		102
STERLING VIRGINIA	210	---	100	360	---	---	341	328	236	245	157	214	151	276	207	192	---	207	115	139	187*	262	234	28	240	221	49	258	15	184		197
TAMPA FLORIDA	300	100	189	373	335	376	397	367	272	343	421	403	---	---	---	302	315	349	360	237	375	390	297	205	385	335	314	222	129	330		312
TUCSON ARIZONA	448	439	428	385	291	296	405	---	---	---	---	276	373	358	97	131	370	271	365	362	264	359	354	359	355	357	337	---	---	228		329
UPPER MARBORO MD.	191	261	42	314	310	225	288	309	257	217	138	232	142	271	165	213	235	248	151	142	166	274	228	44	212	218	47	224	14	165		198
WAKE ISLAND PACIFIC	507	522	399	191	330	396	494	470	52	302	432	460	483	492	492	495	456	480	491	483	482	424	475	471	433	487	485	457	460	455		435

Note.--Langley is the unit used to denote one gram calorie per square centimeter.

Values with an asterisk are interpolated.
U Indicates Urban sites.

The solar radiation data in this table form the basis for the analyses in Charts VII. A. and B. of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska

NOVEMBER 1971

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys	- 51	-134	- 84	- 72	- 47	- 58	- 70	- 64	- 61	- 26	- 39	- 70	- 62	- 62	- 78	- 46	- 27	- 68	- 68	- 82	- 38	- 64	- 68	-119	-199	-161	- 85	- 95	- 25	- 63		- 75

The measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (λ 3900 Å)

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys													NO DATA - MACHINE MALFUNCTION																			

These data are from an U - V Epplev total ultra violet sensor and Speedomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Means O_3
	Data will be delayed																															

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e. the amount contained in a vertical column of unit cross-section extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone usually quoted [illegible] is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e.g. [illegible] milli atmo-cm ozone implies an ozone layer [illegible] thick. The code [illegible] designates the type of measurement made.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), November



B. Temperature Departure from 30 - Year Mean (°F 1931-60), November 1971.

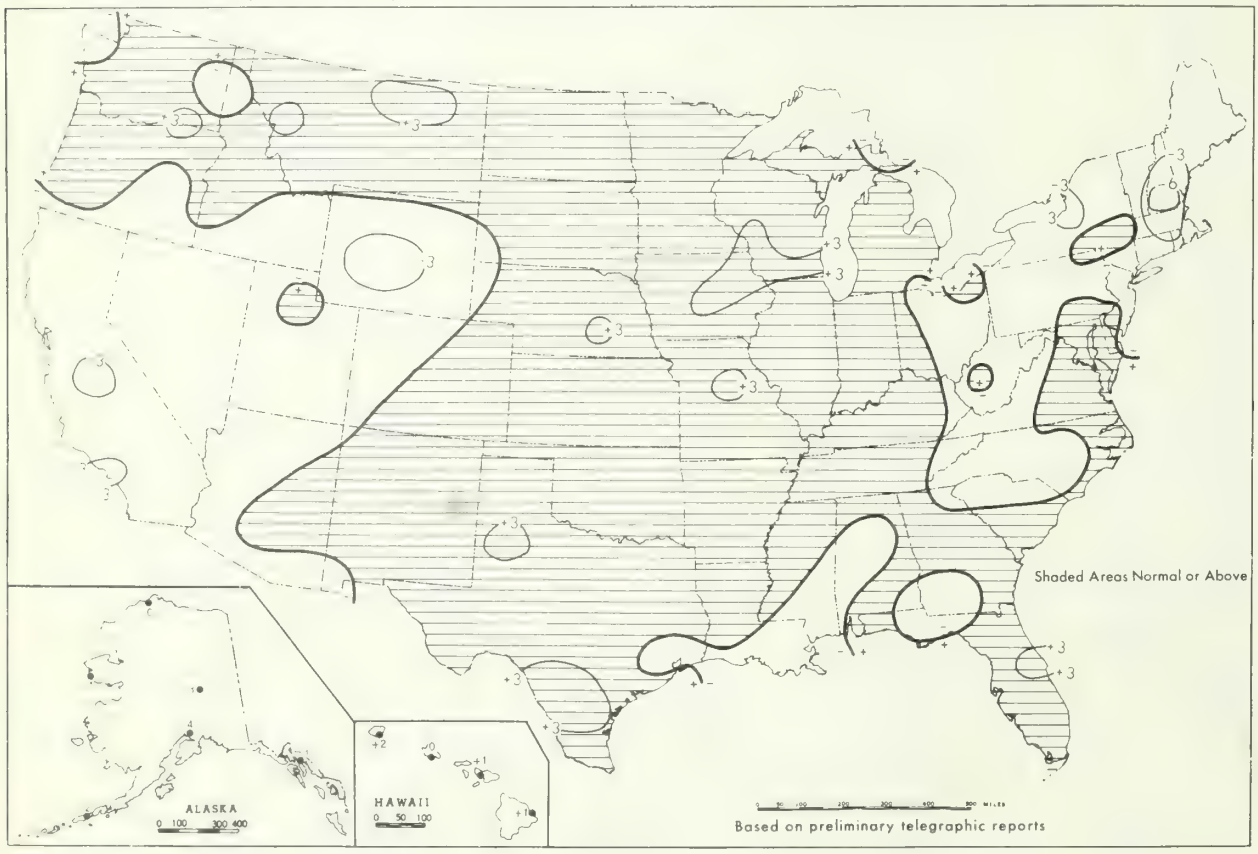


Chart II. Total Precipitation (Inches), November 1971.

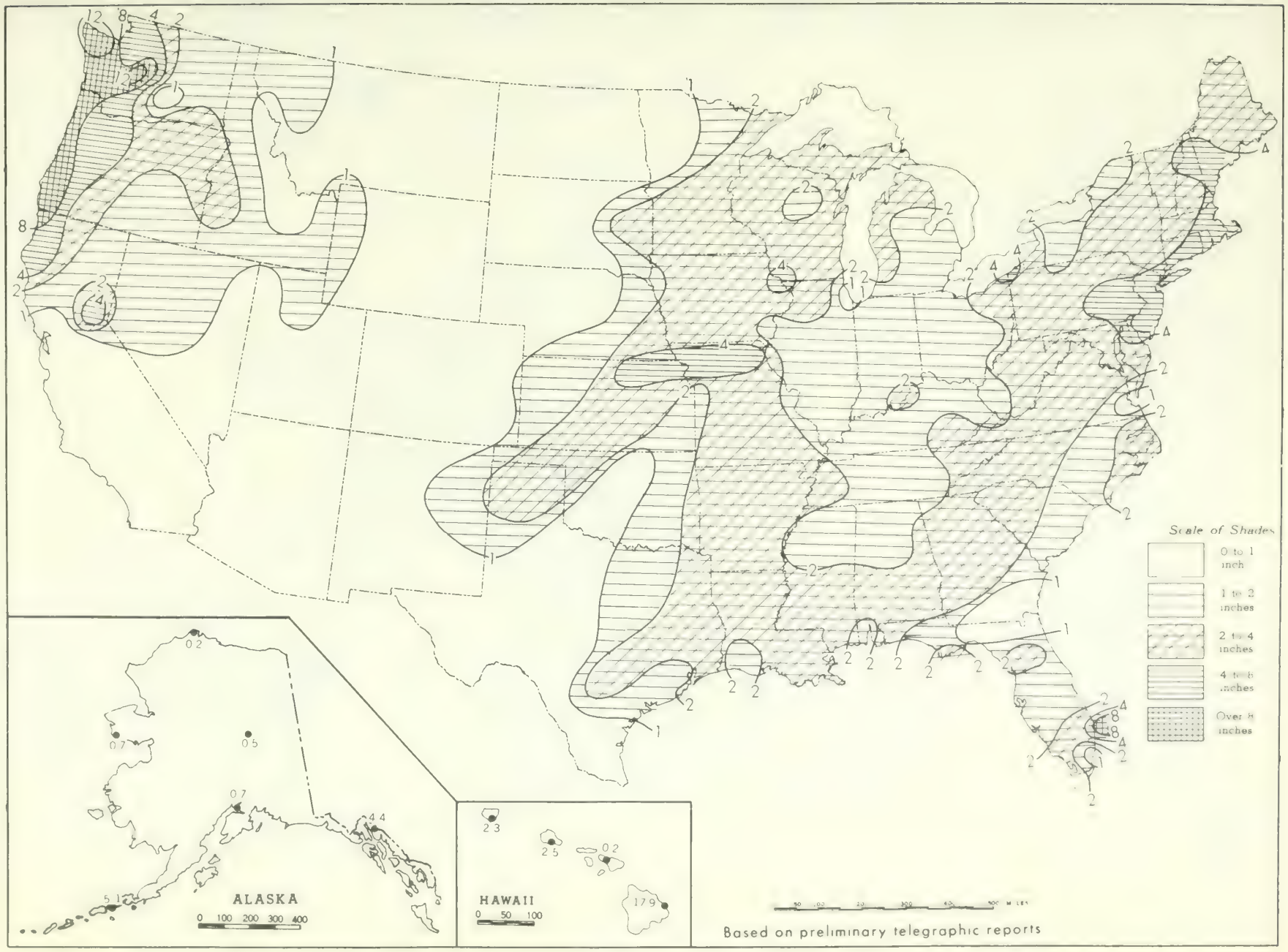


Chart III. Percentage of Normal Precipitation, November 1971.

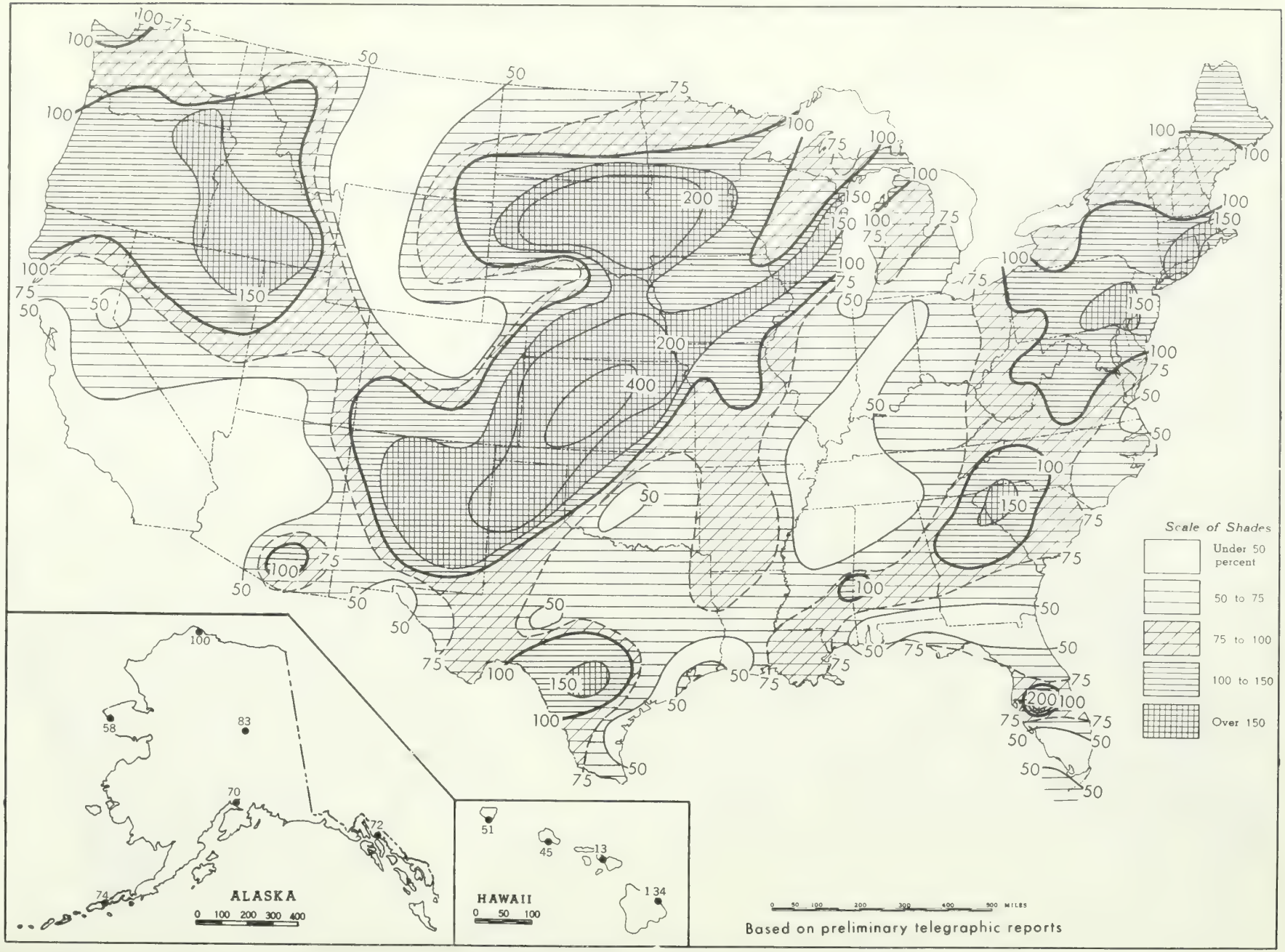
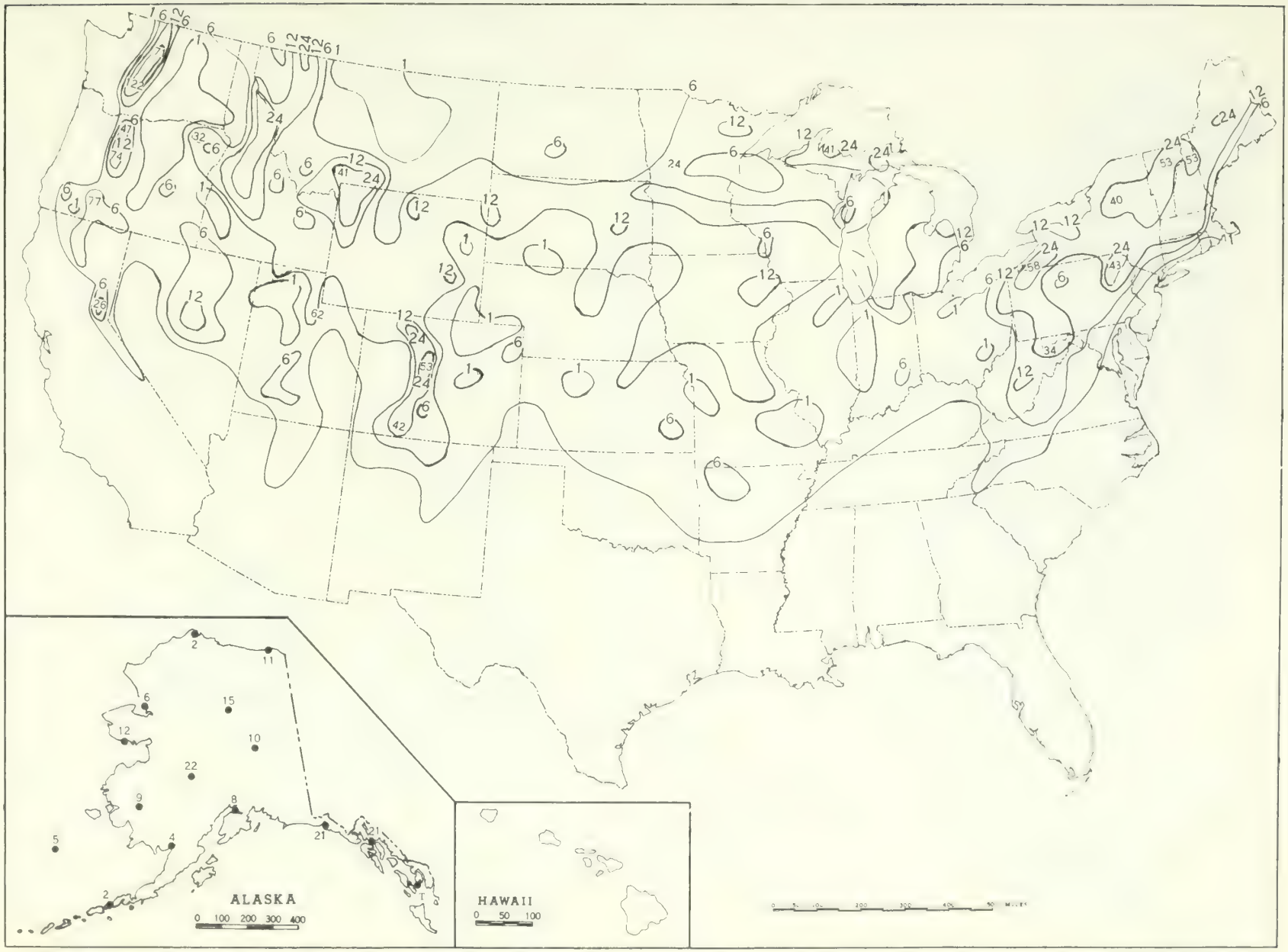
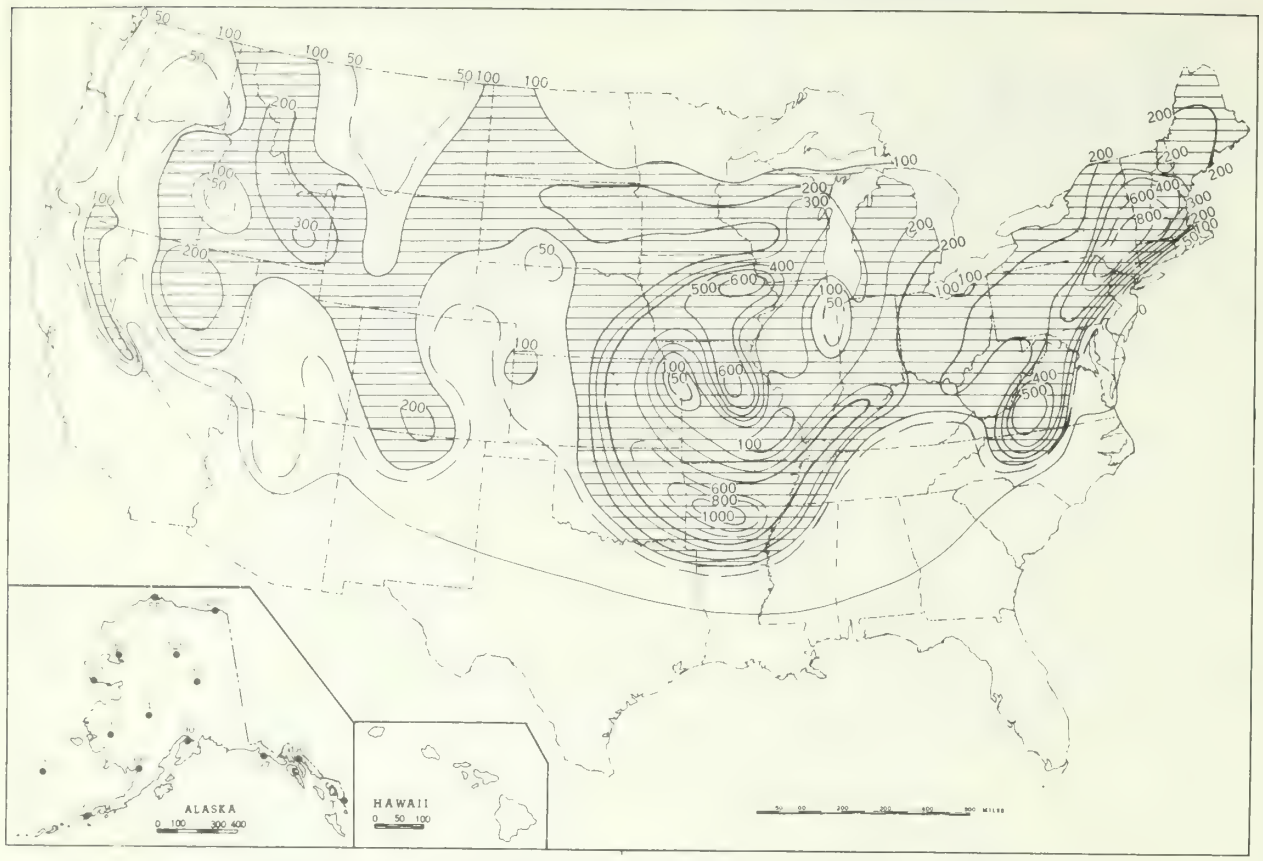


Chart IV. Total Snowfall (Inches), November 1971.

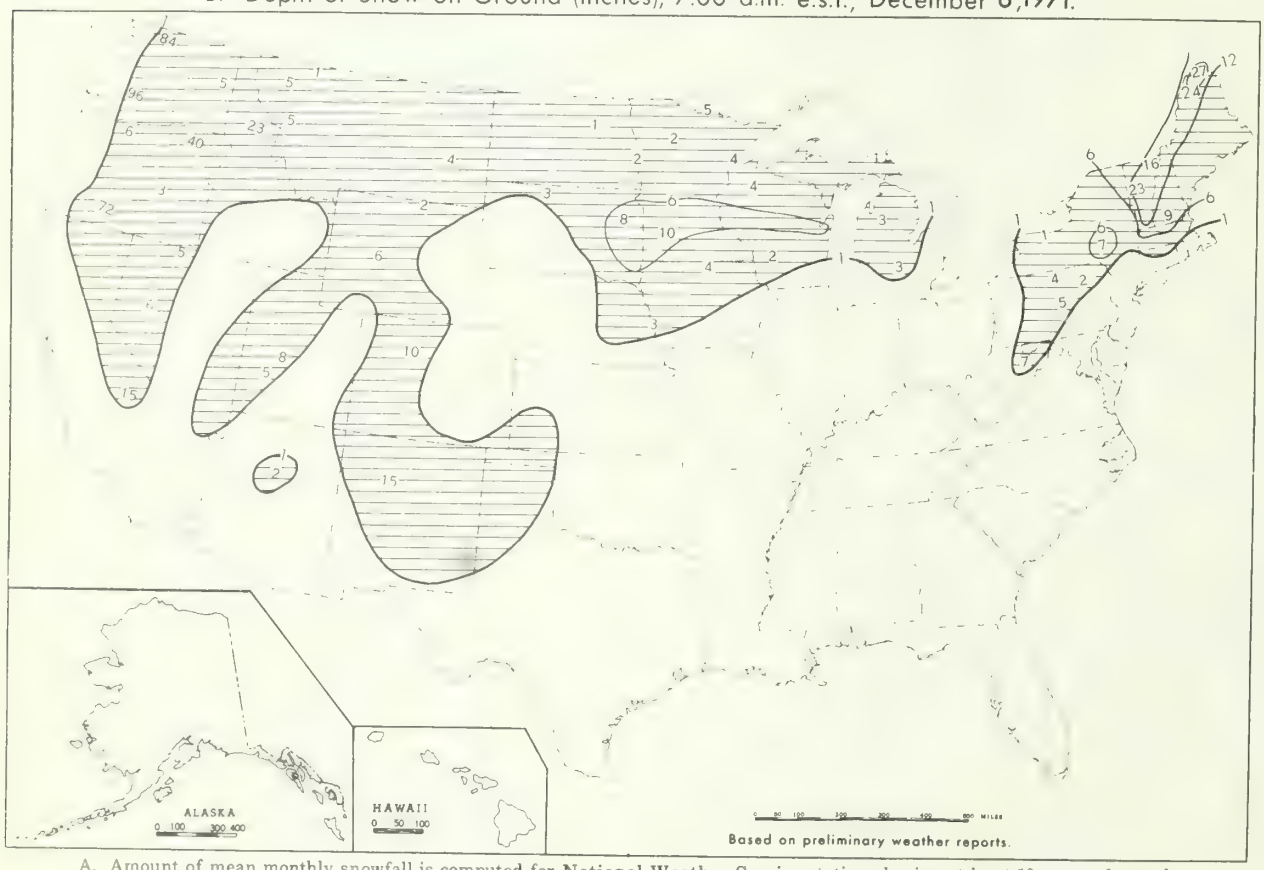


This is the total of unmelted snowfall recorded during the month at **National Weather Service** and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the Far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, November 1971.

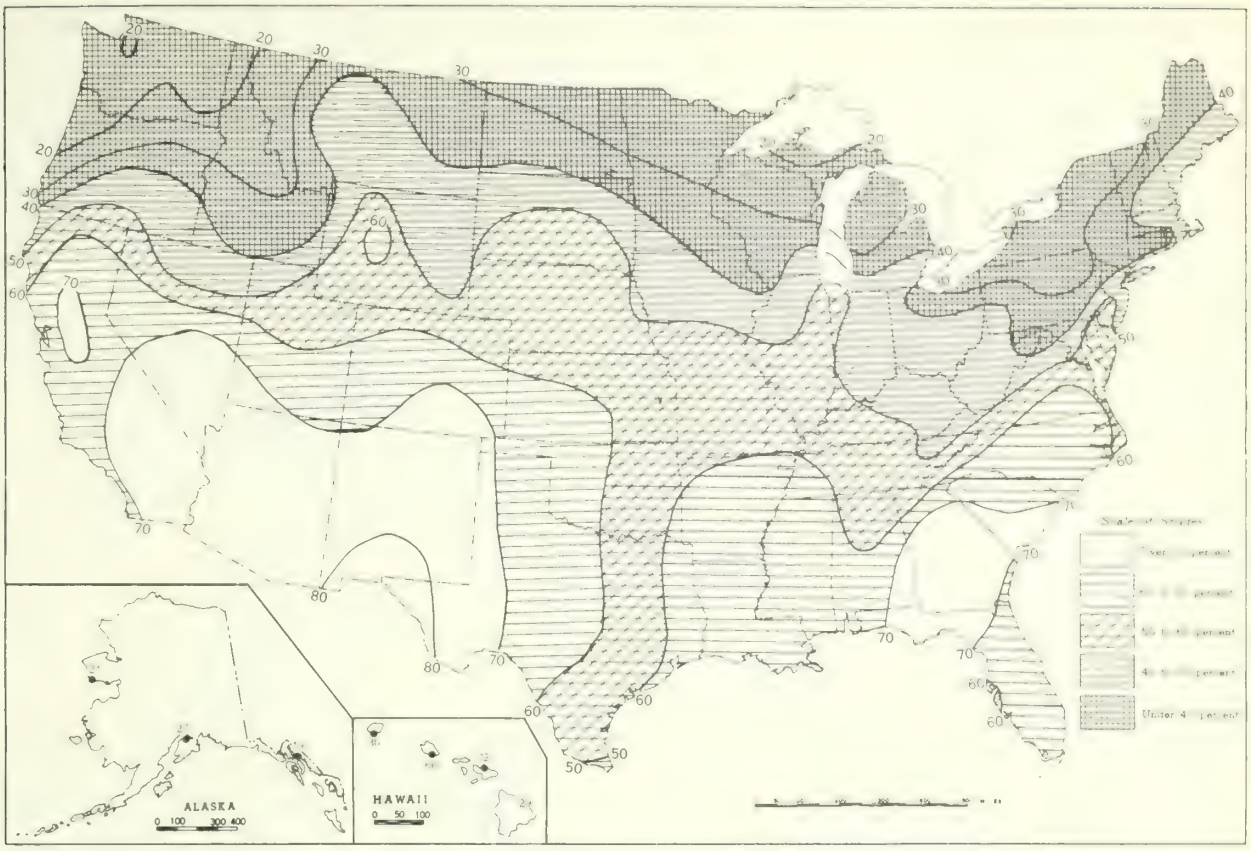


B. Depth of Snow on Ground (Inches), 7:00 a.m. e.s.t., December 6,1971.

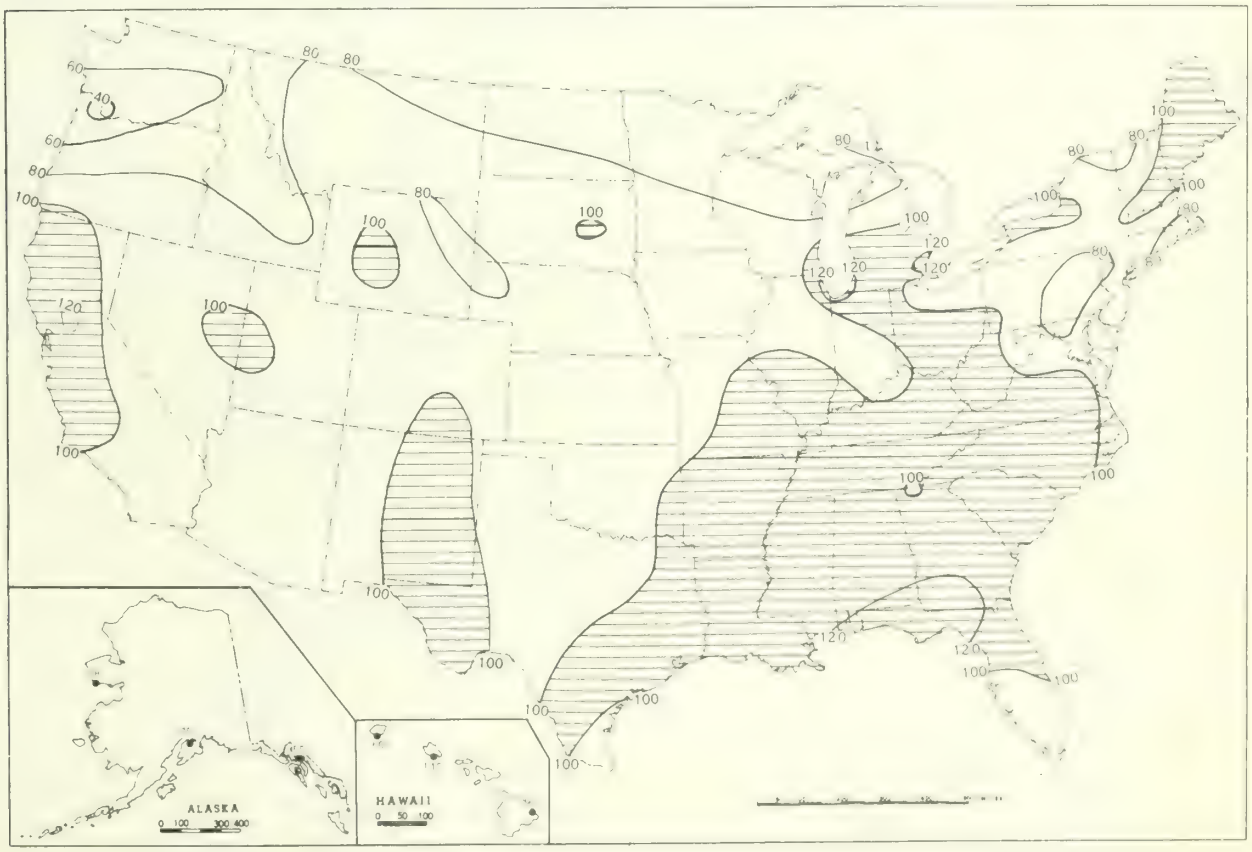


A. Amount of mean monthly snowfall is computed for **National Weather Service** stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. **e.s.t.**, of the Monday nearest the end of the month.
It is based on reports from **National Weather Service** and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, November 1971.

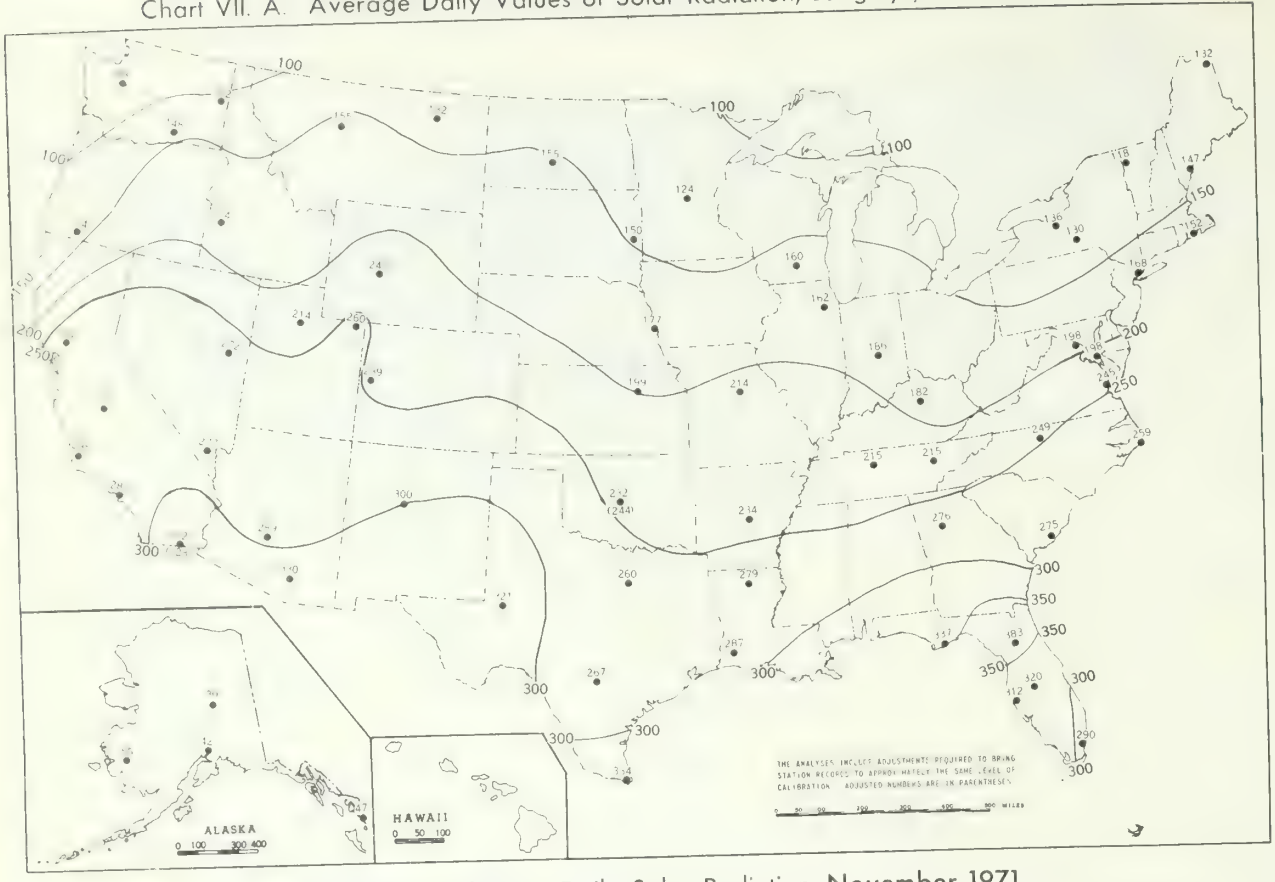


B. Percentage of Mean Monthly Sunshine, November 1971.

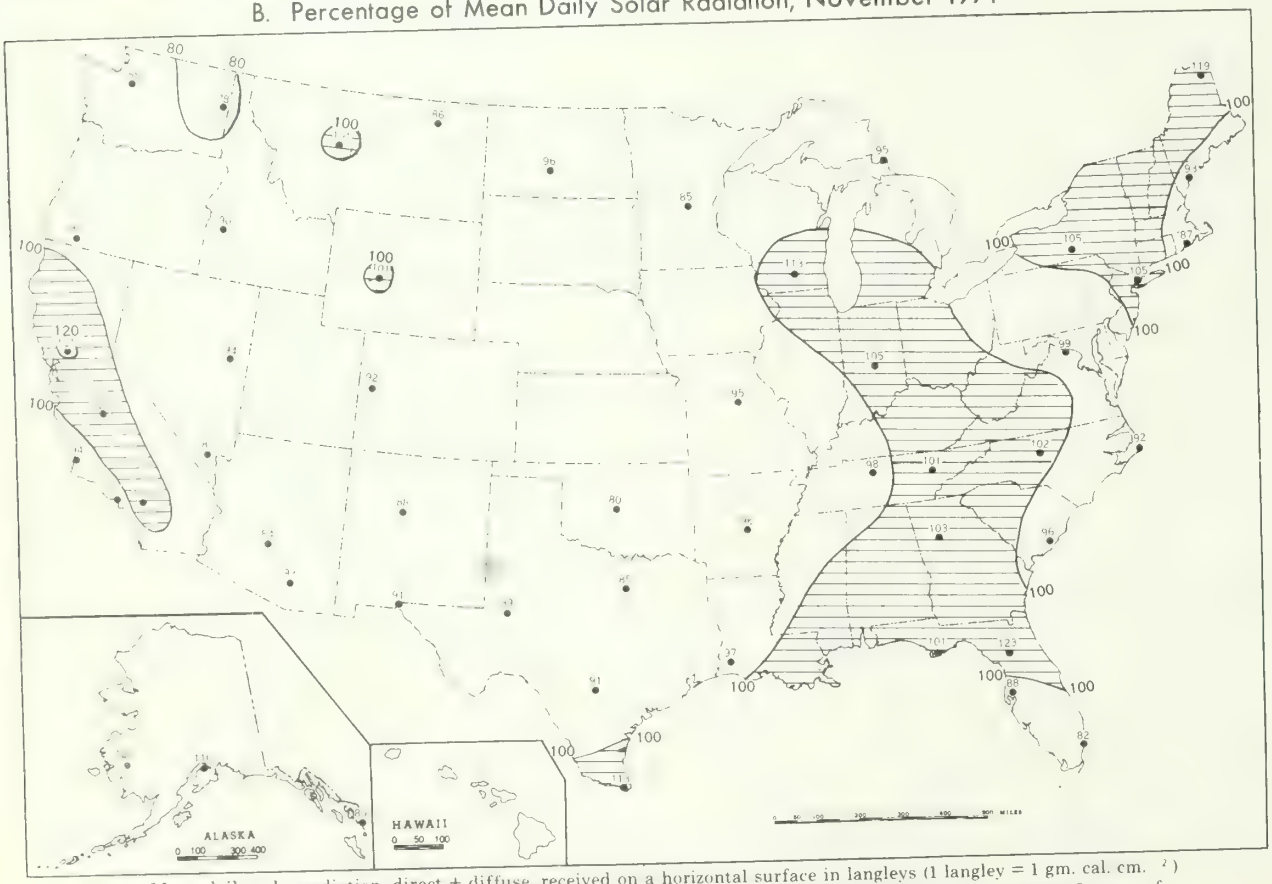


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, [illegible]

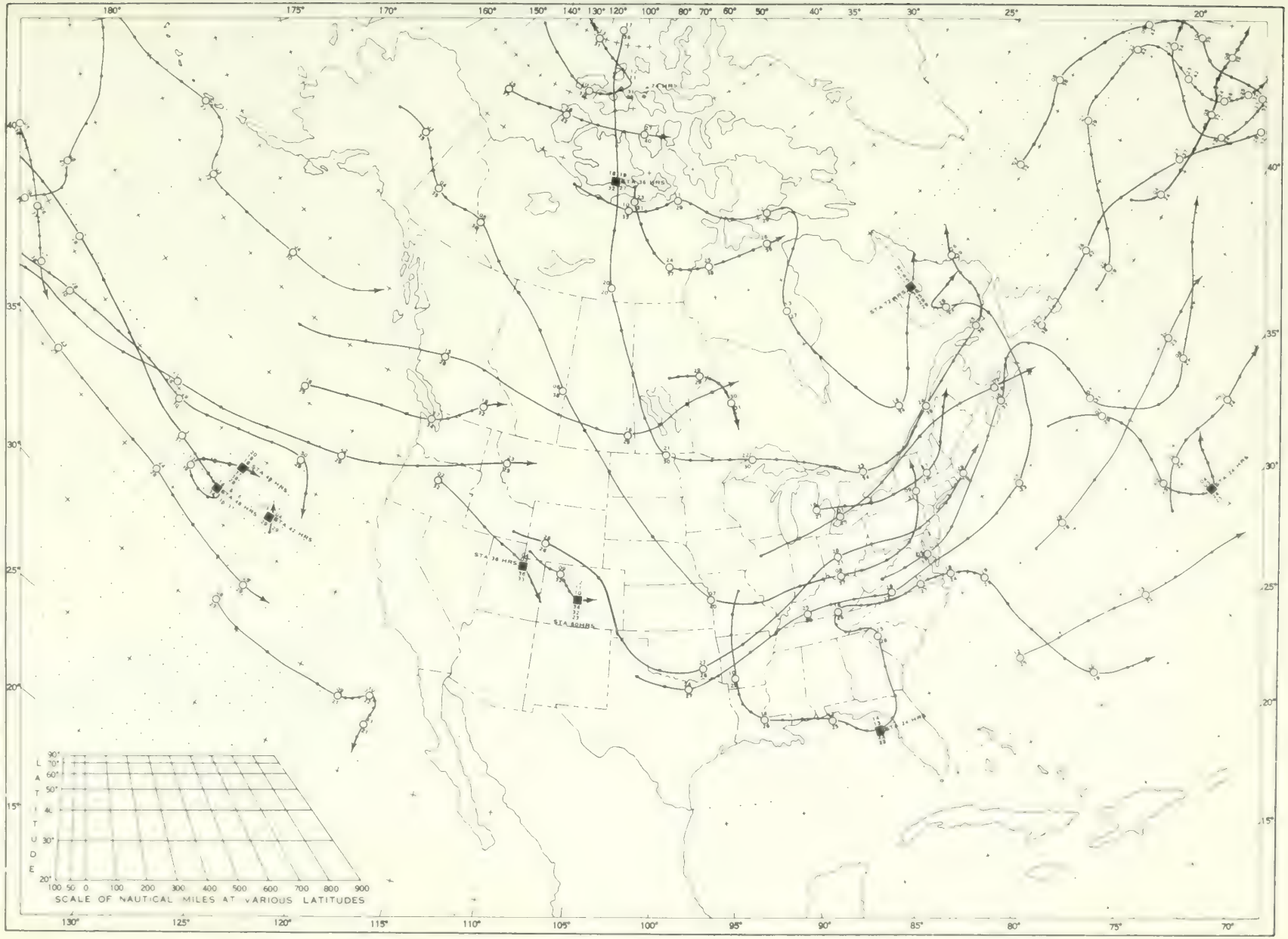


B. Percentage of Mean Daily Solar Radiation, November 1971



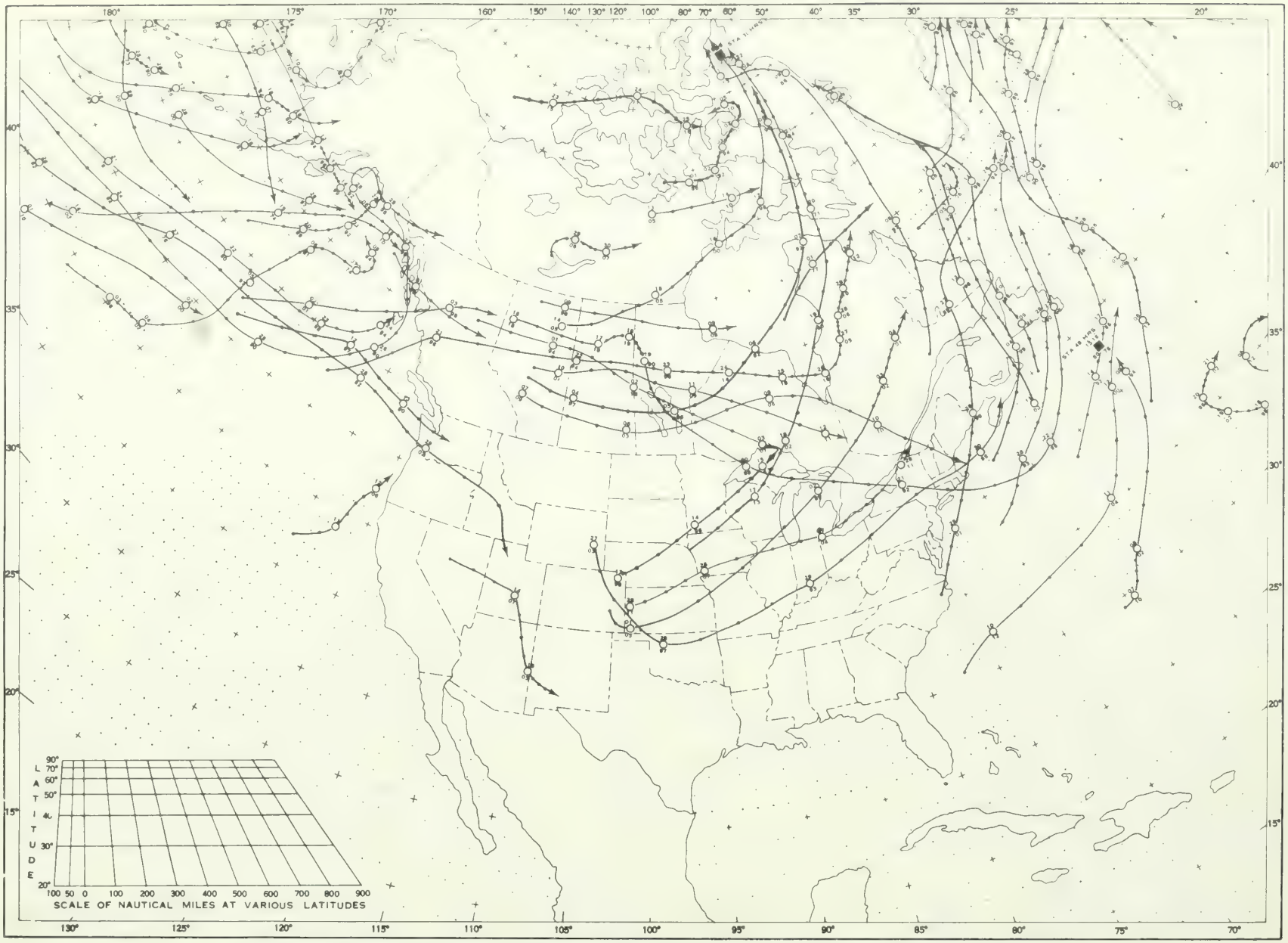
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm. $^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, November 1971.



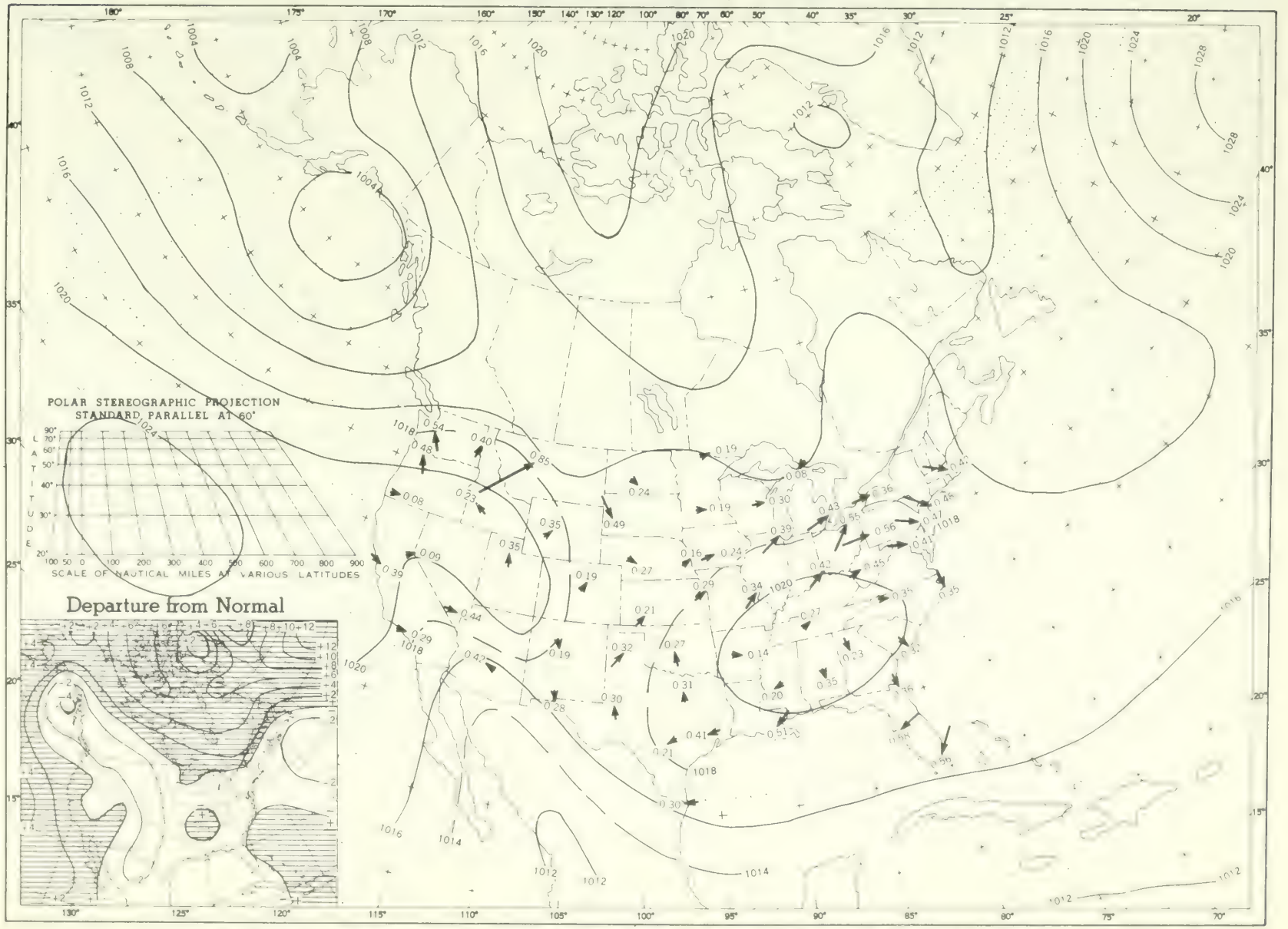
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar Dots indicate intervening 6-hourly positions Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included

Chart IX Tracks of Centers of Cyclones at Sea Level, November 1971.



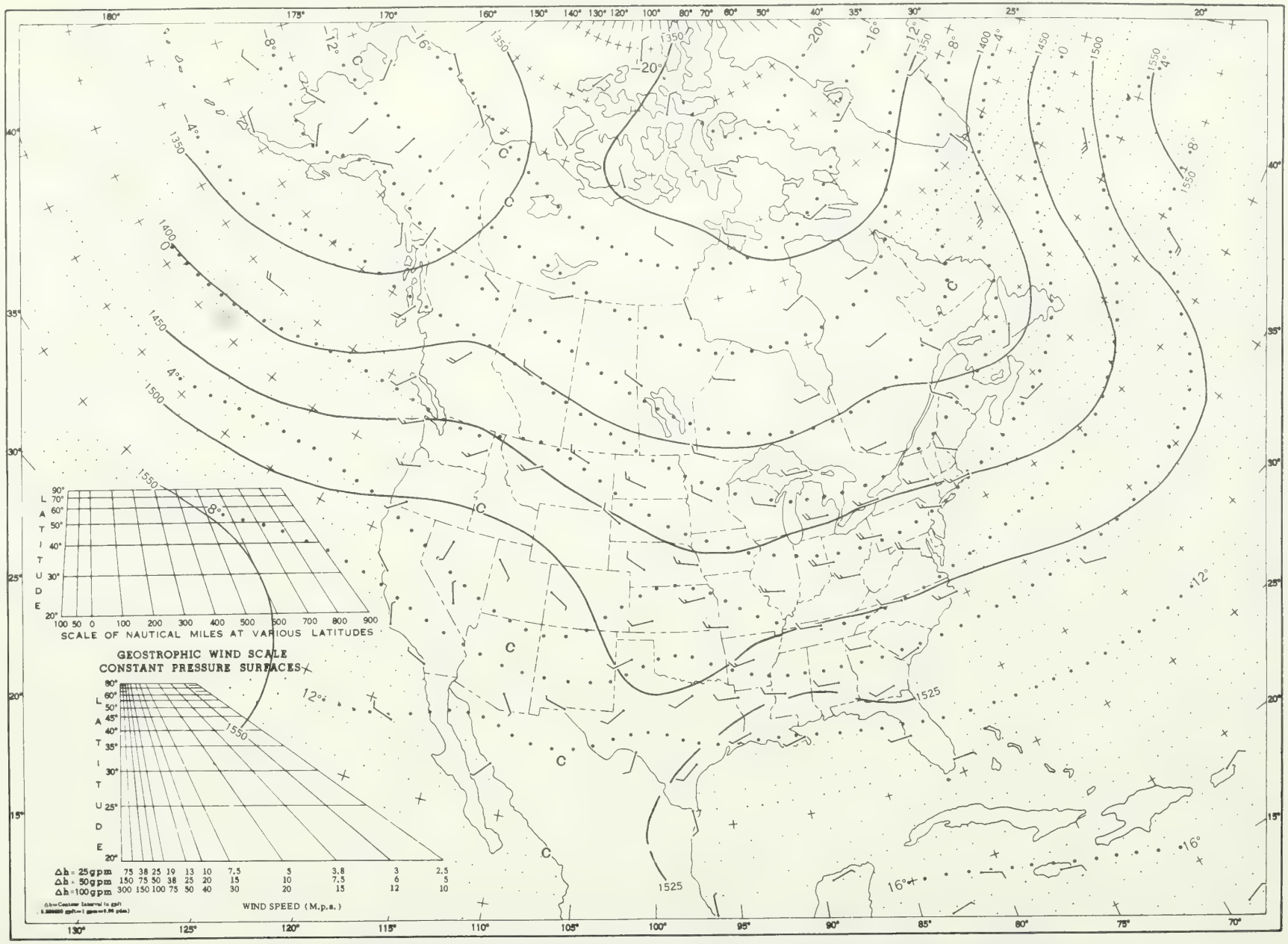
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, November 1971. Inset Departure of Average Pressure (mb) from Normal, November 1971.



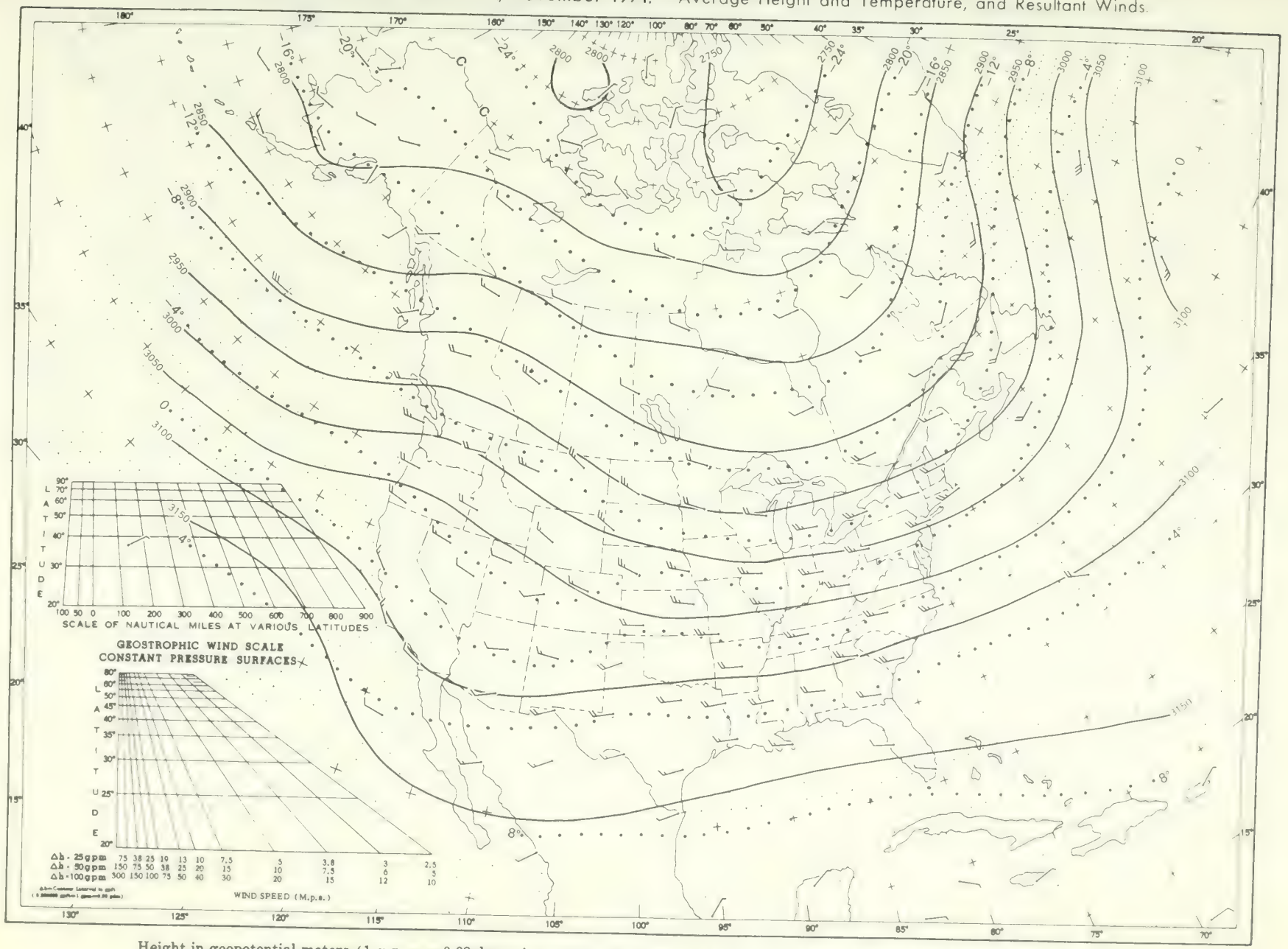
Average sea-level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed ÷ average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb Surface, 1200 G.m.t., November 1971. Average Height and Temperature, and Resultant Winds.



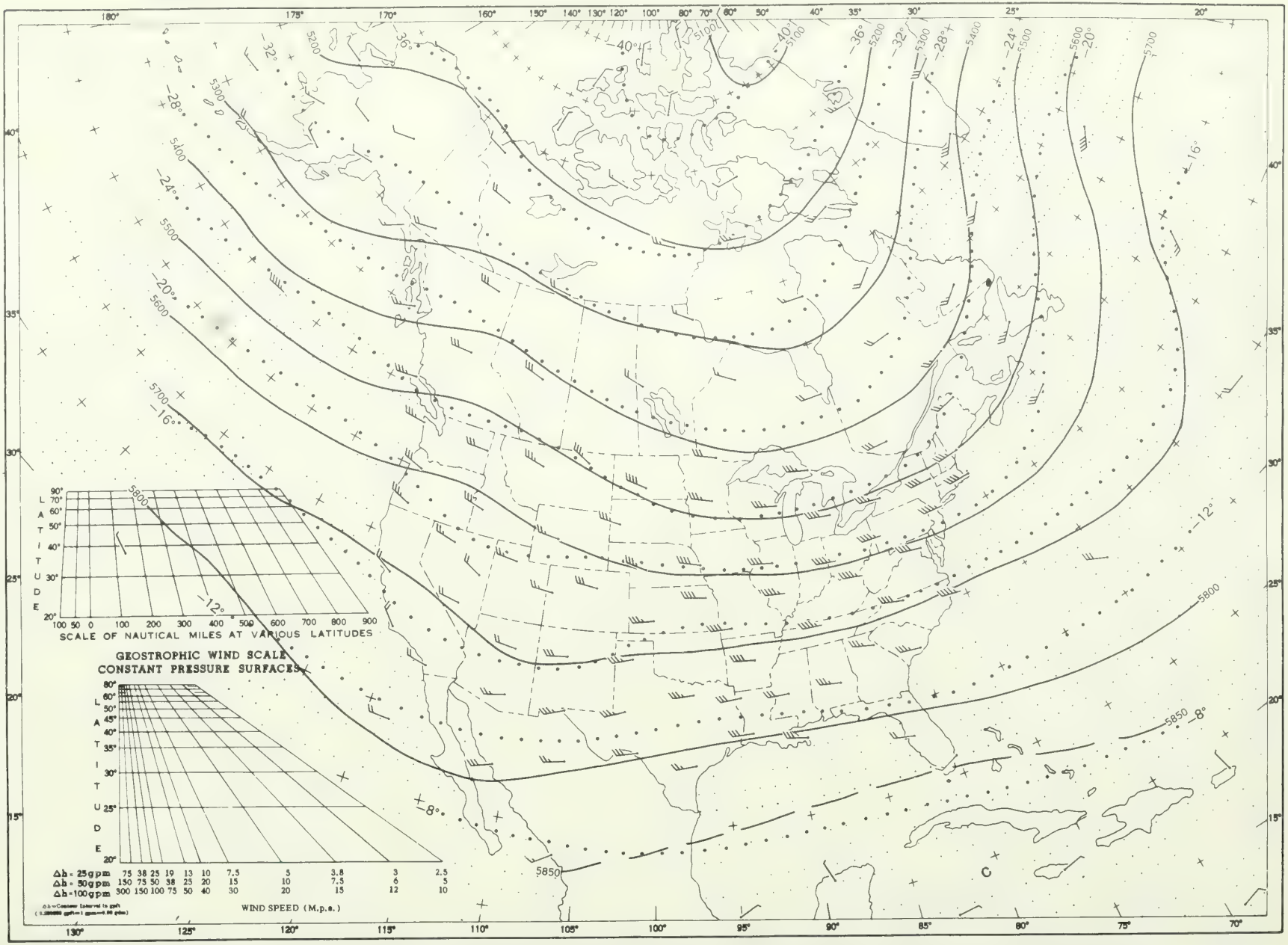
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb Surface, 1200 G.m.t., November 1971. Average Height and Temperature, and Resultant Winds.



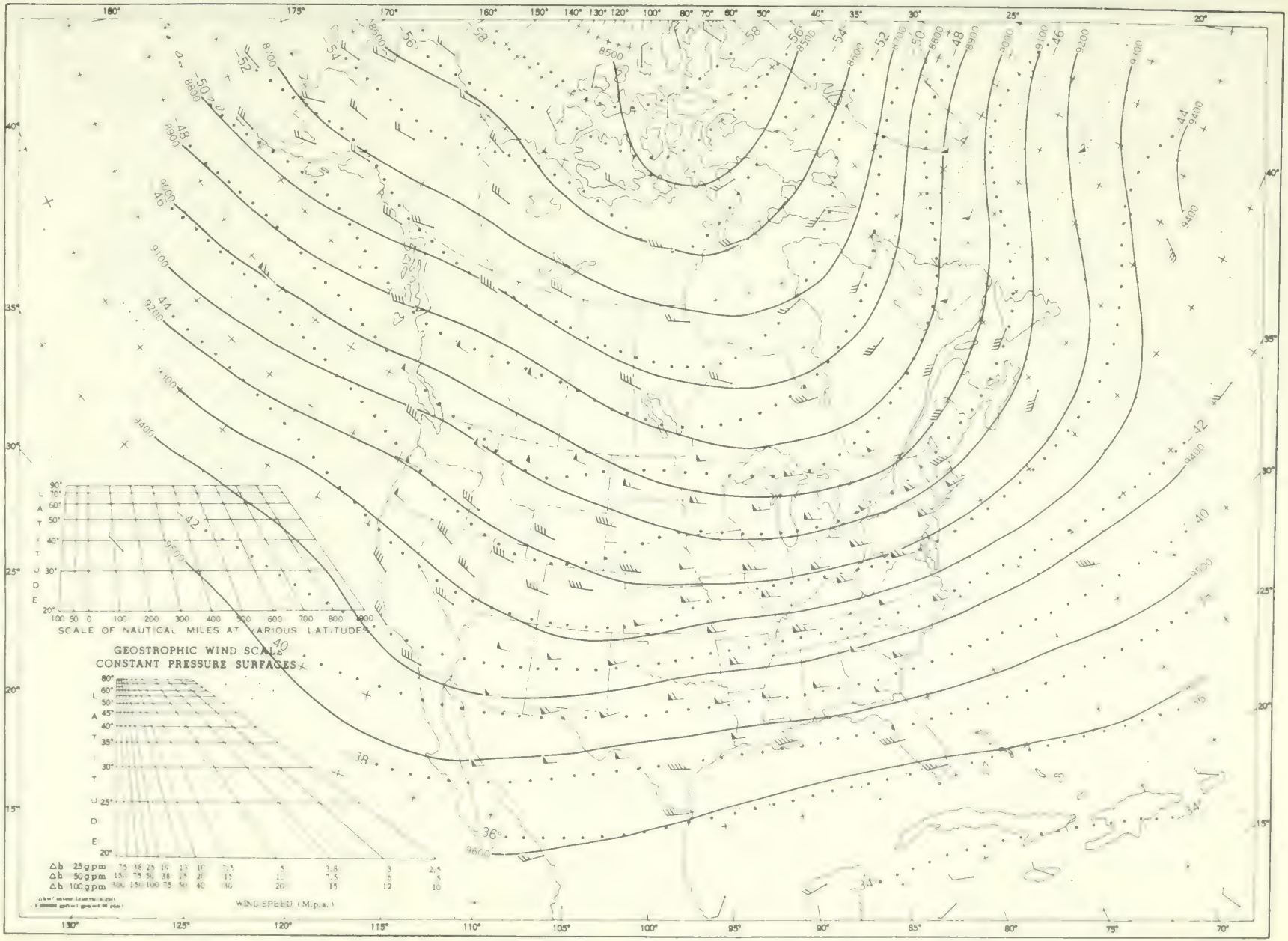
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 G.m.t., November 1971. Average Height and Temperature, and Resultant Winds.



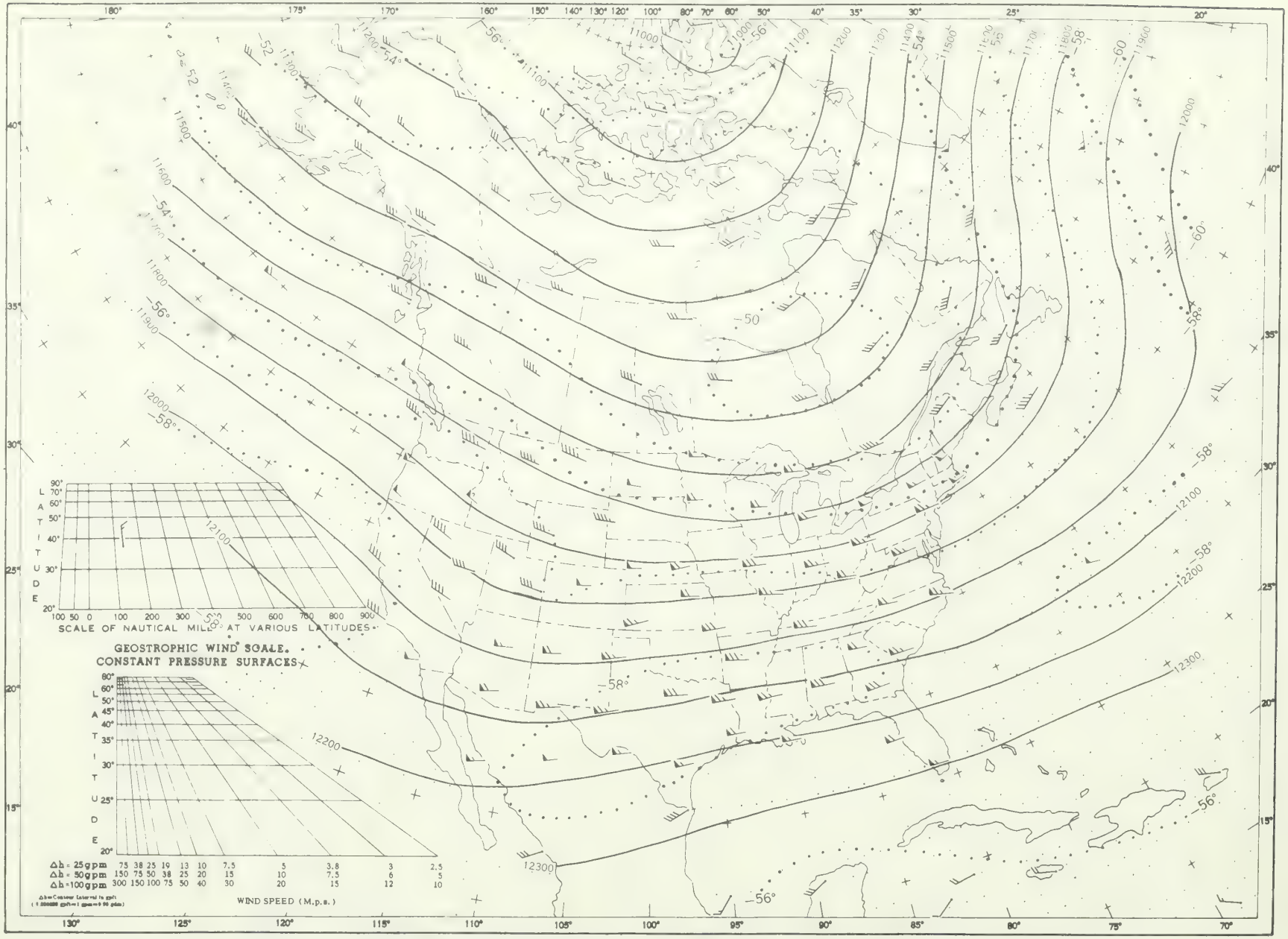
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300-mb Surface, 1200 G.m.t., November 1971. Average Height and Temperature, and Resultant Winds



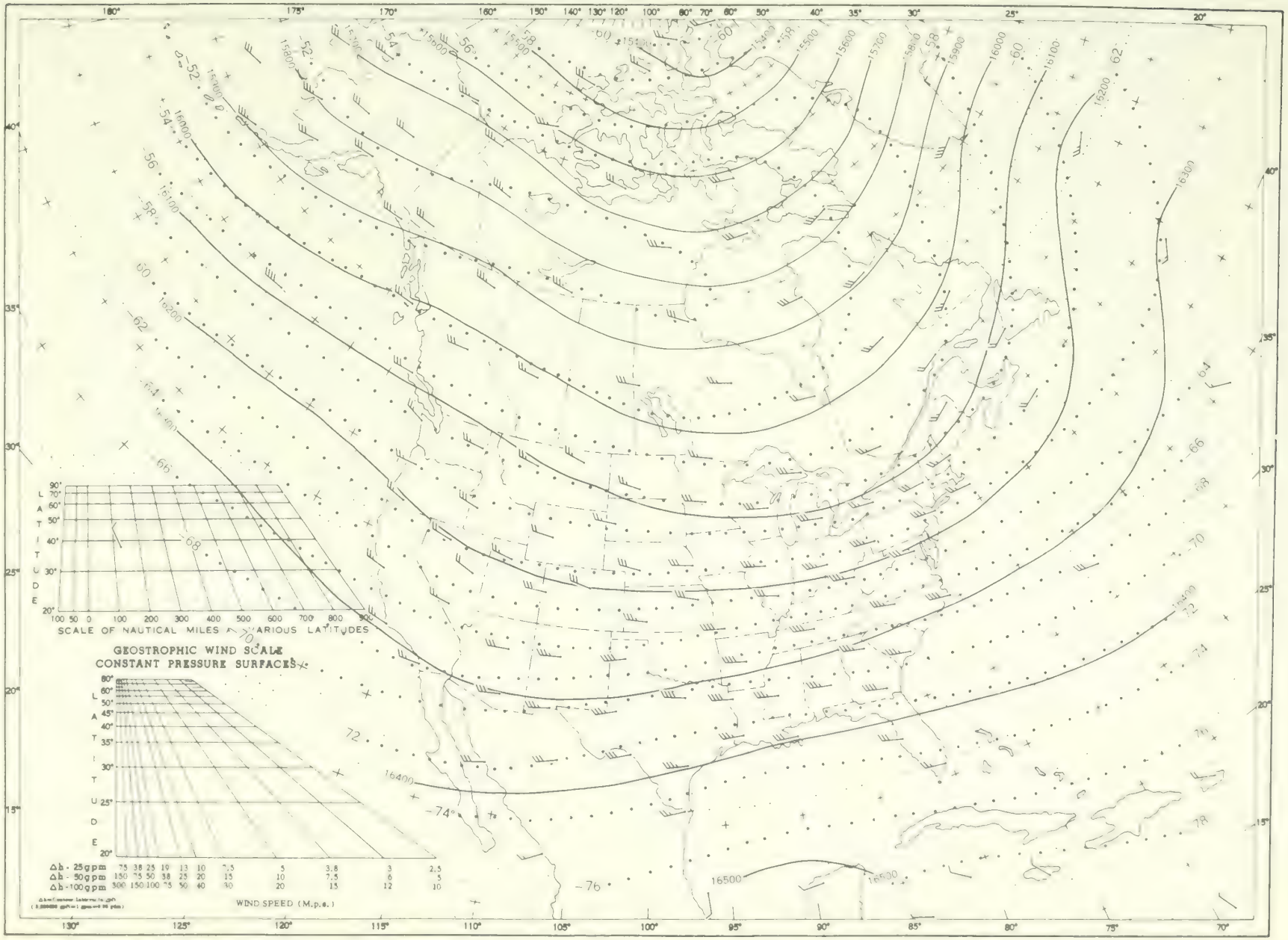
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb Surface, 1200 G.m.t., November 1971. Average Height and Temperature, and Resultant Winds



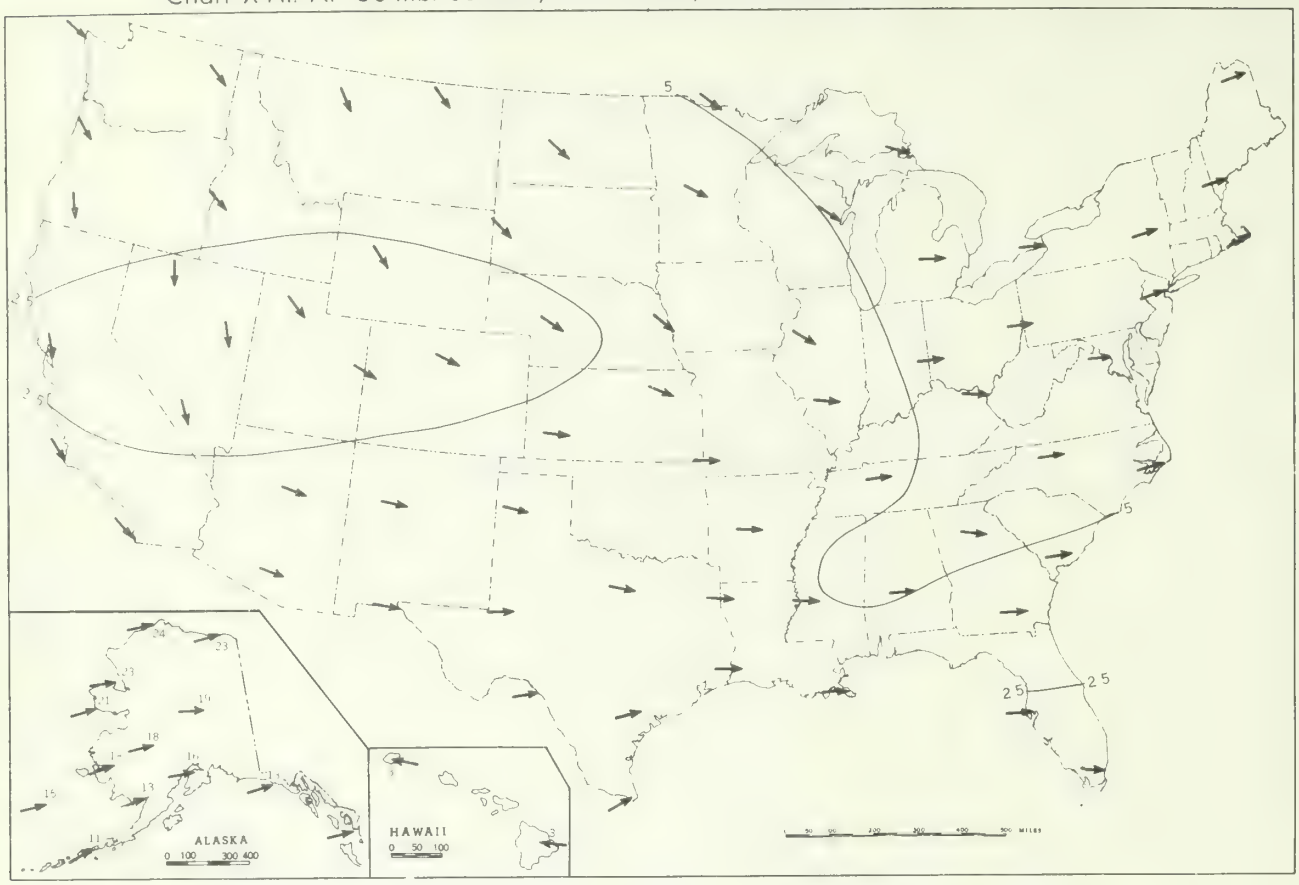
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI 100-mb Surface, 1200 G.m.t., November 1971. Average Height and Temperature, and Resultant Winds.

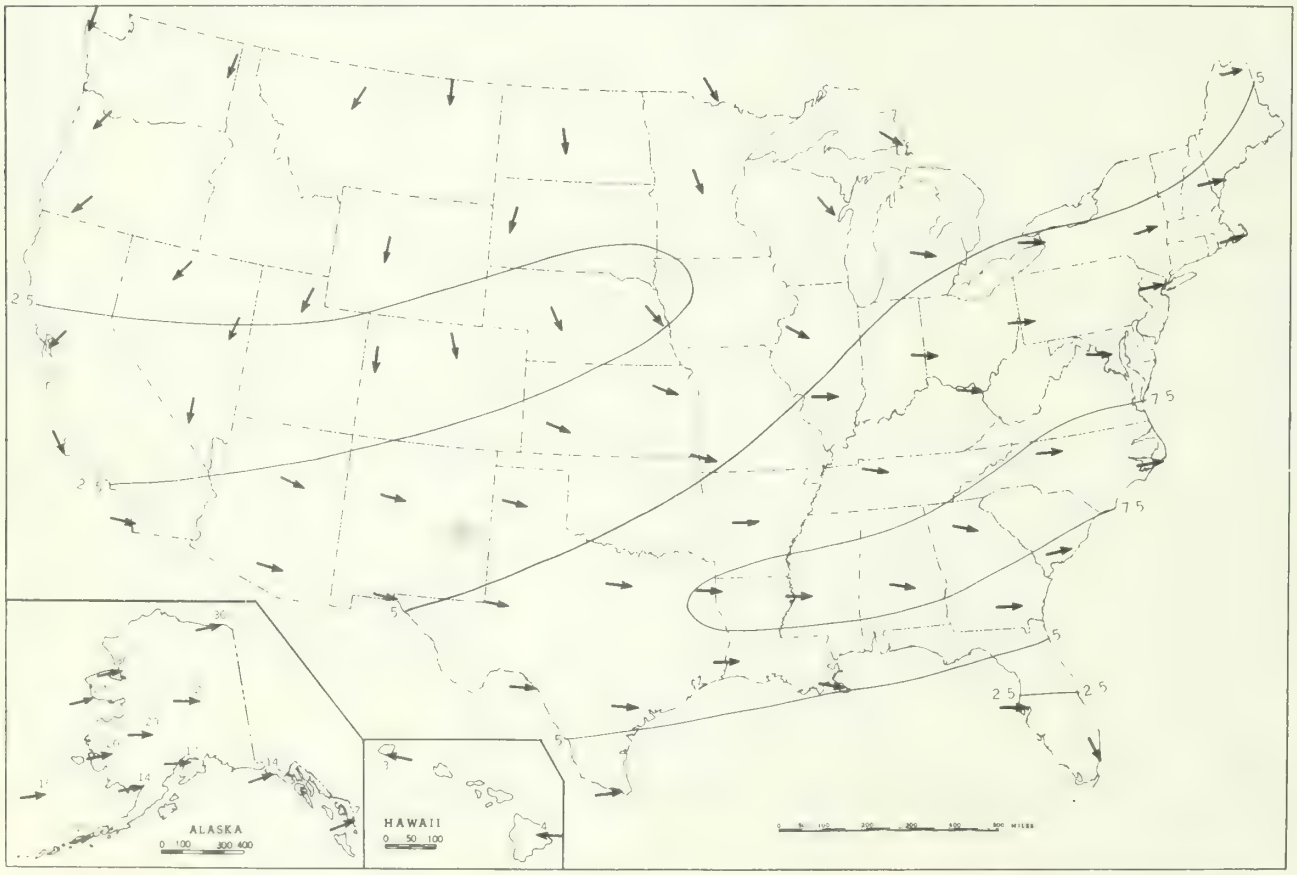


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., November 1971. Resultant Winds.



B. 30-mb. Surface, 1200 G.m.t., November 1971. Resultant Winds.



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NOTE: Late reports and corrections will be carried in the June and December issues of this publication. An explanatory page "Description of Charts" will be carried in the January and July issues.

SUBSCRIPTION PRICE: Monthly 20 cents and annual 40 cents per copy; yearly subscription, including monthly and annual issues, $2.50 domestic, $3.50 foreign. Checks and money orders should be made payable to the Superintendent of Documents. Remittance and correspondence regarding subscriptions should be sent to "Superintendent of Documents, Government Printing Office, Washington, D. C. 20402."

I certify that this is an official publication of the National Oceanic and Atmospheric Administration, and is compiled from records on file at the National Climatic Center, Asheville, North Carolina, 28801.

William H. Haggard

Director, National Climatic Center

CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

Volume 22 No. 12 DECEMBER 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

HIGHLIGHTS:

1. Many locations in the East experienced the warmest December temperatures in the 20th century. In contrast, unusually cold weather predominated over the West.
2. December was unusually wet from the Great Lakes to the western gulf coast.
3. Heavy snow fell in the Cascades, the Rocky Mountains, and in northern New England.

TEMPERATURE (° F)--Cold temperatures prevailed over most of the nation at the beginning of December. Waterloo, Iowa, registered -5° and Hibbing, Minn., -4° on December 1. On the 2d, subzero weather was common over the northern portions of New York and New England. Boonville, N. Y., recorded 13° below zero on the morning of December 2. Subzero temperatures also occurred in several western and central states: Montana, Wyoming, Colorado, Minnesota, Wisconsin, and Iowa.

Bone-chilling cold continued over much of the West through the first 3 weeks of December. Parts of the Southwest averaged 15° colder than normal during that period. Mild weather came to the East in the second week of the month and continued to the end of the year. Baton Rouge, La., registered 83° and Ft. Myers, Fla., 84° on the afternoon of December 9. Savannah, Ga., warmed to 83° on the 11th; this is the highest December temperature of record for Savannah. Bridgeport, Conn., registered 65° on the same date. This is the warmest temperature of record for so late in the season at Bridgeport.

The Indian summer over the East was interrupted shortly after midmonth when a cold front pushed steadily southward. Subzero weather came to northern New England on the 19th. On the same date the mercury at Tallahassee, Fla., tumbled to 30°. Arctic cold continued its grip over the northern border States from Washington to Minnesota in the fourth week of December but mild southerly winds warmed mid-America and the East. Subzero chill prevailed over the Northwest, the northern Rocky Mountains, and the northern Great Plains in the last few days of December. Big Piney, Wyo., recorded -26° on the morning of December 28. Temperatures over the Southeast continued mild to the end of the year.

Many stations in the Southwest--California, Nevada, and Arizona--reported that December 1971 was the coldest December in several decades and one of the coldest of record. In contrast, numerous stations in the East recorded the warmest temperatures in several decades. At Trenton, N. J., December 1971 was the warmest December in the 20th century and the second warmest of record.

PRECIPITATION--December began with a mixture of snow, sleet, freezing rain, and freezing drizzle across much of the North and cold clouds and cold rain farther south. By December 2, a storm in the West was reaching major proportions. Gales whipped the coastal areas, rain fell along the coast, and heavy snow blanketed the Rocky Mountains. The storm dumped heavy snow over the southern Rocky Mountains and spread to the adjoining Great Plains. As the storm moved along the Gulf of Mexico coast, it dumped generous rains over the Deep South. The storm crossed the Florida Peninsula to the Atlantic Ocean. It produced combinations of cold rain, drizzle, snow, and sleet. The snow accumulated to depths of 18 inches or more at some mountain locations in the Carolinas. Storms brought a variety of inclement weather to much of the nation in the second week of December. Freezing rain and freezing drizzle iced the highways and coated the trees from Pennsylvania to New England. Heavy rains caused flash floods in the Lower Mississippi River Valley. Another storm raged in the western mountains. Snow reached depths of 10 to 12 inches in spots in New Mexico. A second western storm lashed the northwest Pacific coast with heavy rain and gales along the coast, and snow in the nearby hills and mountains. The strong winds whistled through the mountain passes and blizzards occurred in Montana east of the Continental Divide. Mixtures of snow, freezing rain, and freezing drizzle fell south of the snow belt. Tornadoes occurred in a half dozen or more Central States on December 15. A tornado caused one death at Springfield, Mo. Several persons of Poplar Bluffs, Mo., were injured by a tornado and tornadoes caused widespread damage in northeastern Arkansas.

A huge storm of the northern Pacific coast brought dismal weather to the Northwest in the fourth week of December. Flurries occurred over the northern Great Plains and eastward to the Great Lakes. Rain or drizzle mixed with fog reduced the visibility to near zero in some localities in the Middle Atlantic States.

In the closing days of the month, a Pacific storm moved southward bringing heavy rain to the already-soaked portions of southern California. Snow flurries occurred in the northern and central Rocky Mountains, the northern Great Plains, and eastward to New England. Freezing rain or freezing drizzle fell south of the snow zone and showers fell from the western gulf coast to the northern Appalachians.

December rainfall over a large area extending from north-central Texas to Lower Michigan was more than twice the normal precipitation. At Ft. Smith, Ark., the December total, 10.09 inches, was the greatest in the 89-year record. It was over 3-1/2 times the Ft. Smith normal. Long Beach, Calif., received 5.21 inches, the most December rain in 30 years. Snowfall records were broken at a number of places. Over 15 inches fell at Boise, Idaho. This exceeds the December amount for any of the last 20 years.

OBSERVED EXTREMES OF TEMPERATURE AND PRECIPITATION -- BY STATES

STATE	Temperature — Monthly extremes						Precipitation — Monthly extremes			
	Station	Highest	Date	Station	Lowest	Date	Station	Greatest	Station	Least
		°F			°F			In.		In.
Alabama	Livingston 2 SW	88	13	Florence	18	18	Alberta	12.12	Phenix City 2 NW	4.09
Alaska	Cape Sarichef	57	11	2 Stations	-58	12+	Little Port Walter	13.72	Dietrich Camp	T
Arizona	2 Stations	85	26+	Bradys Lake	-21	16	Show Low City	D 6.21	Ehrenberg	.01
Arkansas	Mammoth Spring	79	27	5 Stations	21	18	Cove	15.74	Helena 5 NW	3.18
California	Santa Paula	78	5	White Mountain 2	-24	8	Squirrel Inn 2	20.78	El Centro 2 SSW	.00
Colorado	3 Stations	76	26+	Taylor Park	-40	31	Wolf Creek Pass 1 E	9.08	Karval	.00
Connecticut	2 Stations	67	11	Falls Village	- 1	5	Stepaug Dam	4.08	New Haven Airport	1.85
Delaware	Georgetown 5 SW	74	17	Milford 2 WSW	14	3	Dover	3.56	Newark University Farm	1.22
Florida	Sarasota	90	14	Monticello 3 W	29	19	Crestview Radio WJSB	7.96	Naples 2 NE	.21
Georgia	Bainbridge	86	16	2 Stations	19	20+	Clayton 1 W	11.27	Washington	2.16
Hawaii	Lahaina 361, Maui	91	19	Mauna Loa Slope Obs, Hawaii	24	31	Kipa 89.2, Hawaii	46.77	11 Stations	.00
Idaho	Swan Falls Power House	57	22	Island Park Dam	-34	8	Elk River 1 S	8.71	Bruneau	D .30
Illinois	2 Stations	72	11	Aurora College	4	18	Pana	9.33	New Salem State Park	3.24
Indiana	Saint Meinrad	73	11	Kokomo 7 SE	7	18	Whitestown	7.30	Lagrange Sewage Plant	2.85
Iowa	Burlington Radio KBUR	61	15	Cherokee	- 8	31	Tipton	6.10	Swea City 5 NW	.25
Kansas	2 Stations	78	26+	3 Stations	9	28+	Mc Cune 6 SW	6.39	Saint Francis 8 NW	.00
Kentucky	4 Stations	78	11+	Waynesburg 7 NE	9	18	Summer Shade	5.05	Grayson Reservoir	1.23
Louisiana	Saint Bernard	87	16	2 Stations	30	19+	Lake Arthur 10 SW	17.86	Shreveport WSO	3.65
Maine	Saco	55	13	Bridgewater	-29	20	2 Stations	3.47	Madison	1.71
Maryland	2 Stations	78	27+	Oakland 1 SE	3	3	Centreville	3.31	Cumberland Police Brks	.48
Massachusetts	5 Stations	66	12+	Chester 2	-12	5	Hoosac Tunnel	4.54	Nantucket FAA Airport	2.28
Michigan	Bay City	68	15	Stambaugh 1 S	-18	18	Greenville 2 NNE	6.81	Ironwood	1.15
Minnesota	4 Stations	41	24+	Hoyt Lakes 5 N	-29	18	Caledonia	2.12	Madison Sewage Plant	.07
Mississippi	Merrill	86	18	3 Stations	24	19+	Woodville 4 ESE	18.33	Pascagoula 2 ENE	3.15
Missouri	2 Stations	77	28	Maryville 2 E	8	28	West Plains	9.81	Tarkio	.62
Montana	Yellowtail Dam	56	22	Wisdom	-36	28	Summit	7.89	Glasgow 15 NW	.09
Nebraska	2 Stations	69	23	Harrisburg 10 NW	-10	8	Wahoo	1.70	Hayes Center	.00
Nevada	Logandale UN Exp Farm	69	18	Mountain City RS	-20	27	Mount Rose-Sky Tavern	7.70	Silverpeak	.02
New Hampshire	Peterboro 2 S	58	7	Mount Washington	-24	22	Mount Washington	9.51	Jefferson 5 SSW	1.56
New Jersey	Hammonton 2 NNE	70	17	3 Stations	10	19+	Belleplain St Forest	3.55	Burlington	.95
New Mexico	Hobbs	80	23	El Vado Dam	-19	17	Sandia Crest	3.61	Villanueva	.08
New York	Fredonia	68	16+	Canton 4 SE	-16	19	Slide Mountain	6.67	NY John F Kennedy INAP	1.46
North Carolina	2 Stations	83	17+	Grandfather Mountain	3	18	Lake Toxaway 2 SW	11.58	Enfield	.66
North Dakota	Alexander 18 SW	45	3	Bottineau	-28	17	Flasher	1.26	2 Stations	.00
Ohio	2 Stations	77	10	Toledo Express WSO	4	2	Dayton	5.60	Mansfield 6 W	.78
Oklahoma	2 Stations	80	25	2 Stations	7	6+	Bear Mountain Tower	18.13	Kenton	.40
Oregon	Pilot Rock 1 SE	63	25	Seneca	-15	28	Nehalem 9 NE	31.50	Rockville 5 N	.45
Pennsylvania	Newell	76	11	Pleasant Mount 1 W	- 1	5	Franklin	7.23	Lakeville 2 NNE	.71
Puerto Rico	Rincon Power Plant	90	25+	Adjuntas Substation	52	5+	Pico Del Este	14.55	Juana Diaz Camp	.24
Rhode Island	Providence WSO	68	11	North Scituate 4 W	6	19	Kingston	3.12	Block Island WSO	1.97
South Carolina	2 Stations	83	16	Caesars Head 1 NE	17	3	Caesars Head 1 NE	9.81	Brookgreen Gardens	1.11
South Dakota	2 Stations	62	25	Andover 7 N	-23	17	Armour	1.33	Farmingdale 4 N	.00
Tennessee	2 Stations	80	16+	Mountain City No 2	10	19+	Savannah	9.90	Rogersville 1 NE	2.30
Texas	Falfurrias	90	11	Perryton 5 NNE	10	8	Cypress	47.38	Imperial	T
Utah	Dewey	67	27	Soldier Creek	-32	31	Silver Lake Brighton	7.78	Ibapah	T
Vermont	Enosburg Falls	58	17	Mount Mansfield	-21	19	Mount Mansfield	6.29	Bristol 5 NNW	D 1.28
Virgin Islands	2 Stations	89	7+	Catherineburg	64	23	Annaly	6.01	Good Hope School	2.45
Virginia	Bedford	83	16	Burkes Garden	3	18	Pennington Gap	4.40	Rocky Knob	.16
Washington	Clallam Bay 1 NNE	65	27	Mazama	-24	27	Quinault Ranger Sta	25.20	Priest Rapids Dam	.90
West Virginia	5 Stations	80	11+	Buckeye	- 4	3	McMechen Dam 13	3.88	Moorefield 2 SSE	.34
Wisconsin	Beloit	60	15	Minong 5 WSW	-23	18	Sheboygan	5.06	St. Croix Falls	.83
Wyoming	Carpenter 3 E	65	25	Bondurant 3 NW	-42	8	Bondurant 3 NW	6.40	10 Stations	T

\+ And also on an earlier date or dates.

NOTE: Dates in the above table apply to the period 24 hours prior to time of observation. In some cases the actual occurrence is on the calendar date preceding that shown. (See individual Climatological Data for times of observations).

D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of snowfall.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
ALABAMA	Ft.	Mb.	Mb	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
BIRMINGHAM	620	998.6	1021.4	64	46	54.8	7.5	78	12	29	19+	0	2	46	75	5.92	0.90	2.35	12	0	0.0	0	2.3	13	25	SW	15+	3	4	24	8.2	30
HUNTSVILLE	624	998.0	1021.3	59	42	50.5	6.9	73	14	23	18	0	3	45	81	9.89	4.98	3.48	15	0	0.0	0	2.8	13	25	9	2	3	5	23	8.1	
MOBILE	211	1012.2	1020.2	71	56	63.5	9.4	81	16+	40	19	0	0	58	87	5.58	0.12	2.03	16	2	0.0	0	3.4	11	23	20	20+	5	1	25	7.9	
MONTGOMERY	183	1014.2	1021.5	68	49	58.3	10.1	83	16	31	19	0	1	51	81	6.24	1.43	3.19	11	0	0.0	0	2.2	12	27	5	15	3	8	20	7.8	48
ALASKA												8															8					
ANCHORAGE	114	1003.1	1008.2	23	9	16.2	2.7	42	28+	-12	21+	0	31	11	79	0.87	- 0.07	0.21	16	0	11.4	11	2.6	35	35	1	22	3	9	19	7.6	26
ANNETTE	110	1006.1	1010.3	35	26	30.5	- 5.5	45	1	10	12	0	24	23	75	8.33	- 3.78	2.13	21	0	37.4	14	3.0	8	35	14	1	4	5	22	7.7	
BARROW	31	1014.2	1014.8	- 5	-18	-11.4	- 0.2	27	25	-34	9	0	31	-22	61	0.18	0.01	0.10	5	0	2.2	6	4.1	9	23	11	25+	1	-	7		
BARTER ISLAND	39	1012.5	1014.7	- 6	-19	-12.3	- 1.9	28	25	-41	7	0	31	-21	68	0.21	- 0.08	0.08	5	0	3.5	20	2.2	22	67	27	19	1	2	7		
BETHEL	125	1000.7	1006.7	22	4	12.9	8.1	38	24	-29	4	0	30	10	88	2.58	1.56	0.57	23	0	17.5	17	3.7	19	43	20	17	4	4	23	8.0	
BETTLES	644	987.1	1013.0	1	-16	- 7.7		29	26	-46	20	0	31	-15	69	1.48		0.38	14	0	23.3	47	4.5	34	21	6	12	10	6	15	6.1	
BIG DELTA	1268			3	-13	- 4.8		34	28	-40	1	0	31			0.51		0.12	11	0	9.9	11			40	11	12	8	3	20	7.1	
COLD BAY	96	1004.4	1008.2	38	27	32.4	3.6	49	17	11	20+	0	26	29	84	4.87	2.28	0.93	24	0	9.3	2	9.3	20	55	15	28+	0	6	25	8.9	
FAIRBANKS	436	994.6	1012.8	3	-15	- 5.8	1.9	28	18	-41	12+	0	31	-14	66	1.83	1.29	0.85	17	0	29.6	30	0.9	24	29	25	19	4	7	20	7.4	
GULKANA	1572			4	-15	- 5.7		30	28	-52	12	0	31			1.68		0.49	17	0	21.3	34	2.1	35	26	4	21+	3	5	23	7.9	
HOMER	67	1004.7	1008.5	29	17	23.0		40	27+	- 5	21	0	30	18	79	1.69	- 0.94	0.31	18	0	17.1	11	1.5	34	28	24	19	6	5	20	7.3	
JUNEAU	12	1009.8	1010.6	26	16	20.9	- 7.5	39	18	- 7	14	0	31	13	74	3.23	- 0.99	0.65	22	0	37.1	14	7.6	10	33	12	29	6	3	22	7.5	30
KING SALMON	49	1005.8	1007.6	26	11	18.6	5.4	43	6	-18	2	0	29	12	77	3.42	2.40	0.63	19	0	15.1	7	2.7	17	44	26	13	4	6	21	7.7	
KOTZEBUE	10	1008.1	1008.6	7	- 7	0.1	3.7	32	25	-24	3+	0	31	- 6	75	0.77	0.48	0.18	15	0	16.4	23	13.7	10	54	11	22	9	3	19	6.9	
MC GRATH	344	997.0	1010.1	10	-10	0.4	7.4	40	25	-46	20	0	30	- 2	88	4.37	3.36	0.83	23	0	50.9	44	0.8	20	23	28	18	3	4	24	8.3	
NOME	13	1004.4	1006.3	17	- 1	8.0	1.7	35	25+	-24	19	0	30	2	73	0.77	- 0.22	0.28	16	0	8.3	13	7.6	8	41	7	27	9	1	21	6.9	30
ST. PAUL ISLAND	22	1002.7	1003.5	34	26	30.0	3.6	40	22+	15	7	0	27	28	89	3.30	1.47	0.68	24	0	13.1	7	3.2	20	47	9	11	1	5	25	8.7	
SHEMYA	122	997.6	1001.3	36	29	32.3	0.9	42	16+	15	6	0	26	25	73	2.73	0.59	0.34	22	0	13.9	4	8.1	25	75	23	23	3	9	22	8.4	
SUMMIT	2401	919.4	1013.1	9	- 4	2.4		28	28+	-22	5+	0	31	- 4	74	0.83		0.25	16	0	42.4	31	9.9	4	30	6	16+	5	7	19	7.6	
TALKEETNA	345			17	- 2	7.8	- 1.8	32	8	-30	21+	0	31			2.09	0.47	0.45	17	0	37.5	38			18	36	6	5	3	23	8.1	
UNALAKLEET	15	1005.8	1006.5	14	0	7.2		35	26+	-30	1	0	31			1.65		0.46	13	0	11.5	17	13.5	9	52	7	26	6	3	22	7.6	
YAKUTAT	28	1005.8	1006.7	30	14	22.0	- 6.1	40	15	-10	21	0	30	17	80	10.00	- 2.27	2.02	21	0	62.9	50	5.1	10	35	12	1	4	4	23	8.1	
ARIZONA																																
FLAGSTAFF	7006	784.6	1018.9	34	11	22.5	- 7.9	49	24	-18	16	0	30	15	70	4.18	2.53	2.07	9	1	18.8	9	3.1	21	23	S	16	9	8	14	6.0	
PHOENIX	1117	977.3	1016.9	61	39	50.2	- 1.4	76	25+	28	12	0	6	35	59	0.47	- 0.38	0.24	6	0	0.0	0	2.4	12	28Y	ENE	17	13	6	12	5.1	68
TUCSON	2584	926.9	1016.3	58	36	47.1	- 4.8	78	24	27	17+	0	10	35	67	1.97	1.05	0.83	6	0	6.8	6	3.5	15	35	S	18	13	3	15	5.5	64
WINSLOW	4895	851.3	1020.2	41	20	30.3	- 2.2	67	24	3	17	0	25	23	76	0.95	0.43	0.40	7	0	8.7	4	1.7	22	28	21	13	12	4	15	5.6	
YUMA	194	1010.2	1017.4	62	41	51.5	- 3.5	75	25	31	12	0	2	31	51	0.15	- 0.17	0.10	4	0	0.0	0	3.4	35	28	NW	31	16	7	8	4.1	84
ARKANSAS																																
FORT SMITH	447	1002.0	1019.0	56	36	46.4	4.1	74	27	26	18	0	10	39	76	10.09	7.27	5.78	12	5	2.0	2	2.3	8	45	NW	14	6	6	19	7.3	46
LITTLE ROCK	257	1009.5	1019.4	59	41	49.9	8.0	74	27	30	18	0	2	43	81	6.97	2.88	3.63	14	3	0.6	T	1.5	8	48	SW	10	7	3	21	7.4	34
CALIFORNIA																																
BAKERSFIELD	475	1002.0	1020.0	54	37	45.4	- 3.4	70	22	26	17	0	9	39	80	1.17	0.20	0.33	8	0	1.5	3	1.5	10	35	18	27	10	5	16	6.1	
BISHOP	4108	873.4		48	19	33.5	- 5.8	67	5	8	11	0	29			1.85	0.67	1.29	5		1.8	2						16	6	9	4.5	
BLUE CANYON	5280			36	24	30.1	-10.2	54	17	17	15	0	28			13.67	3.43	3.25	17		90.6	56			34	18	22	4	2	20	6.5	
EUREKA U	43			51	39	45.0	- 3.9	60	1	34	16	0	0			6.38	- 0.33	1.00	18		0.0	0			36	A	24+	8	6	17	6.8	48
FRESNO	328	1008.1	1020.3	52	34	42.9	- 4.1	61	23	26	19+	0	15	38	86	2.56	0.59	0.70	14	0	0.0	0	2.2	11	30	NW	7	10	3	18	5.7	41
LONG BEACH	25	1017.6	1018.8	63	43	52.6	- 3.4	73	17	35	29+	0	0	39	68	5.29	3.32	1.77	12	0	0.0	0	0.4	30	23	31	11	10	6	14	4.8	
LOS ANGELES	97	1014.6	1018.2	61	45	52.7	- 4.2	70	1	39	30+	0	0	38	64	5.70	3.31	2.25	12	0	T	0	1.1	5	39Y	NW	15	10	5	13	4.7	
LOS ANGELES U	278			61	45	52.8	- 5.4	70	1	38	29	0	0			6.57	3.70	2.70	10		0.0	0			26	NE	8	17	5	9	4.9	60
MT SHASTA R	3544	891.6	1018.6	36	22	29.3	- 6.6	47	19	9	28	0	31	24	81	4.84	- 1.38	1.23	19		52.3	24										
OAKLAND	6	1019.6	1020.0	52	41	46.7	- 2.8	58	1	35	16+	0	0	39	78	3.50	- 0.08	1.23	14	0	0.0	0	1.9	16	31	15	26	8	12	11	5.9	
RED BLUFF	342	1006.4	1019.3	51	34	42.6	- 4.5	62	31	29	17	0	14	34	76	3.26	- 3.95	1.45	13	0	T	T	0.8	24	46	S	12	9	4	16	6.7	52
SACRAMENTO	17	1018.6	1019.6	51	35	43.0	- 3.4	58	24	27	17+	0	11	36	80	4.05	0.81	1.06	14	0	0.0	0	1.2	15	29	SE	12	4	10	18	7.2	54
SANDBERG R	4517	861.8		39	28	33.1	- 9.6	48	18+	14	8	0	23	23	76	10.26	7.77	2.88	15		39.2	32			39	S	22	9	7	14	6.7	
SAN DIEGO	13	1017.6	1018.5	62	47	54.2	- 2.9	70	31	38	8	0	0	46	61	5.27	1.22	0.96	13	1	0.0	0	2.3	27	30	S	27	15	7	9	4.6	65
SAN FRANCISCO	8	1019.0	1019.8	53	39	46.1	- 4.0	58	1	34	19+	0	0	39	79	3.44	- 0.65	1.09	13	3	0.3	0	1.8	22	27	NW	28	8	11	12	6.0	
SAN FRANCISCO U	52			53	45	49.0	- 3.5	60	1	42	31+	0	0			5.93	- 0.34	1.81	14		0.1	0			32	SE	26					65
SANTA MARIA	236			57	34	45.6	- 6.8	66	18+	24	8	0	18			2.90	0.22	0.96	12		1.3	3						15	7	9	4.4	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max. 90° F. or above	Temperature: No of days: Min. 32° F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 01 inch or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear 0.3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	Ft.	Mb.	Mb	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In			In.	In	M.p.h.		M.p.h							%
CALIFORNIA																																
STOCKTON	22	1019.6	1020.5	51	35	42.9	- 3.0	61	24	27	20+	0	11	36	81	3.82	1.16	1.40	13	0	0.0	0	2.5	15	32	34	7	3	8	20	7.7	
COLORADO																																
ALAMOSA	7536	768.7		31	0	15.8	- 3.4	51	25	-20	17	0	31			0.45	0.20	0.24	6		11.0	7						8	14	9	5.3	
COLORADO SPRINGS	6145	806.6	1015.8	42	18	30.4	- 1.3	67	25	2	8	0	29	13	55	0.23	- 0.01	0.12	6	0	3.8	2	2.1	5	28	30	29+	8	12	11	5.6	
DENVER	5283	831.7	1013.4	46	17	31.9	0.3	69	23	- 6	9	0	31	17	62	0.25	- 0.22	0.11	6	0	8.4	5	1.6	21	35	NW	10	9	11	11	5.5	69
GRAND JUNCTION	4843	852.4	1020.6	36	16	25.9	- 3.2	60	26+	- 3	18	0	28	19	75	0.67	0.10	0.20	13	0	10.4	5	2.5	12	27	SW	26	10	4	17	6.5	48
PUEBLO	4684	852.4	1015.0	49	18	33.5	0.3	72	25	4	31	0	30	17	59	0.18	- 0.12	0.13	3	0	2.2	2	2.7	29	37	SW	26	12	8	11	5.3	68
CONNECTICUT																																
BRIDGEPORT	7	1021.3	1021.9	46	31	38.6	5.4	65	11	18	31+	0	14	27	66	3.33	- 0.18	1.52	10	1	0.8	1	6.0	31	35	32	31+	9	5	17	6.5	
HARTFORD	169	1013.9	1020.8	41	25	32.8	3.9	63	11	10	23+	0	24	23	70	3.55	0.08	1.00	16	1	6.6	3	3.9	30	42	NW	25	10	4	17	6.6	57
DELAWARE																																
WILMINGTON	74	1019.0	1022.1	50	34	42.1	7.0	69	16	18	3	0	12	33	71	1.33	- 1.70	0.94	9	0	T	T	2.7	30	36	31	18	7	5	19	7.0	
DIST.OF COLUMBIA																																
WASHINGTON DULLES	290	1010.2	1022.1	53	31	42.2		73	27	13	23	0	17	35	75	1.00		0.87	5	0	T	T	2.0	25	35	30	18+	6	4	21	7.5	
WASHINGTON NATIONAL	10	1019.6	1022.1	54	37	45.5	7.4	74	16	23	3	0	10	34	68	1.66	- 1.12	1.34	4	0	0.1	T	2.3	29	42	NW	18	7	4	20	7.2	36
FLORIDA																																
APALACHICOLA U	13			70	57	63.1	7.3	79	17	42	4+	0	0			4.48	1.52	2.18	8	2	0.0	0			27	NE	23	3	12	16	7.2	78
DAYTONA BEACH	31	1020.3	1021.6	76	59	67.8	7.5	84	15	48	4	0	0	60	80	2.49	0.54	1.89	9	0	0.0	0	3.1	8	31	7	22	6	13	12	6.2	
FORT MYERS	15	1020.0	1020.2	82	63	72.3	7.3	86	20+	51	5	0	0	62	74	0.30	- 0.99	0.22	3	0	0.0	0	5.1	8	21	6	23+	15	12	4	4.2	
JACKSONVILLE	26	1021.3	1022.3	74	55	64.4	8.3	83	28+	39	19	0	0	58	85	5.87	3.65	3.70	5	2	0.0	0	1.4	6	33	NE	22	5	9	17	7.1	47
KEY WEST	4	1018.0	1018.7	80	72	76.2	5.6	83	16+	67	22	0	0	67	74	1.59	- 0.10	1.54	5	1	0.0	0	10.9	9	28	NE	23	10	13	8	4.9	86
LAKELAND U	214			78	62	70.0	7.6	85	16	51	4	0	0			0.73	- 1.13	0.73	1		0.0	0						14	11	6	4.3	62
MIAMI	7	1019.3	1019.7	79	69	74.2	6.1	82	17	61	5	0	0	64	72	4.33	2.66	1.86	9	1	0.0	0	8.6	7	33	4	23	6	20	5	5.6	
ORLANDO	108	1016.9	1021.3	81	62	71.4	10.5	86	16+	52	4	0	0	62	77	1.93	0.04	1.45	4	1	0.0	0	2.6	8	27	7	23	11	10	10	5.5	
PENSACOLA	112	1016.3	1020.5	70	56	63.0	8.7	80	16	41	4	0	0	58	86	3.71	- 0.51	1.77	9	0	0.0	0	3.2	11	23	19	10	4	5	22	7.6	
TALLAHASSEE	55	1019.3	1021.5	73	52	62.8	8.7	84	16	30	19	0	1	57	84	4.11	0.67	2.17	9	2	0.0	0	2.4	11	21	36	17	4	10	17	7.3	
TAMPA	19	1020.3	1020.7	79	60	69.4	7.1	83	15	50	19+	0	0	61	78	0.79	- 1.10	0.67	3	0	0.0	0	4.1	10	22	8	23	13	9	9	5.1	44
WEST PALM BEACH	15	1019.3	1019.9	80	67	73.1	4.9	83	21+	53	5	0	0	64	75	1.87	- 0.70	0.94	11	2	0.0	0	8.4	9	35	6	23+	8	18	5	5.3	
GEORGIA																																
ATHENS	802	992.9	1022.3	62	44	52.6	8.0	78	16	28	19	0	5	45	79	2.81	- 1.72	1.51	12	0	3.0	3	0.3	34	25	30	12	4	10	17	7.4	
ATLANTA	1010	984.4	1021.7	61	44	52.3	7.5	77	16+	28	19+	0	4	44	78	2.79	- 1.59	1.30	12	0	1.0	1	1.3	12	34	E	3	4	6	21	7.6	42
AUGUSTA	136	1017.3	1022.4	66	45	55.7	8.5	81	16	25	19	0	3	48	80	2.69	- 0.64	1.84	8	0	0.4	T	0.7	22	23	19	15	6	3	22	7.4	
COLUMBUS	385	1007.5		66	49	57.8	10.1	82	16	32	19	0	1	51	82	4.96	0.40	2.48	13	0	0.0	0	2.0	9	24	S	3	3	3	25	8.1	
MACON	354	1009.8	1022.9	66	47	56.2	7.2	82	16	27	19	0	2	50	80	4.89	0.84	3.02	11	0	T	T	0.7	11	25	SW	30	4	4	23	7.9	35
ROME	637			61	41	50.9	8.5	75	15	23	19	0	5			7.99	2.86	2.01	15		0.3	T										
SAVANNAH	46	1020.7	1022.5	70	51	60.6	9.2	83	15+	29	19	0	2	52	78	3.69	0.88	1.81	8	0	0.0	0	0.3	6	29	N	3	2	8	21	7.7	43
HAWAII																																
HILO	27	1015.2	1016.4	78	64	70.9	- 0.6	83	7	60	22+	0	0	65	87	32.19	17.01	7.48	31	1	0.0	0	2.8	19	21	SE	17	0	12	19	8.1	21
HONOLULU	7	1014.6	1015.1	79	67	73.3	- 0.3	83	9+	60	24	0	0	63	72	2.88	- 0.11	1.51	12	1	0.0	0	11.3	7	33	NE	13	3	16	12	6.4	65
KAHULUI	48	1012.5	1014.7	83	63	72.7	0.0	89	18	56	26	0	0	62	72	0.14	- 2.56	0.08	6	0	0.0	0	9.0	6	36	E	9	17	8	6	4.3	76
LIHUE	103	1011.2	1016.3	79	70	74.5	2.3	82	6+	64	18+	0	0	66	75	7.52	2.34	4.60	22	3	0.0	0	9.4	8	27	E	13	2	12	17	7.4	23
IDAHO																																
BOISE	2838	915.3	1018.1	37	24	30.2	- 2.0	49	24+	11	19	0	26	22	71	1.63	0.31	0.47	15	0	14.8	6	5.3	12	34	SE	12+	5	2	24	7.9	19
LEWISTON	1413			40	28	34.2	- 0.7	55	22+	15	28	0	22			1.08	- 0.29	0.53	11		5.9	2			56Y		8	5	2	24	8.1	
POCATELLO	4454	861.2	1018.8	30	15	22.6	- 4.8	48	25	- 6	8	0	29	17	79	1.69	0.69	0.45	15	0	17.6	4	9.8	20	45	SW	6	2	3	26	8.8	19
ILLINOIS																																
CAIRO U	314			54	39	46.6	7.1	71	10	23	18	0	7			4.17	0.50	0.94	13		T	0			63	SW	10	6	5	20	7.4	31
CHICAGO O HARE	658	993.9	1018.9	41	27	34.2	6.8	62	15	10	18	0	20	28	78	5.37	3.54	2.13	12	1	0.2	T	4.5	23	44	24	15	4	4	23	8.3	
CHICAGO MIDWAY	607	996.3	1019.4	44	29	36.7	7.6	64	15	13	18	0	18	29	75	5.93	4.03	2.19	14	1	0.3	T	3.8	22	42	S	15	5	6	20	7.9	34

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear. 0-3	No. of days (sunrise to sunset): Partly cloudy. 4-7	No. of days (sunrise to sunset): Cloudy. 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
ILLINOIS	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MOLINE	582	997.6	1020.0	38	25	31.6	4.7	51	15	10	18	0	23	25	78	4.77	3.12	2.37	11	2	0.3	T	2.1	25	37	S	15	4	5	22	8.0	25
PEORIA	652	994.9	1019.7	41	28	34.3	5.2	63	15	10	18	0	21	29	81	4.96	3.02	1.75	13	3	T	T	2.4	20	46	SW	15	3	5	23	8.3	23
ROCKFORD	724	991.5	1019.3	38	25	31.5	5.9	58	15	8	18+	0	23	26	81	5.04	3.34	2.24	12	1	0.2	T	2.1	25	35	20	15	4	6	21	8.0	
SPRINGFIELD	588	996.6	1019.5	45	32	38.5	6.5	64	15	15	18	0	17	33	82	4.38	2.49	1.60	10	2	T	T	3.1	19	54	SW	15	4	3	24	8.2	25
INDIANA																																
EVANSVILLE	381	1006.4	1021.0	50	34	42.1	6.0	70	10	15	18	0	15	36	78	3.15	0.07	1.04	14	2	T	T	2.3	18	56	SW	10	7	4	20	7.5	36
FORT WAYNE	791	989.8	1020.8	43	29	36.0	7.6	66	10	16	18+	0	20	31	83	4.35	2.26	1.19	15	0	0.5	T	4.6	23	50	SW	10	4	2	25	8.3	26
INDIANAPOLIS	792	990.5	1020.5	46	30	38.4	7.3	66	10	12	18	0	22	32	80	6.02	3.34	2.21	14	0	0.4	T	2.8	20	56	SW	10	3	6	22	8.2	19
SOUTH BEND	773	990.9	1019.4	43	30	36.0	7.3	64	10	11	2	0	19	30	80	4.58	2.39	1.39	16	1	4.4	5	4.3	21	39	21	15	2	4	25	8.5	
IOWA																																
BURLINGTON	692			40	26	32.8	4.4	61	15	10	28	0	25	29	85	4.94	3.34	2.29	13	1	T	T	1.5	25	35	22	15	4	4	23	8.0	
DES MOINES	938	983.7	1019.7	35	22	28.2	2.9	49	18	6	28	0	28	24	83	1.12	- 0.02	0.53	8	0	2.9	4	0.7	22	25	W	15	3	5	23	8.2	23
DUBUQUE	1056	979.0		34	21	27.7	4.2	47	10	6	17	0	27			4.04	2.14	2.31	12		4.1	4										
SIOUX CITY	1095	977.7	1019.3	32	17	24.4	- 0.6	44	23	5	12	0	31	18	76	0.79	0.05	0.54	9	0	6.7	4	0.9	16	29	NW	23	9	3	19	7.0	40
WATERLOO	868	986.8	1019.8	31	17	23.9	0.7	40	23	- 5	1	0	29	20	86	1.78	0.65	0.75	9	0	7.0	6	1.3	27	24	32	15	5	4	22	8.0	
KANSAS																																
CONCORDIA	1470	963.4	1018.1	41	26	33.1	1.1	60	25	13	27	0	29	29	88	0.71	0.00	0.30	6	0	4.3	3	1.8	18	27	SW	18+	7	4	20	7.1	40
DODGE CITY	2582	923.8	1016.9	43	27	34.9	0.2	72	23	18	6	0	28	26	77	0.66	0.19	0.43	5	0	5.2	5	2.6	20	30	W	29	11	3	17	6.5	54
GOODLAND	3654	885.9	1015.8	44	22	32.6	2.2	69	23	12	8	0	29	21	71	0.21	- 0.23	0.12	5	0	4.1	1	3.7	22	30	34	18	9	9	13	5.9	
TOPEKA	877	986.5	1019.2	42	27	34.8	1.4	60	25	15	28	0	24	29	83	1.83	0.44	0.88	11	0	1.2	1	0.5	18	30	NW	30	5	6	20	7.6	34
WICHITA	1321	968.8	1018.0	44	28	35.8	0.0	59	25	18	31+	0	25	31	85	0.95	0.01	0.46	10	1	2.4	2	1.0	16	32	NE	14	9	3	19	6.9	41
KENTUCKY																																
COVINGTON	869	988.5	1020.7	49	33	41.2	7.9	67	10	12	18	0	15	33	73	3.39	0.64	0.99	12	0	T	T	3.6	22	37	22	15	2	7	22	8.2	
LEXINGTON	966	985.4	1021.4	55	37	45.7	9.8	72	10	15	18	0	12	37	71	4.30	0.85	1.53	10	1	T	T	4.1	20	37	19	10	4	6	21	7.8	
LOUISVILLE	477	1002.7	1020.8	53	37	45.1	8.8	71	10	16	18	0	11	36	72	2.98	- 0.24	1.03	11	1	T	0	2.7	22	34	SW	30	5	5	21	7.6	35
LOUISIANA																																
ALEXANDRIA	92	1015.2	1019.7	66	48	57.2	5.9	78	14	37	19	0	0	53	88	11.55	5.82	6.16	13	2	0.0	0	1.6	11	23	29	15+	4	6	21	7.8	
BATON ROUGE	64	1016.3	1019.0	71	55	62.7	9.0	83	12+	42	19	0	0	56	83	10.04	4.94	3.64	14	6	0.0	0	3.2	12	21	24	20+	4	8	19	7.5	
LAKE CHARLES	9	1017.3	1018.4	69	54	61.8	7.2	81	16+	43	4+	0	0	57	89	9.90	4.14	6.88	10	6	0.0	0	3.7	10	32	11	5	2	13	16	7.6	
NEW ORLEANS	4	1018.3	1019.3	71	56	63.4	8.0	84	16	43	7	0	0	59	86	6.64	2.54	2.28	9	3	0.0	0	3.0	12	28	19	6	3	7	21	7.6	
SHREVEPORT	254	1008.8	1018.3	65	46	55.4	5.8	80	9	36	18	0	0	50	85	3.65	- 1.29	1.29	14	3	0.0	0	2.4	13	29	18	10+	7	4	20	7.2	34
MAINE																																
CARIBOU	624	993.6		21	2	11.7	- 3.8	42	11	-25	20	0	30			2.46	0.03	0.63	17		26.3	17						8	8	15	6.5	
PORTLAND	43	1017.3	1019.5	37	18	27.3	1.5	54	11	- 3	31	0	30	18	68	2.85	- 1.00	0.66	13	0	12.5	6	5.2	31	34	NW	25	9	10	12	5.6	56
MARYLAND																																
BALTIMORE	148	1016.9	1022.7	53	35	43.7	7.9	71	16	18	3	0	11	34	69	1.29	- 1.70	0.94	4	0	T	T	2.9	28	40	NW	18	7	5	19	7.1	41
MASSACHUSETTS																																
BLUE HILL OBS R	629			39	24	31.7	1.7	62	11	7	19	0	25			2.72	- 1.24	0.80	14		10.7	3			60	NW	25					50
BOSTON	15	1019.0	1019.9	44	29	36.3	3.0	64	16+	13	19	0	18	25	66	2.40	- 1.23	0.84	15	0	7.9	3	6.7	29	42	NW	25	9	8	14	6.0	52
WORCESTER	986	982.1	1020.2	28	23	30.5	3.3	58	16+	5	19	0	27	21	70	2.68	- 0.91	0.88	11	1	9.6	6	6.2	29	36	30	25	8	7	16	6.3	
MICHIGAN																																
ALPENA	689	992.2	1018.4	35	20	27.5	3.4	56	10	- 3	31	0	26	23	82	4.44	2.60	1.63	14	0	18.3	11	2.9	24	33	W	15	1	6	24	8.4	28
DETROIT	619			42	30	35.9	6.0	66	10	18	17	0	20	25	67	4.06	1.98	1.39	14	0	2.0		4.5	24	43	21	10					
DETROIT METRO	633	994.6	1019.4	41	26	33.3	4.4	64	10	10	2	0	22	28	80	3.79	1.87	1.37	14	0	2.6	2	4.1	25	45	SW	15	2	6	23	8.1	30
FLINT	771	990.2	1018.8	39	26	32.4	4.8	63	10	7	2	0	23	25	76	4.66	2.86	1.77	15	0	7.2	5	4.7	24	37	25	15	3	5	23	8.2	
GRAND RAPIDS	784	988.8	1018.9	38	26	32.0	5.0	62	10	12	1	0	24	26	79	6.63	4.60	2.13	15	2	3.7	2	3.6	22	60	SW	10	2	4	25	8.7	15
HOUGHTON LAKE	1149	974.9	1018.4	33	19	26.2	2.7	55	10	- 5	31	0	30	23	84	4.48	2.81	1.70	12	0	16.7	9	3.5	25	29	28	11+	3	3	25	8.6	
LANSING	841	986.5	1019.3	39	25	31.9	4.4	64	15	3	2	0	23	27	82	4.24	2.25	1.36	14	2	3.7	3	4.4	23	56	SW	15	2	7	22	8.3	26
MARQUETTE U	677			31	20	25.4	1.3	40	10+	9	18	0	27			2.89	0.97	0.88	13		25.3	13			30	SW	11	6	3	22	7.8	33

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

DECEMBER 1971

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
												No. of days						No. of days		Snow, Ice pellets				Fastest mile							
		Station ○	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F. or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
MICHIGAN																																
MUSKEGON	625	995.3	1019.1	38	25	31.6	1.7	61	10	15	22+	0	26	25	77	5.34	3.34	1.82	14	0	8.4	3	2.6	24	38	19	15	0	7	24	8.8	
SAULT STE MARIE	721	989.5	1017.4	29	15	22.0	1.1	42	10	- 7	31	0	30	18	85	4.43	2.15	1.32	20	0	26.7	13	0.1	17	41	NW	24	2	4	25	8.8	18
MINNESOTA																																
DULUTH	1428	964.1	1018.3	22	7	14.7	0.7	33	24+	-11	17	0	31	10	82	1.22	0.06	0.42	15	0	17.5	12	3.3	25	33	NW	24	5	6	20	7.6	27
INTERNATIONAL FALLS	1179	972.6	1018.0	18	- 2	8.5	- 0.9	33	2	-20	27+	0	31	5	83	0.48	- 0.36	0.14	11	0	7.1	11	3.6	22	25	28	24	9	3	19	7.1	
MINNEAPOLIS	834	987.8	1019.7	26	11	18.4	0.3	35	24+	-10	17	0	30	13	77	0.70	- 0.16	0.33	10	0	12.8	11	1.9	23	32	NW	24	5	4	22	7.7	24
ROCHESTER	1297	969.5	1019.3	28	12	20.0	1.4	35	23+	- 5	17	0	31	17	87	0.98	0.01	0.30	13	0	8.4	7	3.5	24	35	17	22	5	3	23	7.9	
ST CLOUD	1034	979.7	1019.8	24	7	15.5	- 1.1	35	23	-12	17	0	31			0.39	- 0.34	0.18	9		6.6	8						4	5	22	7.9	
MISSISSIPPI																																
JACKSON	310	1007.8	1019.9	67	49	57.9	8.5	81	12	32	19	0	1	53	86	9.82	4.52	4.61	13	3	0.0	0	3.0	14	29	S	14	3	7	21	7.9	30
MERIDIAN	290	1009.5	1020.6	67	48	57.5	9.2	81	16	31	19	0	1	52	83	7.63	2.32	2.29	13	2	0.0	0	1.3	11	23	27	6	2	5	24	8.5	
MISSOURI																																
COLUMBIA REGIONAL	887	986.5	1019.5	47	32	39.7	5.9	69	25	19	28+	0	17	32	77	4.21	2.25	1.11	13	3	T	2	2.8	16	58	SW	15	4	2	25	8.3	28
KANSAS CITY	742	990.9	1018.7	44	30	37.0	1.2	63	25	18	28	0	20	32	85	3.82	2.29	1.70	13	2	1.0	1	0.4	8	27	W	30	5	5	21	7.7	30
ST JOSEPH	811			40	26	33.1	1.6	54	25	14	28	0	27			1.89	0.53		12				0.4	15	23	28	30	5	3	23	7.9	
ST LOUIS	535	999.0	1020.0	50	32	40.6	5.8	72	27	14	18+	0	16	36	85	6.50	4.53	2.57	13	2	0.0	0	1.9	17	42	SW	15	5	6	20	7.6	32
SPRINGFIELD	1268	972.6		52	33	42.8	6.1	71	27	20	28	0	16			6.24	4.05	2.34	10	4	T	T			60	SE	14	5	1	25	8.0	35
MONTANA																																
BILLINGS	3567	886.6	1015.0	30	9	19.7	- 8.7	43	22	-10	16	0	31	10	69	1.13	0.54	0.70	9	0	12.2	7	7.7	25	49	NW	9	8	7	16	6.5	32
GLASGOW	2284	930.6	1016.6	21	1	10.8	- 6.9	42	9	-20	16	0	31	3	70	0.26	- 0.19	0.06	10	0	6.3	4	1.4	5	24	33	25+	6	13	12	6.4	
GREAT FALLS	3662	882.8	1015.3	29	7	18.0	- 9.3	47	17	-17	16	0	30	7	63	1.48	0.88	0.47	11	0	19.2	5	11.0	23	47	SW	31	7	7	17	6.9	36
HAVRE	2584	919.4	1016.2	19	- 5	7.3	-13.6	41	9	-29	16	0	31	0	72	0.84	0.37	0.24	11	0	12.0	7	4.8	25	35	SW	31	8	7	16	6.9	52
HELENA	3828	876.1	1017.0	27	5	15.6	- 8.6	48	22	-24	29+	0	31	7	66	1.02	0.49	0.50	10	0	14.5	10	2.9	26	38	NW	9	4	5	22	7.7	31
KALISPELL	2965	907.2	1015.4	29	8	18.4	- 6.6	41	17	-18	16	0	31	15	80	1.53	0.20	0.56	20	0	29.6	16	0.3	16	32	2	25	2	3	26	8.7	
MILES CITY	2629	918.7	1016.1	22	2	12.2	-11.0	38	17	-18	12	0	31	7	79	1.24	0.87		13	0	12.6		2.2	28								
MISSOULA	3190	900.8	1016.8	29	13	21.1	- 2.4	46	17	-10	8	0	30	19	85	1.63	0.55	0.37	18	0	16.7	8	0.3	8	31	NW	22	3	4	24	8.5	21
NEBRASKA																																
GRAND ISLAND	1841	949.9	1018.1	38	22	29.9	2.7	63	23	10	27	0	30	22	76	0.50	- 0.06	0.19	8	0	2.7	2	2.6	22	23	32	30+	9	7	15	6.3	
LINCOLN U	1150			38	25	31.2	0.6	57	23	11	27	0	26			0.83	- 0.07	0.67	5		2.3	4			32	NE	17	5	5	21	7.6	32
NORFOLK	1544			33	15	24.2	- 1.0	54	23	5	27+	0	31			0.69	- 0.04	0.39	6		4.5	3						8	7	16	6.5	
NORTH PLATTE	2775	916.4	1017.7	41	14	27.6	0.2	63	23	- 1	28	0	31	17	71	0.16	- 0.24	0.13	5	0	2.1	1	1.2	25	28	NW	10	12	5	14	5.5	56
OMAHA	977	982.4	1018.9	37	21	28.9	0.7	55	23	8	28	0	30	23	81	1.05	0.25	0.58	11	0	4.4	4	0.5	18	30	N	17	4	7	20	7.8	27
SCOTTSBLUFF	3957	876.4	1015.9	44	15	29.4	0.8	66	25	0	8	0	31	15	62	0.13	- 0.27	0.13	1	0	1.3	1	4.1	29	29	30	31	12	8	11	5.5	
VALENTINE	2587			38	11	24.4	- 0.7	58	23	- 2	12	0	31			0.27	- 0.07	0.14	4		3.7	1			31	S	3	10	10	11	5.8	51
NEVADA																																
ELKO	5050	843.2	1020.0	30	8	18.8	- 7.6	46	25	- 8	27	0	28	12	70	1.57	0.56	0.30	18	0	13.4	5	3.3	23	30	19	25	7	9	15	6.9	
ELY	6253	806.3	1018.9	33	5	18.9	- 7.9	47	20+	-11	31	0	30	12	75	1.25	0.57	0.45	13	0	13.6	5	5.8	19	43	SE	22+	5	9	17	6.7	60
LAS VEGAS	2162	941.1	1019.2	51	32	41.4	- 3.7	62	25	21	9	0	18	20	45	0.51	0.11	0.21	7	0	T	0	3.4	29	38	NW	7	13	8	10	4.8	63
RENO	4404	864.9	1018.8	40	13	26.6	- 5.3	61	5	- 1	30	0	31	15	66	2.97	1.89	1.39	7	0	25.6	13	1.1	24	38	SW	12	7	8	16	6.5	58
WINNEMUCCA	4301	867.9	1018.9	37	12	24.2	- 5.6	47	22+	- 6	16	0	31	16	72	1.47	0.53	0.42	13	0	17.5	4	3.2	19	37	SW	14	7	8	16	6.7	42
NEW HAMPSHIRE																																
CONCORD	342	1007.1	1020.1	37	16	26.6	1.6	54	16+	- 8	19	0	30	17	67	2.36	- 0.89	0.53	16	0	17.4	11	4.9	31	39	NW	25	8	8	15	6.2	50
MT WASHINGTON OBS	6262			18	1	9.6	0.8	34	11	-24	22	0	31			9.51	3.20	2.05	25	0	60.3	18			116Y	W	28+	4	6	21	8.1	35
NEW JERSEY																																
ATLANTIC CITY	64	1019.0	1021.5	50	32	41.1	4.5	66	16+	16	19	0	17	32	71	2.08	- 1.14	1.57	6	0	0.1	T	4.5	28	32	29	18	6	7	18	7.0	28
ATLANTIC CITY U	11			52	38	44.9	6.6	67	28+	21	2	0	10			2.85	- 0.63	2.19	7						33	SW	11					
NEWARK	7	1020.3	1021.4	48	34	41.4	6.7	65	16+	21	19	0	11	31	67	1.51	- 1.71	0.57	9	0	0.4	T	4.3	29	28	29	18	6	8	17	6.7	
TRENTON U	56			49	36	42.1	6.9	66	16+	22	23+	0	11			1.24	- 1.63	0.61	10		0.5	T			36	NW	18	9	5	17	6.6	45

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
NEW MEXICO	Ft	Mb	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In	In					M.p.h.		M.p.h.							%
ALBUQUERQUE	5311	837.5	1018.6	42	22	31.9	- 5.1	55	25	5	16	0	29	23	74	1.40	0.94	0.47	7	0	6.8	5	1.3	6	38	E	1	13	3	15	5.5	57
CLAYTON	4969			46	24	34.8	- 1.2	70	25+	12	5+	0	27			0.52	0.17	0.47	3		6.6	6						15	2	14	4.7	
ROSWELL	3612			55	26	40.8	1.8	72	26+	16	18	0	28			0.80	0.26	0.42	7		5.5	2			30	W	20					63
NEW YORK																																
ALBANY	275	1010.2	1021.1	39	21	30.0	3.5	55	16	- 1	31	0	26	22	72	3.09	0.50	1.11	16	0	10.1	5	3.4	27	47	W	25	5	8	18	7.4	45
BINGHAMTON	1590	960.0	1020.7	38	24	30.9	4.1	56	15	5	5	0	24	24	77	4.16	1.60	1.11	19	0	8.1	4	4.6	24	36	NW	25	3	6	22	7.9	26
BUFFALO	705	993.2	1019.7	41	26	33.5	5.8	65	15	8	31	0	22	27	79	3.61	0.61	1.00	20	0	12.9	5	6.3	25	43	SW	15+	3	4	24	8.5	27
NEW YORK U	132	1018.0	1021.0	47	35	40.8	4.9	63	16+	20	19	0	12	30	69	1.76	- 1.50	0.68	11	0	T	0	3.9	28	32	NW	31					42
NEW YORK KENNEDY	13	1020.7	1021.5	49	36	42.8	7.9	67	11	23	31+	0	11	31	66	1.46	- 1.77	0.57	8	0	0.1	T	5.4	30	29	20	24+	6	7	18	6.9	
NEW YORK LA GUARDIA	11	1020.0	1021.2	46	34	40.0	3.6	62	16+	20	19	0	11	28	64	1.55	- 1.84	0.72	9	0	T	T	5.0	31	36	NW	25	7	7	17	6.7	
ROCHESTER	547	999.0	1020.0	39	23	30.9	2.2	59	15	8	31+	0	24	26	83	3.49	1.11	0.93	18	0	13.8	5	4.7	25	48	SW	11	3	4	24	8.3	33
SYRACUSE	410	1004.7	1020.0	41	26	33.2	5.4	60	15	8	31	0	23	25	75	3.26	0.11	1.06	17	0	18.3	7	3.6	25	44	W	11	3	4	24	8.4	31
NORTH CAROLINA																																
ASHEVILLE	2140	945.1	1022.5	59	37	47.7	9.8	76	26	19	19	0	8	41	82	4.32	0.70	1.47	13	0	16.3	16	0.7	30	30	35	18	9	2	20	7.1	62
CAPE HATTERAS R	7	1022.4	1022.8	63	49	56.2	8.0	74	15	29	19	0	1	50	80	2.07	- 2.51	0.82	8	0	0.0	0	1.8	34	30	25	31+	8	5	18	6.6	36
CHARLOTTE	736	994.9	1022.7	60	42	50.6	7.9	77	28	24	19	0	7	42	74	2.24	- 1.38	0.84	11	1	7.5	8	1.3	25	30	SW	30	5	5	21	7.4	47
GREENSBORO	897	990.5	1022.7	59	39	48.7	8.8	78	16	20	19	0	8	39	71	1.61	- 1.52	0.52	9	0	4.2	4	1.2	25	34	NW	18	5	3	23	7.7	49
RALEIGH	434	1007.1	1023.2	60	40	50.3	8.4	77	16	21	19	0	8	40	69	1.69	- 1.33	0.50	8	1	3.7	4	1.1	24	28	22	30+	5	8	18	7.2	60
WILMINGTON	28	1021.7	1023.1	66	47	56.6	8.4	80	16	27	19	0	3	50	82	1.49	- 1.93	0.52	7	0	T	0	0.4	31	40	NW	18	6	5	20	7.4	42
NORTH DAKOTA																																
BISMARCK	1647	954.6	1017.6	21	1	10.9	- 6.9	35	31+	-20	17	0	31	5	73	0.47	0.11	0.26	10	0	8.7	5	1.4	29	27	NW	23	6	7	18	6.8	38
FARGO	896	984.1	1018.9	21	3	12.2	- 2.2	36	23	-18	17	0	31	6	74	0.59	0.01	0.19	12	0	10.0	5	3.4	20	38	SE	4	4	8	19	7.4	40
WILLISTON	1899	944.8	1016.8	21	- 2	9.6	- 6.6	42	2	-17	26	0	31	5	80	0.42	- 0.08	0.18	7	0	5.4	4	2.6	26	32	W	31	7	6	18	6.6	47
OHIO																																
AKRON	1208	974.9	1020.6	44	28	35.7	5.2	67	10	14	3	0	22	29	77	4.32	2.05	1.40	15	1	2.1	2	5.2	23	39	21	19	3	4	24	8.4	
CINCINNATI ABBE OB	761			49	34	41.3	6.0	69	10	13	18	0	14			3.45	0.68	0.97	13		0.0	0			32	SW	19					14
CLEVELAND	777	990.5	1020.6	46	31	38.1	7.6	69	10	17	3	0	20	28	69	3.90	1.56	1.05	19	0	1.9	1	6.3	22	49	SW	15	3	5	23	8.5	44
COLUMBUS	812	990.5	1021.2	47	30	38.4	6.9	72	10	15	2	0	20	30	74	4.61	2.27	1.28	15	1	0.6	T	3.7	22	47	SW	15	5	4	22	7.8	25
DAYTON	1002	983.7	1020.7	47	31	38.8	7.5	67	10	11	18	0	20	32	79	3.80	1.43	1.04	15	1	1.0	1	4.0	21	46	SW	15	3	8	20	7.9	23
MANSFIELD	1295			46	29	37.6	8.4	68	10	12	2	0	21	31	80	3.42	0.77	0.89	16	0	1.7	1	6.9	22	46	18	15	5	1	25	8.2	
TOLEDO	669	993.9	1019.9	42	25	33.6	5.3	67	10	4	2	0	20	27	78	3.73	1.78	0.90	16	0	1.4	1	4.3	24	45	SW	40+	4	3	24	8.2	26
YOUNGSTOWN	1178	976.6	1020.5	43	28	35.8	6.4	69	10	12	3	0	20	30	80	5.52	2.84	1.51	19	0	7.2	4	4.7	23	32	20	15	3	3	25	8.5	
OKLAHOMA																																
OKLAHOMA CITY	1285	970.9	1018.2	51	34	42.2	1.9	70	25	25	28+	0	13	36	83	2.79	1.38	1.06	10	3	5.2	5	1.0	15	37	NW	14	7	4	20	7.2	59
TULSA	650	993.6	1018.3	52	36	43.7	4.1	72	27+	24	28	0	13	38	81	6.34	4.72	3.04	11	2	1.0	T	1.4	18	34	NW	14	5	5	21	7.6	52
OREGON																																
ASTORIA	8	1013.2	1014.1	46	36	41.2	- 1.9	53	8+	27	7	0	6	37	83	13.83	0.18	2.29	28	1	3.4	3	3.1	20	29	19	13+	2	5	24	8.6	
BURNS U	4151	870.6	1017.3	33	15	23.9	- 5.2	48	24	3	28+	0	31	18	77	2.06	0.63	0.40	15		22.0	12	2.5	24				6	9	16	6.8	
EUGENE	359	1003.1	1016.8	44	33	38.7	- 3.1	54	5	21	28	0	13	35	87	9.46	2.85	2.26	19	0	1.2	T	6.5	18	36	17	23	2	2	27	8.7	
MEACHAM	4050	872.3	1016.1	29	21	24.8	- 5.0	40	5	2	28	0	31			6.69	2.16		19		33.5	43			26	26	W					
MEDFORD	1298	969.9	1018.5	41	31	36.1	- 0.8	52	1	21	28	0	19	29	80	2.45	- 0.93	0.54	20	0	2.8	2	0.8	19	30	13	21	1	1	29	9.1	
PENDLETON	1482	960.4	1015.0	43	30	36.9	0.4	58	24+	15	28	0	15	27	69	2.59	1.10	1.05	14	0	11.8	5	5.1	22	40	27	9	3	3	25	8.4	
PORTLAND	21	1013.9	1015.3	45	35	40.4	- 0.9	55	5	23	28+	0	8	35	81	8.05	1.67	1.30	21	0	4.6	3	5.7	18	34	S	25	1	2	28	9.3	4
SALEM	196	1008.5	1015.9	45	34	39.5	- 2.0	54	5	22	28	0	10	36	88	8.18	0.81	1.17	23	0	2.2	2	8.0	19	35	18	11	2	0	29	9.1	
SEXTON SUMMIT R	3836	881.5	1017.5	35	26	30.1	- 6.7	47	17	21	7	0	31			9.48	4.72	2.07	20		80.3	30			39	21	8					
PACIFIC AREA																																
GUAM TAGUAC R	361	998.0	1010.4	85	74	79.2	0.5	86	9+	69	29+	0	0	72	80	3.14	- 2.97	0.86	25	0	0.0	0	11.4	8	26	E	30					69
JOHNSTON	7	1010.5	1011.0	80	74	77.0	- 1.1	83	4	70	8	0	0	69	77	3.57	0.57	1.38	16	0	0.0	0	13.2	9	38	NE	15	7	11	13	6.3	67
KUROR R	94	1004.4	1008.0	88	76	82.0	1.1	91	15	73	27	6	0	75	84	11.06	- 0.66	2.73	24	4	0.0	0	7.8	8	21	NE	17	0	3	28	9.4	49
KWAJALEIN	8	1006.8	1007.6	86	77	81.6	0.8	87	28+	73	13	0	0	72	75	1.90	- 7.06	0.78	16	1	0.0	0	15.4	6	29	S	33	5	12	14	6.4	
MAJURO	10	1007.5	1007.7	84	77	80.5	0.2	86	25+	73	28+	0	0	73	79	8.40	- 2.72	4.41	18	1	0.0	0	10.7	6	30	E	28	2	7	22	8.3	42

See footnotes at end of table.

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure		Temperature										Average relative humidity	Precipitation							Wind					No. of days (sunrise to sunset)			Sky cover, tenths (sunrise to sunset)	Possible sunshine
											No of days							No of days		Snow, Ice pellets				Fastest mile							
		Station Ø	Sea level	Average maximum	Average minimum	Average	Departure from normal	Highest	Date	Lowest	Date	Max. 90 F. or above	Min. 32 F or below	Average dew point		Total	Departure from normal	Greatest in 24 hours	.01 inch or more	With thunderstorms	Total	Maximum depth on ground	Resultant speed	Resultant direction	Speed	Direction	Date	Clear, 0-3	Partly cloudy, 4-7	Cloudy, 8-10		
PACIFIC AREA	Ft.	Mb.	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
PAGO PAGO	12	1007.1	1007.4	86	74	80.1		88	25+	71	15+	0	0	73	81	6.67		1.43	21	1	0.0	0	3.3	6	26	SE	2	2	8	21	7.7	51
PONAPE R	123	1001.7	1006.7	87	76	81.2	1.0	90	3	73	26+	1	0	73	78	8.67	- 9.67	1.80	23	1	0.0	0	7.9	11	24	NE	8	0	5	26	8.8	38
TRUK MOEN ISLAND	5	1007.1	1007.4	86	77	81.7	0.9	87	23+	75	27+	0	0	74	78	8.04	- 5.20	1.60	25	2	0.0	0	10.9	6	33	E	9	0	4	27	9.3	68
WAKE	11	1013.5	1013.9	81	73	76.6	- 2.3	85	1	68	24	0	0	64	67	0.98	- 0.84	0.31	11	0	0.0	0	20.3	5	40	NE	7	11	16	4	4.6	49
YAP R	44			86	76	80.9	- 0.1	89	19	72	27+	0	0			9.71	- 0.45	2.14	27	2	0.0	0			22	NE	27	0	13	18	7.9	68
PENNSYLVANIA																																
ALLENTOWN	387	1007.5	1021.7	44	29	36.5	5.2	60	16	15	23+	0	18	29	77	1.32	- 1.95	0.61	7	1	1.4	1	3.4	30	31	31	22	9	5	17	6.5	
ERIE	731	992.6	1020.2	43	29	35.9	5.2	65	10	14	2	0	20	28	76	4.06	1.45	1.11	20	0	9.3	5	5.6	23	33	21	15	2	6	23	8.4	
HARRISBURG	338	1008.8	1021.8	47	33	40.3	7.3	63	16	21	23	0	14	30	70	1.93	- 0.98	1.04	13	1	T	T	2.6	31	39	W	30	7	10	14	6.5	42
PHILADELPHIA	5	1021.0	1021.9	49	34	41.6	7.7	68	16	20	3	0	13	31	66	1.21	- 1.73	0.82	8	0	0.1	T	2.9	29	30	NW	18+	8	5	18	6.9	46
PITTSBURGH	1137	976.0	1021.0	47	31	38.8	8.1	72	10	14	3	0	18	29	69	3.24	0.84	1.47	15	0	0.7	1	5.3	26	33	27	30	3	3	25	8.3	22
SCRANTON	930	985.8	1020.9	41	27	34.1	4.7	60	15	10	3	0	20	27	77	2.08	- 0.39	0.74	13	0	4.1	3	3.3	26	30	NW	31	4	7	20	7.8	38
WILLIAMSPORT	524	1001.7	1021.5	42	28	35.1	4.7	58	16	13	3	0	21	26	73	2.87	- 0.17	1.30	15	0	1.6	1	1.9	33	32	27	11	6	4	21	7.3	
RHODE ISLAND																																
BLOCK ISLAND	110			46	32	38.8	2.9	59	11	17	19	0	14			1.97	- 1.62	0.53	10		1.0	T										
PROVIDENCE	51	1018.3	1020.5	44	27	35.0	3.0	68	11	13	19	0	20	26	70	2.37	- 1.25	0.80	11	0	4.7	3	4.7	32	31	32	22	9	7	15	6.3	47
SOUTH CAROLINA																																
CHARLESTON	40	1020.7	1022.6	69	49	58.8	8.8	81	16	26	19	0	2	51	79	2.28	- 0.57	1.40	3	0	0.0	0	0.9	27	42Y	NE	3	6	6	19	7.2	58
CHARLESTON U	9			66	53	59.5	7.8	79	16	38	3+	0	0			3.31	0.57	2.49	3		0.0	0			47	NE	3					
COLUMBIA	213	1014.6	1022.6	67	46	56.4	10.0	83	16	26	19	0	3	48	75	2.90	- 0.62	2.16	7	0	0.8	1	0.7	25	23	20	15	6	4	21	7.3	39
GRNVLLE-SPRTNBRG	957	987.5	1022.5	60	41	50.4	6.8	75	28+	24	19	0	7	42	76	3.79	- 0.24	0.96	11	1	11.4	11	1.1	32	36	NE	3	5	8	18	7.3	42
SOUTH DAKOTA																																
ABERDEEN	1296	969.2	1018.4	23	3	12.6	- 5.5	36	22	-17	17	0	31	8	76	0.47	- 0.14	0.11	12	0	9.9	9	0.7	21	26	1	25+	4	8	19	7.5	
HURON	1281	969.5	1018.2	26	8	16.8	- 2.0	37	23	-10	17	0	31	11	75	0.41	- 0.15	0.16	8	0	10.4	8	2.0	19	32	S	22	5	5	21	7.6	38
RAPID CITY	3162	900.4	1015.1	36	11	23.3	- 3.9	58	22	- 2	27+	0	31	14	70	0.15	- 0.15	0.09	5	0	2.0	1	1.4	34	43	W	23	10	6	15	5.9	70
SIOUX FALLS	1418	965.8	1019.7	27	8	17.4	- 3.7	38	23	- 9	9	0	31	14	83	0.64	- 0.10	0.22	6	0	10.6	8	1.9	21	24	31	23	8	5	18	7.2	
TENNESSEE																																
BRISTOL	1507	967.2	1022.0	57	38	47.5	9.2	76	10	18	18	0	9	39	73	2.43	- 0.78	0.60	13	0	4.3	4	0.9	25	25	31	18	3	8	20	7.7	
CHATTANOOGA	665	996.6	1021.7	58	41	49.4	6.9	74	16	22	19	0	6	44	81	6.56	1.37	1.96	15	0	T	T	0.6	18	26	N	18	5	4	22	7.7	30
KNOXVILLE	980	986.5	1021.9	58	42	50.4	8.8	73	15+	22	18	0	4	42	75	5.48	1.25	1.23	14	0	T	0	1.9	31	34	SW	15	4	4	23	7.9	17
MEMPHIS	258	1009.8	1020.1	59	42	50.7	8.2	74	10	26	18	0	1	41	72	6.71	1.78	2.67	14	4	0.0	0	3.3	15	37	20	10	6	5	20	7.4	46
NASHVILLE	590	998.6	1020.8	58	40	49.2	7.8	74	10	19	18	0	7	42	77	5.17	0.98	1.00	15	3	T	T	2.9	18	42	S	10	4	7	20	7.8	32
OAK RIDGE R	905			56	39	47.8	7.7	71	15+	19	18	0	8			6.90	1.00	2.58	14		0.7	T			44Y		15	4	3	24	7.9	
TEXAS																																
ABILENE	1784	953.6	1017.1	59	39	48.9	2.8	76	27+	26	18	0	7	38	73	1.81	0.55	0.80	8	3	T	0	3.9	21	37	W	14	6	9	16	6.9	54
AMARILLO	3604	889.6	1015.5	48	27	37.6	- 1.7	75	23	15	6	0	26	25	69	0.89	0.12	0.80	5	0	7.9	7	4.3	24	36	W	23	13	1	17	5.7	56
AUSTIN	597	995.3	1017.6	65	48	56.4	3.7	80	20	34	7	0	0	48	77	4.22	1.69	1.79	14	4	T	0	1.1	1	35	NW	9	6	3	22	7.3	33
BROWNSVILLE	19	1015.9	1016.4	76	58	67.3	4.4	84	31+	41	3	0	0	60	82	1.08	- 0.64	0.66	5	0	0.0	0	1.3	14	38	S	14	6	14	11	6.1	40
CORPUS CHRISTI	41	1015.2	1016.8	73	57	64.9	5.7	84	30	37	3	0	0	59	85	3.42	1.34	1.04	8	3	0.0	0	3.6	7	35	SE	14	5	11	15	6.8	39
DALLAS	481	1000.3	1017.8	61	44	52.5	4.4	78	27	35	18	0	0	44	76	7.76	5.09	3.40	10	3	T	0	1.7	16	38	SW	14	9	4	18	6.9	38
DEL RIO	1026	980.7	1017.1	67	46	56.5	4.2	80	20	33	10	0	0	43	68	0.25	- 0.57	0.07	10	0	0.0	0	2.2	9	35	32	14	8	3	20	6.9	
EL PASO	3918	882.5	1016.6	56	33	44.7	0.6	71	26+	23	30	0	12	29	60	0.50	0.01	0.21	9	1	1.0	1	1.2	29	56	SW	14	7	12	12	5.9	69
FORT WORTH	537	997.3	1018.0	61	43	52.2	4.5	81	27	34	18	0	0	45	80	6.99	4.64	3.10	10	3	0.0	0	1.3	22	30	27	14	6	5	20	7.3	
GALVESTON U	7			67	57	62.2	5.0	76	21	42	3	0	0			6.67	2.78	3.44	12		0.0	0			29	NE	17					37
HOUSTON INTERCON	96	1014.6	1018.2	68	51	59.9	6.5	82	16	38	7	0	0	54	83	7.33	2.80	3.43	12	3	0.0	0	1.9	10	28	28	10	4	3	24	8.0	27
LUBBOCK	3254	902.8	1015.7	56	31	43.7	2.7	79	23	20	6+	0	16	29	64	0.81	0.16	0.36	7	0	6.5	4	3.6	26	35	31	29	10	7	14	5.7	
MIDLAND	2851	916.4	1015.9	61	35	47.8	1.9	78	24	24	18	0	14	34	68	0.24	- 0.42	0.11	5	0	T	T	3.0	21	32	25	14	11	5	15	6.0	
PORT ARTHUR	16	1017.6		68	52	59.8	5.0	80	16	39	7	0	0	56	89	7.53	2.44	3.43	12	4	0.0	0	3.6	10	33	S	14	6	7	18	7.3	37
SAN ANGELO	1903	949.5	1017.0	62	38	50.2	2.5	81	22	22	18	0	8	38	68	0.88	0.03	0.33	6	2	0.0	0	2.8	23	35	30	14	8	4	19	6.7	
SAN ANTONIO	788	989.2	1017.4	67	47	57.2	3.5	82	14	30	4+	0	2	47	75	2.86	1.11	1.19	11	1	0.0	0	1.8	1	37	NW	14	6	3	22	7.5	39
VICTORIA	104	1013.2	1017.3	70	53	61.8	4.6	81	28+	40	7+	0	0	55	81	2.23	- 0.38	1.01	8	2	0.0	0	2.8	6	46Y	S	14	2	9	20	7.8	
WACO	501	999.3	1017.7	61	45	53.4	3.1	77	27	32	18	0	1	46	79	4.30	1.56	1.79	9	2	0.0	0	1.2	23	30	26	14	6	7	18	7.2	

See footnotes at end of table

CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Elevation (ground)	Pressure: Station	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 90 F. or above	Temperature: No. of days: Min. 32 F. or below	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: .01 inch or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
TEXAS	Ft	Mb	Mb.	F.	F.	F.	F.	F.		F.				F.	%	In.	In.	In.			In.	In.	M.p.h.		M.p.h.							%
WICHITA FALLS	994	979.7	1017.2	57	36	46.1	1.5	76	23	29	13	0	10	41	86	3.37	1.92	1.20	7	2	4.2	1	0.2	24	40	26	14	7	6	18	6.8	
UTAH																																
MILFORD	5028	845.2		36	14	25.1	- 3.1	53	25	- 7	14	0	27			1.33	0.62	0.73	10		8.7	2						9	9	13	6.1	
SALT LAKE CITY	4220	871.7	1019.6	35	19	26.9	- 3.2	55	25	4	8	0	27	20	73	1.35	0.11	0.29	16	0	17.7	5	5.1	17	35	S	12	4	6	21	7.5	42
WENDOVER	4237	870.6	1019.4	35	19	26.9	- 2.9	55	25	7	19	0	30	18	71	0.38	0.09	0.13	8		1.1	T						9	8	14	6.3	
VERMONT																																
BURLINGTON	332	1007.1	1020.2	33	16	24.3	2.8	51	11	-13	31	0	26	16	73	1.93	- 0.20	0.56	19	0	19.3	12	1.8	24	37	NW	25	3	6	22	8.2	24
VIRGINIA																																
LYNCHBURG	916			57	38	47.3	8.8	78	16	18	19	0	9			1.38	- 1.76	0.82	7		T	T			29	SW	30	5	7	19	7.2	43
NORFOLK	24	1021.7	1022.5	61	44	52.3	9.8	79	16	25	19	0	2	42	69	1.44	- 1.30	0.45	6	2	T	0	1.2	27	42	NW	18	6	10	15	6.7	54
RICHMOND	164	1016.3	1022.8	59	37	48.0	8.3	80	16	19	19	0	11	38	69	0.75	- 2.22	0.35	5	0	0.0	0	1.6	25	35	NW	18	6	5	20	7.2	44
ROANOKE	1149	979.3	1022.3	55	35	45.3	6.9	75	16	19	23+	0	11	34	66	0.83	- 2.15	0.49	6	0	0.2	T	3.1	29	32	24	30	5	9	17	6.7	
WALLOPS ISLAND	9			55	40	47.5		78	16	24	19	0	9			1.51		0.99	6		0.0	0			57Y	NW	18					
WASHINGTON																																
OLYMPIA	195	1006.4	1013.9	41	31	36.0	- 4.7	51	8	20	7	0	16	35	96	9.18	0.13	1.51	29	0	17.2	3	5.3	19	36	25	8	1	1	29	9.4	
QUILLAYUTE	179	1004.7	1012.3	43	30	36.4	- 4.8	53	1	17	27	0	20	34	89	15.42	- 1.39	2.30	26	0	8.3	3	1.1	11	32	SE	1	4	2	25	8.4	17
SEATTLE-TACOMA	400	997.0	1013.5	42	33	37.5	- 3.3	50	8+	25	27	0	13	32	80	6.67	0.38	1.64	26	0	10.6	5	3.1	16	34	SW	8	2	3	29	9.4	6
SPOKANE	2356	927.9	1013.9	32	19	25.8	- 4.3	44	24	- 3	7	0	28	21	81	2.89	0.46	0.90	16	0	34.2	20	5.2	20	45	SW	9	1	11	19	8.0	26
STAMPEDE PASS R	3958	872.3		28	20	23.9	- 3.1	36	17+	7	28	0	31			18.68	2.49	3.30	28		156.1	112						0	1	30	9.9	
WALLA WALLA U	949			44	31	37.5	- 0.3	61	24	12	30	0	16			3.24	1.39	1.41	18		9.5	4			38	S	22	2	2	27	9.0	10
YAKIMA	1052	975.3	1014.9	36	19	27.8	- 3.7	53	17	2	30	0	30	22	79	1.45	0.33	0.28	11	0	14.7	4	2.3	28	29	26	9	2	6	23	8.4	
WEST INDIES																																
SAN JUAN P.R.	13	1013.9	1016.6	84	74	78.8	2.6	86	20+	71	19	0	0	64	65	3.93	- 1.52	0.80	21	0	0.0	0	9.4	9	37	NE	7	3	24	4	5.5	54
WEST VIRGINIA																																
BECKLEY	2504	931.9	1022.0	51	34	42.5	8.5	73	10	10	18	0	14	33	71	1.91	- 1.79	1.05	10	0	0.9	1	4.7	21	30	20	15	2	10	19	7.9	
CHARLESTON	939	986.8	1021.2	57	38	47.3	10.2	80	10	18	2	0	12	35	64	1.71	- 1.54	1.03	12	0	0.8	1	2.9	24	29	23	30+	2	10	19	8.1	
ELKINS	1948	949.2		52	30	41.1	8.1	72	10	4	19	0	19			1.65	- 1.43	0.63	14		1.6	1						4	4	23	7.9	
HUNTINGTON	827	990.9	1021.5	54	37	45.6	8.2	76	10	17	18	0	12	35	67	1.50	- 1.31	0.55	11	0	0.2	T	2.5	21	29	23	15+	2	4	20	8.2	
PARKERSBURG U	615			52	35	43.6	7.8	77	10	17	2	0	12			1.73	- 1.11	0.57	12		T	T			34	SW	30					27
WISCONSIN																																
GREEN BAY	682	992.2	1018.9	31	16	23.5	1.5	42	10	- 3	1	0	30	19	80	3.15	1.97	1.17	12	0	13.2	10	3.7	26	34	NE	30	3	5	23	7.9	40
LA CROSSE	651	994.9	1020.3	31	18	24.5	2.7	41	23	2	17	0	28	20	83	2.55	1.40		11	0	12.0		0.8	27								
MADISON	858	986.1	1018.9	35	19	26.8	4.7	46	11+	- 1	1	0	26	22	82	3.64	2.33	1.66	12	0	8.9	7	2.7	25	31	NW	17	5	4	22	8.0	31
MILWAUKEE	672	992.9	1019.1	36	23	29.5	4.9	54	15	6	18	0	26	25	81	4.34	2.71	1.54	11	0	2.7	1	4.4	26	33	E	30	4	6	21	7.8	35
WYOMING																																
CASPER	5338	832.4	1015.0	33	15	23.9	- 3.4	51	25	- 6	27	0	29	14	68	0.34	- 0.14	0.19	4	0	4.7	2	16.0	22	43	21	4	8	11	12	6.0	
CHEYENNE	6126	806.3	1014.3	39	19	29.1	- 0.4	58	25	- 2	8	0	28	9	47	0.07	- 0.38	0.06	2	0	1.4	1	11.3	27	50	NW	10	10	8	13	5.7	54
LANDER	5563	823.6	1015.6	33	10	21.5	- 1.6	48	22	-12	8	0	31	9	62	0.36	- 0.06	0.25	5	0	6.6	9	2.5	22	36	SW	23	8	12	11	6.7	54
SHERIDAN	3964	873.4	1016.0	30	3	16.3	-10.0	57	23	-22	8	0	31	8	70	0.52	- 0.10	0.40	8	0	9.2	7	3.1	28	37	NW	21	7	5	19	6.8	54

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 70 F. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.
Z Sun continuously below horizon.

CLIMATOLOGICAL DATA

METRIC UNITS

DECEMBER 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min. 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb	C	C.	C.	C.	C		C.				C	%	Mm.	Mm	Mm			Mm	Mm	M.p.s.		M.p.s							%
ALABAMA																																
BIRMINGHAM	189	998.6	1021.4	17.8	7.8	12.7	4.2	25.6	14	- 1.7	19+	0	2	7.8	75	150	23	60	12	0	0	0	1.0	13	11.2	SW	15+	3	4	24	8.2	30
HUNTSVILLE	190	998.0	1021.3	15.0	5.6	10.3	3.8	22.8	14	- 5.0	18	0	3	7.2	81	251	126	88	15	0	0	0	1.3	13	11.2	9	2	3	5	23	8.1	
MOBILE	64	1012.2	1020.2	21.7	13.3	17.5	5.2	27.2	16+	4.4	19	0	0	14.4	87	142	3	52	16	2	0	0	1.5	11	10.3	20	20+	5	1	25	7.9	
MONTGOMERY	56	1014.2	1021.5	20.0	9.4	14.6	5.6	28.3	16	- 0.6	19	0	1	10.6	81	158	36	81	11	0	0	0	1.0	12	12.1	S	15	3	8	20	7.8	48
ALASKA																											8					
ANCHORAGE	35	1003.1	1008.2	- 5.0	-12.8	- 8.8	1.5	5.6	28+	-24.4	21+	0	31	-11.7	79	22	- 2	5	16	0	290	279	1.2	35	15.6	1	22	3	9	19	7.6	26
ANNETTE	34	1006.1	1010.3	1.7	- 3.3	- 0.8	- 3.1	7.2	1	-12.2	12	0	24	- 5.0	75	212	- 96	54	21	0	950	356	1.3	8	15.6	14	1	4	5	22	7.7	
BARROW	9	1014.2	1014.8	-20.6	-27.8	-24.1	- 0.1	- 2.8	25	-36.7	9	0	31	-30.0	61	5	T	3	5	0	56	152	1.8	9	10.3	11	25+	Z	Z	Z		
BARTER ISLAND	12	1012.5	1014.7	-21.1	-28.3	-24.6	- 1.1	- 2.2	25	-40.6	7	0	31	-29.4	68	5	- 2	2	5	0	89	508	1.0	22	30.0	27	19	Z	Z	Z		
BETHEL	38	1000.7	1006.7	- 5.6	-15.6	-10.6	4.5	3.3	24	-33.9	4	0	30	-12.2	88	66	40	14	23	0	445	432	1.7	19	19.2	20	17	4	4	23	8.0	
BETTLES	196	987.1	1013.0	-17.2	-26.7	-22.1		- 1.7	26	-43.3	20	0	31	-26.1	69	38		10	14	0	592	1194	2.0	34	9.4	6	12	10	6	15	6.1	
BIG DELTA	386			-16.1	-25.0	-20.4		1.1	28	-40.0	1	0	31			13		3	11	0	251	279			17.9	11	12	8	3	20	7.1	
COLD BAY	29	1004.4	1008.2	3.3	- 2.8	0.2	2.0	9.4	17	-11.7	20+	0	26	- 1.7	84	124	58	24	24	0	236	51	4.2	20	24.6	15	28+	0	6	25	8.9	
FAIRBANKS	133	994.6	1012.8	-16.1	-26.1	-21.0	1.1	- 2.2	18	-40.6	12+	0	31	-25.6	66	46	33	22	17	0	752	762	0.4	24	13.0	25	19	4	7	20	7.4	
GULKANA	479			-15.6	-26.1	-20.9		- 1.1	28	-46.7	12	0	31			43		12	17	0	541	864	0.9	35	11.6	4	21+	3	5	23	7.9	
HOMER	20	1004.7	1008.5	- 1.7	- 8.3	- 5.0		4.4	27+	-20.6	21	0	30	- 7.8	79	43	- 24	8	18	0	434	254	0.7	34	12.5	24	19	6	5	20	7.3	
JUNEAU	4	1009.8	1010.6	- 3.3	- 8.9	- 6.2	- 4.2	3.9	18	-21.7	14	0	31	-10.6	74	82	- 25	17	22	0	942	356	3.4	10	14.8	12	29	6	3	22	7.5	30
KING SALMON	15	1005.8	1007.6	- 3.3	-11.7	- 7.4	3.0	6.1	6	-27.8	2	0	29	-11.1	77	87	61	16	19	0	384	178	1.2	17	19.7	26	13	4	6	21	7.7	
KOTZEBUE	3	1008.1	1008.6	-13.9	-21.7	-17.7	2.1	0.0	25	-31.1	3+	0	31	-21.1	75	20	12	5	15	0	417	584	6.1	10	24.1	11	22	9	3	19	6.9	
MC GRATH	105	997.0	1010.1	-12.2	-23.3	-17.6	4.1	4.4	25	-43.3	20	0	30	-18.9	88	111	85	21	23	0	1293	1118	0.4	20	10.3	28	18	3	4	24	8.3	
NOME	4	1004.4	1005.3	- 8.3	-18.3	-13.3	0.9	1.7	25+	-31.1	19	0	30	-16.7	73	20	- 6	7	16	0	211	330	3.4	8	18.3	7	27	9	1	21	6.9	30
ST. PAUL ISLAND	7	1002.7	1003.5	1.1	- 3.3	- 1.1	2.0	4.4	22+	- 9.4	7	0	27	- 2.2	89	84	37	17	24	0	333	178	1.4	20	21.0	9	11	1	5	25	8.7	
SHEMYA	37	997.6	1001.3	2.2	- 1.7	0.2	0.5	5.6	16+	- 9.4	6	0	26	- 3.9	73	69	15	9	22	0	353	102	3.6	25	33.5	23	23	0	9	22	8.4	
SUMMIT	732	919.4	1013.1	-12.8	-20.0	-16.4		- 2.2	28+	-30.0	5+	0	31	-20.0	74	21		6	16	0	1077	787	4.4	4	13.4	6	16+	5	7	19	7.6	
TALKEETNA	105			- 8.3	-18.9	-13.4	- 1.0	0.0	8	-34.4	21+	0	31			53	12	11	17	0	953	965			8.0	36	6	5	3	23	8.1	
UNALAKLEET	5	1005.8	1006.5	-10.0	-17.8	-13.8		1.7	26+	-34.4	1	0	31			42		12	19	0	292	432	6.0	9	23.2	7	26	6	3	22	7.6	
YAKUTAT	9	1005.8	1006.7	- 1.1	-10.0	- 5.6	- 3.4	4.4	15	-23.3	21	0	30	- 8.3	80	254	- 58	51	21	0	1598	1270	2.3	10	15.6	12	1	4	4	23	8.1	
ARIZONA																																
FLAGSTAFF	2135	784.6	1018.9	1.1	-11.7	- 5.3	- 4.4	9.4	24	-27.8	16	0	30	- 9.4	70	106	64	53	9	1	478	229	1.4	21	10.3	5	16	9	8	14	6.0	
PHOENIX	340	977.3	1016.9	16.1	3.9	10.1	- 0.8	24.4	25+	- 2.2	12	0	6	1.7	59	12	- 10	6	6	0	0	0	1.1	12	12.5Y	ENE	17	13	6	12	5.1	68
TUCSON	788	926.9	1016.3	14.4	2.2	8.4	- 2.7	25.6	24	- 2.8	17+	0	10	1.7	67	50	27	21	6	0	173	152	1.6	15	17.4	E	18	13	3	15	5.5	64
WINSLOW	1492	851.3	1020.2	5.0	- 6.7	- 0.9	- 1.2	19.4	24	-17.8	17	0	25	- 5.0	76	24	11	10	7	0	221	102	0.8	22	12.5	21	13	12	4	15	5.6	
YUMA	59	1010.2	1017.4	16.7	5.0	10.8	- 1.9	23.9	25	- 0.6	12	0	2	- 0.6	51	4	- 4	3	4	0	0	0	1.5	35	12.5	NW	31	16	7	8	4.1	74
ARKANSAS																																
FORT SMITH	136	1002.0	1019.0	13.3	2.2	8.0	2.3	23.3	27	- 3.3	18	0	10	3.9	76	256	185	147	12	5	51	51	1.0	8	20.1	SW	14	6	6	19	7.3	43
LITTLE ROCK	78	1009.5	1019.4	15.0	5.0	9.9	4.4	23.3	27	- 1.1	18	0	2	6.1	81	177	73	92	14	3	15	T	0.7	8	21.5	SW	10	7	3	21	7.4	34
CALIFORNIA																																
BAKERSFIELD	145	1002.0	1020.0	12.2	2.8	7.4	- 1.9	21.1	22	- 3.3	17	0	9	3.9	80	30	5	8	8	0	0	0	0.7	10	15.6	18	27	10	5	16	6.1	
BISHOP	1252	873.4		8.9	- 7.2	0.8	- 3.2	19.4	5	-13.3	11	0	29			47	17	33	5		46	51						16	6	9	4.5	
BLUE CANYON	1609			2.2	- 4.4	- 1.1	- 5.7	12.2	17	- 8.3	15	0	28			347	87	83	17		2301	1422			16.1	18	22	9	2	20	6.8	
EUREKA U	13			10.6	3.9	7.2	- 2.2	15.6	1	1.1	16	0	0			162	- 8	25	18		0	0			16.1	S	24+	8	6	17	6.8	48
FRESNO	100	1008.1	1020.3	11.1	1.1	6.1	- 2.3	16.1	23	- 3.3	19+	0	15	3.3	86	65	15	18	13	0	0	0	1.0	11	13.4	NW	7	10	3	18	6.5	41
LONG BEACH	8	1017.6	1018.8	17.2	6.1	11.4	- 1.9	22.8	17	1.7	29+	0	0	3.9	65	134	84	45	12	0	0	0	0.2	30	10.3	31	13	15	5	11	4.8	
LOS ANGELES	30	1014.6	1018.2	16.1	7.2	11.5	- 2.3	21.1	1	3.9	30+	0	0	3.3	64	145	84	57	12	0	T	0	0.5	3	17.4Y	NW	13	15	3	13	4.7	
LOS ANGELES U	82			16.1	7.2	11.6	- 3.0	21.1	1	3.3	29	0	0			167	94	69	10		0	0			11.6	NE	8	17	5	9	4.3	60
MT SHASTA R	1080	891.6	1018.6	2.2	- 5.6	- 1.5	- 3.7	8.3	19	-12.8	28	0	31	- 4.4	81	123	- 35	31	19		1321	559										
OAKLAND	2	1019.6	1020.0	11.1	5.0	8.2	- 1.6	14.4	1	1.7	16+	0	0	3.9	78	89	- 2	31	14	0	0	0	0.8	16	13.9	15	26	8	10	13	5.9	
RED BLUFF	104	1006.4	1019.3	10.6	1.1	5.9	- 2.5	16.7	31	- 1.7	17	0	14	1.1	76	83	- 24	37	13	0	T	T	0.4	29	20.6	SE	12	6	9	16	6.7	53
SACRAMENTO	5	1018.6	1019.6	10.6	1.7	6.1	- 1.9	14.4	24	- 2.8	17+	0	11	2.2	80	103	21	27	13	0	0	0	0.5	15	13.0	SE	12	3	10	18	7.2	54
SANDBERG R	1377	861.8		3.9	- 2.2	0.6	- 5.3	8.9	18+	-10.0	8	0	23	- 5.0	76	261	197	73	15		996	813			17.4	17	22	9	7	15	6.3	
SAN DIEGO	4	1017.6	1018.5	16.7	8.3	12.3	- 1.6	21.1	31	3.3	8	0	0	4.4	61	83	31	24	13	1	0	0	0.6	27	13.4	SE	27	15	7	9	4.6	65
SAN FRANCISCO	2	1019.0	1019.8	11.7	3.9	7.8	- 2.2	14.4	1	1.1	19+	0	0	3.9	79	87	- 17	28	13	0	0	0	0.8	22	16.5	18	22	8	11	12	6.0	
SAN FRANCISCO U	16			11.7	7.2	9.4	- 1.9	15.6	1	5.6	31+	0	0			100	- 9	31	14		0	0			14.3	SE	26					65
SANTA MARIA	72			13.9	1.1	7.6	- 3.8	18.9	18+	- 4.4	8	0	18			71	6	22	12		0	0						15	7	9	4.4	
STOCKTON	7	1019.6	1020.5	10.6	1.7	6.1	- 1.7	16.1	24	- 2.8	20+	0	11	2.2	81	97	29	36	13	0	0	0	1.1	15	14.3	34	7	3	8	20	7.7	
COLORADO																																
ALAMOSA	2297	768.7		- 0.6	-17.8	- 9.0	- 1.9	10.6	25	-28.9	17	0	31			11	5	6	6		279	178						8	14	9	5.3	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

DECEMBER 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0.3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C				C	%	Mm	Mm	Mm			Mm	Mm	M p s		M p s							
COLORADO																																
COLORADO SPRINGS	1873	806.6	1015.8	5.6	- 7.8	- 0.9	- 0.7	19.4	25	-16.7	8	0	29	-10.6	55	6	T	3	6	0	97	51	0.9	5	12.5	30	29+	8	12	11	5.6	
DENVER	1610	831.7	1013.4	7.8	- 8.3	- 0.1	0.2	20.6	23	-21.1	9	0	31	- 8.3	62	6	- 6	3	6	0	213	127	0.7	21	15.6	NW	10	9	11	11	5.5	69
GRAND JUNCTION	1476	852.4	1020.6	2.2	- 8.9	- 3.4	- 1.8	15.6	26+	-19.4	18	0	28	- 7.2	75	17	3	5	13	0	264	127	1.1	22	12.1	SW	26	10	4	17	6.5	48
PUEBLO	1428	852.4	1015.0	9.4	- 7.8	0.8	0.2	22.2	25	-15.6	31	0	30	- 8.3	59	5	- 3	3	3	0	56	51	1.2	29	16.5	SW	26	12	8	11	5.3	68
CONNECTICUT																																
BRIDGEPORT	2	1021.3	1021.9	7.8	- 0.6	3.7	3.0	18.3	11	- 7.8	31+	0	14	- 2.8	66	85	- 5	39	10	1	20	25	2.7	31	15.6	32	31+	9	5	17	6.5	
HARTFORD	52	1013.9	1020.8	5.0	- 3.9	0.4	2.2	17.2	11	-12.2	23+	0	24	- 5.0	70	90	2	25	16	1	168	76	1.7	30	18.8	NW	25	10	4	17	6.6	57
DELAWARE																																
WILMINGTON	23	1019.0	1022.1	10.0	1.1	5.6	3.9	20.6	16	- 7.8	3	0	12	0.6	71	34	- 43	24	9	0	T	T	1.2	30	16.1	31	18	7	5	19	7.0	
DIST. OF COLUMBIA																																
WASHINGTON DULLES	88	1010.2	1022.1	11.7	- 0.6	5.7		22.8	27	-10.6	23	0	17	1.7	75	25		22	5	0	T	T	0.9	25	15.6	30	18+	6	4	21	7.5	
WASHINGTON NATIONAL	3	1019.6	1022.1	12.2	2.8	7.5	4.1	23.3	16	- 5.0	3	0	10	1.1	68	42	- 28	34	4	0	T	T	1.0	29	18.8	NW	18	7	4	20	7.2	36
FLORIDA																																
APALACHICOLA U	4			21.1	13.9	17.3	4.1	26.1	17	5.6	4+	0	0			114	39	55	8	2	0	0			12.1	NE	23	3	12	16	7.2	78
DAYTONA BEACH	9	1020.3	1021.6	24.4	15.0	19.9	4.2	28.9	15	8.9	4	0	0	15.6	80	63	14	48	9	0	0	0	1.4	8	13.9	7	22	6	13	12	6.2	
FORT MYERS	5	1020.0	1020.2	27.8	17.2	22.4	4.1	30.0	20+	10.6	5	0	0	16.7	74	8	- 25	6	3	0	0	0	2.3	8	9.4	6	23+	15	12	4	4.2	
JACKSONVILLE	8	1021.3	1022.3	25.3	12.8	18.0	4.6	28.3	28+	3.9	19	0	0	14.4	85	149	93	94	5	2	0	0	0.6	6	14.8	NE	22	5	9	17	7.1	47
KEY WEST	1	1018.0	1018.7	26.7	22.2	24.6	3.1	28.3	16+	19.4	22	0	0	19.4	74	40	- 3	39	5	1	0	0	4.9	9	12.5	NE	24	20	13	8	4.9	86
LAKELAND U	65			25.6	16.7	21.1	4.2	29.4	16	10.6	4	0	0			19	- 29	19	1		0	0						14	11	6	4.3	62
MIAMI	2	1019.3	1019.7	26.1	20.6	23.4	3.4	27.8	17	16.1	5	0	0	17.8	72	110	68	47	9	1	0	0	5.8	7	14.8	4	21	1	20	5	5.6	
ORLANDO	33	1016.9	1021.3	27.2	16.7	21.9	5.8	30.0	16+	11.1	4	0	0	16.7	77	49	1	37	4	1	0	0	1.2	8	12.1	7	23	11	10	10	5.5	
PENSACOLA	34	1016.3	1020.5	21.1	13.3	17.2	4.8	26.7	16	5.0	4	0	0	14.4	86	94	- 13	45	9	0	0	0	1.4	21	10.3	19	18	4	5	22	7.6	
TALLAHASSEE	17	1019.3	1021.5	22.8	11.1	17.1	4.8	28.9	16	- 1.1	19	0	1	13.9	84	104	17	55	9	2	0	0	1.1	21	9.4	36	27	4	10	17	7.3	
TAMPA	6	1020.3	1020.7	26.1	15.6	20.8	3.9	28.3	15	10.0	19+	0	0	16.1	78	20	- 28	17	3	0	0	0	1.8	10	9.8	8	21	13	9	9	6.1	44
WEST PALM BEACH	5	1019.3	1019.9	26.7	19.4	22.8	2.7	28.3	21+	11.7	5	0	0	17.8	75	47	- 18	24	11	2	0	0	3.8	9	15.6	6	23+	8	18	5	6.3	
GEORGIA																																
ATHENS	244	992.9	1022.3	16.7	6.7	11.4	4.4	25.6	16	- 2.2	19	0	5	7.2	79	71	- 44	38	12	0	76	76	0.1	34	11.2	30	12	4	10	17	7.4	
ATLANTA	308	984.4	1021.7	16.1	6.7	11.3	4.2	25.0	16+	- 2.2	19+	0	4	6.7	78	71	- 40	33	12	0	25	25	0.6	12	15.2	E	3	4	6	21	7.6	42
AUGUSTA	41	1017.3	1022.4	18.9	7.2	13.2	4.7	27.2	16	- 3.9	19	0	3	8.9	80	68	- 16	47	8	0	10	T	0.3	22	10.3	19	15	6	5	20	7.4	
COLUMBUS	117	1007.5		18.9	9.4	14.3	5.6	27.8	16	0.0	19	0	1	10.6	82	126	10	63	13	0	0	0	0.4	9	10.7	S	3	3	5	23	8.0	
MACON	108	1009.8	1022.9	18.9	8.3	13.4	4.0	27.8	16	- 2.8	19	0	2	10.0	80	124	21	77	11	0	T	T	0.5	11	11.2	SW	30	4	4	23	7.9	44
ROME	194			16.1	5.0	10.5	4.7	23.9	15	- 5.0	19	0	5			203	73	51	15		8	T										
SAVANNAH	14	1020.7	1022.5	21.1	10.6	15.9	5.1	28.3	15+	- 1.7	19	0	2	11.1	78	94	22	46	8	0	0	0	0.1	6	13.0	N	3	2	8	21	7.7	43
HAWAII																																
HILO	8	1015.2	1016.4	25.6	17.8	21.6	- 0.3	28.3	7	15.6	22+	0	0	18.3	87	818	432	190	31	1	0	0	1.5	19	9.4	SE	17	0	12	19	8.1	21
HONOLULU	2	1014.6	1015.1	26.1	19.4	22.9	- 0.2	28.3	9+	15.6	24	0	0	17.2	72	73	- 3	38	12	1	0	0	5.1	7	14.8	NE	19	1	16	14	4.4	65
KAHULUI	15	1012.5	1014.7	28.3	17.2	22.6	0.0	31.7	18	13.3	26	0	0	16.7	72	4	- 65	2	1	0	0	0	4.0	7	16.1	E	7	17	8	6	4.1	76
LIHUE	31	1011.2	1016.3	26.1	21.1	23.6	1.3	27.8	6+	17.8	18+	0	0	18.9	75	191	59	117	22	3	0	0	4.2	8	12.1	E	13	2	12	17	7.4	33
IDAHO																																
BOISE	865	915.3	1018.1	2.8	- 4.4	- 1.0	- 1.1	9.4	24+	-11.7	19	0	26	- 5.6	19	41	8	12	15	0	376	152	2.4	12	15.2	SE	12+	5	2	24	7.7	19
LEWISTON	431			4.4	- 2.2	1.2	- 0.4	12.8	22+	- 9.4	28	0	22			27	- 7	13	11		152	51			25.0Y		8	5	2	24	8.1	
POCATELLO	1358	861.2	1018.8	- 1.1	- 9.4	- 5.2	- 2.7	8.9	25	-21.1	8	0	29	- 8.3	79	43	18	11	15	0	447	152	4.4	22	16.1	SW	6	2	3	26	8.3	13
ILLINOIS																																
CAIRO U	96			12.2	3.9	8.1	3.9	21.7	10	- 5.0	18	0	7			106	13	24	13		T	0			28.2	SW	10	4	5	22	7.4	11
CHICAGO O HARE	201	993.9	1018.9	5.0	- 2.8	1.2	3.8	16.7	15	-12.2	18	0	20	- 2.2	78	136	90	54	12	1	5	T	2.0	23	19.7	24	18	4	4	23	4.0	
CHICAGO MIDWAY	185	996.3	1019.4	6.7	- 1.7	2.6	4.2	17.8	15	-10.6	18	0	18	- 1.7	75	151	102	56	14	1	8	T	1.7	23	18.8	S	26	5	6	20	7.0	34
MOLINE	177	997.6	1020.0	3.3	- 3.9	- 0.2	2.6	10.6	15	-12.2	18	0	23	- 3.9	78	121	79	60	11	2	8	T	0.9	25	16.5	S	19	4	5	22	8.0	25
PEORIA	199	994.3	1019.7	5.0	- 2.2	1.3	2.9	17.2	15	-12.2	18	0	21	- 1.7	81	126	77	44	13	3	T	T	1.1	20	20.6	SW	25	3	5	23	8.1	23
ROCKFORD	221	991.5	1019.3	3.3	- 3.9	- 0.3	3.3	14.4	15	-13.3	18+	0	23	- 3.3	81	128	85	57	12	1	5	T	0.9	24	15.6	20	15	4	6	21	8.0	
SPRINGFIELD	179	996.6	1019.5	7.2	0.0	3.6	3.6	17.8	15	- 9.4	18	0	17	0.6	82	111	63	41	10	2	T	T	1.4	19	24.1	SW	15	4	3	24	8.2	25
INDIANA																																
EVANSVILLE	116	1006.4	1021.0	10.0	1.1	5.6	3.3	21.1	10	- 9.4	18	0	15	2.2	78	80	2	26	14	2	T	T	1.0	18	25.1	SW	10	7	4	20	7.5	36

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

DECEMBER 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, ice pellets: Total	Precipitation: Snow, ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C	C	C	C	C		C.				C.	%	Mm	Mm.	Mm			Mm.	Mm.	M.p.s		M.p.s							%
INDIANA																																
FORT WAYNE	241	989.8	1020.8	6.1	- 1.7	2.2	4.2	18.9	10	- 8.9	18+	0	20	- 0.6	83	110	57	30	15	0	13	T	2.1	23	22.4	SW	10	4	2	25	8.3	26
INDIANAPOLIS	241	990.5	1020.5	7.8	- 1.1	3.6	4.1	18.9	10	-11.1	18	0	22	0.0	80	153	85	56	14	0	10	T	1.3	20	25.0	SW	10	3	6	22	8.2	19
SOUTH BEND	236	990.9	1019.4	6.1	- 1.1	2.2	4.1	17.8	10	-11.7	2	0	19	- 1.1	80	116	61	35	16	1	112	127	1.9	21	17.4	21	15	2	4	25	8.5	
IOWA																																
BURLINGTON	211			4.4	- 3.3	0.4	2.4	16.1	15	-12.2	28	0	25	- 1.7	85	125	85	58	13	1	T	T	0.7	25	15.6	22	15	4	4	23	8.0	
DES MOINES	286	983.7	1019.7	1.7	- 5.6	- 2.1	1.6	9.4	18	-14.4	28	0	28	- 4.4	83	28	- 1	13	8	0	74	102	0.3	22	11.2	W	15	3	5	23	8.2	23
DUBUQUE	322	979.0		1.1	- 6.1	- 2.4	2.3	8.3	10	-14.4	17	0	27			103	54	59	12		104	102										
SIOUX CITY	334	977.7	1019.3	0.0	- 8.3	- 4.2	- 0.3	6.7	23	-15.0	12	0	31	- 7.8	76	20	1	14	9	0	170	102	0.4	16	13.0	NW	23	9	3	19	7.0	40
WATERLOO	265	986.8	1019.8	- 0.6	- 8.3	- 4.5	0.4	4.4	23	-20.6	1	0	29	- 6.7	86	45	17	19	9	0	178	152	0.6	27	10.7	32	15	5	4	22	8.0	
KANSAS																																
CONCORDIA	448	963.4	1018.1	5.0	- 3.3	0.6	0.6	15.6	25	-10.6	27	0	29	- 1.7	88	18	0	8	6	0	109	76	0.8	18	12.1	SW	18+	7	4	20	7.1	40
DODGE CITY	787	923.8	1016.9	6.1	- 2.8	1.6	0.1	22.2	23	- 7.8	6	0	28	- 3.3	77	17	5	11	5	0	132	127	1.2	20	13.4	W	29	11	3	17	6.5	54
GOODLAND	1114	885.9	1015.8	6.7	- 5.6	0.3	1.2	20.6	23	-11.1	8	0	29	- 6.1	71	5	- 6	3	5	0	104	25	1.7	22	13.4	34	10	9	9	13	5.9	
TOPEKA	267	986.5	1019.2	5.6	- 2.8	1.6	0.8	15.6	25	- 9.4	28	0	24	- 1.7	83	46	11	22	11	0	30	25	0.2	18	13.4	NW	30	5	6	20	7.6	34
WICHITA	403	968.8	1018.0	6.7	- 2.2	2.1	0.0	15.0	25	- 7.8	31+	0	25	- 0.6	85	24	T	12	10	1	61	51	0.4	16	14.3	NE	14	9	3	19	6.9	41
KENTUCKY																																
COVINGTON	265	988.5	1020.7	9.4	0.6	5.1	4.4	19.4	10	-11.1	18	0	15	0.6	73	86	16	25	12	0	T	T	1.6	22	16.5	22	15	2	7	22	8.2	
LEXINGTON	294	985.4	1021.4	12.8	2.8	7.6	5.4	22.2	10	- 9.4	18	0	12	2.8	71	109	22	39	10	1	T	T	1.8	20	16.5	19	10	4	6	21	7.8	
LOUISVILLE	145	1002.7	1020.8	11.7	2.8	7.3	4.9	21.7	10	- 8.9	18	0	11	2.2	72	76	- 6	26	11	1	T	0	1.2	22	15.2	SW	30	5	5	21	7.6	35
LOUISIANA																																
ALEXANDRIA	28	1015.2	1019.7	18.9	8.9	14.0	3.3	25.6	14	2.8	19	0	0	11.7	88	293	148	156	13	2	0	0	0.7	11	10.3	29	15+	4	6	21	7.8	
BATON ROUGE	20	1016.3	1019.0	21.7	12.8	17.1	5.0	28.3	12+	5.6	19	0	0	13.3	83	255	125	92	14	6	0	0	1.4	12	9.4	24	20+	4	8	19	7.5	
LAKE CHARLES	3	1017.3	1018.4	20.6	12.2	16.6	4.0	27.2	16+	6.1	4+	0	0	13.9	89	251	105	175	10	6	0	0	1.7	10	14.3	11	5	2	13	16	7.6	
NEW ORLEANS	1	1018.3	1019.3	21.7	13.3	17.4	4.4	28.9	16	6.1	7	0	0	15.0	86	169	65	58	9	3	0	0	1.3	12	12.5	19	6	3	7	21	7.6	
SHREVEPORT	77	1008.8	1018.3	18.3	7.8	13.0	3.2	26.7	9	2.2	18	0	0	10.0	85	93	- 33	33	14	3	0	0	1.1	13	13.0	18	10+	7	4	20	7.2	34
MAINE																																
CARIBOU	190	993.6		- 6.1	-16.7	-11.3	- 2.1	5.6	11	-31.7	20	0	30			62	1	16	17		668	432						8	8	15	6.5	
PORTLAND	13	1017.3	1019.5	2.8	- 7.8	- 2.6	0.8	12.2	11	-19.4	31	0	30	- 7.8	68	72	- 25	17	13	0	318	152	2.3	31	15.2	NW	25	9	10	12	5.6	56
MARYLAND																																
BALTIMORE	45	1016.9	1022.7	11.7	1.7	6.5	4.4	21.7	16	- 7.8	3	0	11	1.1	69	33	- 43	24	4	0	T	T	1.3	28	17.9	NW	18	7	5	19	7.1	41
MASSACHUSETTS																																
BLUE HILL OBS R	192			3.9	- 4.4	- 0.2	0.9	16.7	11	-13.9	19	0	25			69	- 31	20	14		272	76			26.8	NW	25					50
BOSTON	5	1019.0	1019.9	6.7	- 1.7	2.4	1.7	17.8	16+	-10.6	19	0	18	- 3.9	66	61	- 31	21	15	0	201	76	3.0	29	18.8	NW	25	9	8	14	6.0	52
WORCESTER	301	982.1	1020.2	3.3	- 5.0	- 0.8	1.8	14.4	16+	-15.0	19	0	27	- 6.1	70	68	- 23	22	11	1	244	152	2.8	29	16.1	30	25	8	7	16	6.3	
MICHIGAN																																
ALPENA	210	992.2	1018.4	1.7	- 6.7	- 2.5	1.9	13.3	10	-19.4	31	0	26	- 5.0	82	113	66	41	14	0	465	279	1.3	24	14.8	W	15	1	6	24	8.4	28
DETROIT	189			5.6	- 1.1	2.2	3.3	18.9	10	- 7.8	17	0	20	- 3.9	67	103	50	35	14	0	51		2.0	24	19.2	21	10					
DETROIT METRO	193	994.6	1019.4	5.0	- 3.3	0.7	2.4	17.8	10	-12.2	2	0	22	- 2.2	80	96	47	35	14	0	66	51	1.8	25	20.1	SW	15	2	6	23	8.1	30
FLINT	235	990.2	1018.8	3.9	- 3.3	0.3	2.7	17.2	10	-13.9	2	0	23	- 3.9	76	118	73	45	15	0	183	127	2.1	24	16.5	25	15	3	5	23	8.2	
GRAND RAPIDS	239	988.8	1018.9	3.3	- 3.3	0.0	2.8	16.7	10	-11.1	1	0	24	- 3.3	79	168	117	54	15	2	94	51	1.6	22	26.8	SW	10	2	4	25	8.7	15
HOUGHTON LAKE	350	974.9	1018.4	0.6	- 7.2	- 3.2	1.5	12.8	10	-20.6	31	0	30	- 5.0	84	114	71	43	12	0	424	229	1.6	25	13.0	28	11+	3	3	25	8.6	
LANSING	256	986.5	1019.3	3.9	- 3.9	- 0.1	2.4	17.8	15	-16.1	2	0	23	- 2.8	82	108	57	35	14	2	94	76	2.0	23	25.0	SW	15	2	7	22	8.3	26
MARQUETTE U	206			- 0.6	- 6.7	- 3.7	0.7	4.4	10+	-12.8	18	0	27			73	25	22	13		643	330			13.4	SW	11	6	3	22	7.8	33
MUSKEGON	191	995.3	1019.1	3.3	- 3.9	- 0.2	0.9	16.1	10	- 9.4	22+	0	26	- 3.9	77	136	85	46	14	0	213	76	1.2	24	17.0	19	15	0	7	24	8.8	
SAULT STE MARIE	220	989.5	1017.4	- 1.7	- 9.4	- 5.6	0.6	5.6	10	-21.7	31	0	30	- 7.8	85	113	55	34	20	0	678	330	0.0	17	18.3	NW	24	2	4	25	8.8	18
MINNESOTA																																
DULUTH	435	964.1	1018.3	- 5.6	-13.9	- 9.6	0.4	0.6	24+	-23.9	17	0	31	-12.2	82	31	2	11	15	0	445	305	1.5	25	14.8	NW	24	5	6	20	7.6	27
INTERNATIONAL FALLS	359	972.6	1018.0	- 7.8	-18.9	-13.1	- 0.5	0.6	2	-28.9	27+	0	31	-15.0	83	12	- 9	4	11	0	180	279	1.6	22	11.2	28	24	9	3	19	7.1	
MINNEAPOLIS	254	987.8	1019.7	- 3.3	-11.7	- 7.6	0.2	1.7	24+	-23.3	17	0	30	-10.6	77	18	- 4	8	10	0	325	279	0.8	23	14.3	NW	24	5	4	22	7.7	24
ROCHESTER	395	969.5	1019.3	- 2.2	-11.1	- 6.7	0.8	1.7	23+	-20.6	17	0	31	- 8.3	87	25	T	8	13	0	213	178	1.6	24	15.6	17	22	5	3	23	7.9	
ST CLOUD	315	979.7	1019.8	- 4.4	-13.9	- 9.2	- 0.6	1.7	23	-24.4	17	0	31			10	- 9	5	9		168	203						4	5	22	7.9	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

DECEMBER 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max. 32.2 °C or above	Temperature: No. of days: Min. 0 C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0.3	No. of days (sunrise to sunset): Partly cloudy, 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M.	Mb.	Mb.	C	C.	C.	C.	C.		C				C.	%	Mm.	Mm.	Mm.			Mm	Mm.	M.p.s.		M.p.s							%
MISSISSIPPI																																
JACKSON	94	1007.8	1019.9	19.4	9.4	14.4	4.7	27.2	12	0.0	19	0	1	11.7	86	249	115	117	13	3	0	0	1.3	14	13.0	S	14	3	7	21	7.9	30
MERIDIAN	88	1009.5	1020.6	19.4	8.9	14.2	5.1	27.2	16	- 0.6	19	0	1	11.1	83	194	59	58	13	2	0	0	0.6	11	10.3	27	6	2	5	24	8.5	
MISSOURI																																
COLUMBIA REGIONAL	270	986.5	1019.5	8.3	0.0	4.3	3.3	20.6	25	- 7.2	28+	0	17	0.0	77	107	57	28	13	3	T	51	1.3	16	25.9	SW	15	4	2	25	8.3	28
KANSAS CITY	226	990.9	1018.7	6.7	- 1.1	2.8	0.7	17.2	25	- 7.8	28	0	20	0.0	85	97	58	43	13	2	25	25	0.2	8	12.1	W	30	5	5	21	7.7	30
ST JOSEPH	247			4.4	- 3.3	0.6	0.9	12.2	25	-10.0	28	0	27			48	13		12				0.2	15	10.3	28	30	5	3	23	7.9	
ST LOUIS	163	999.0	1020.0	10.0	0.0	4.8	3.2	22.2	27	-10.0	18+	0	16	2.2	85	165	115	65	13	2	0	0	0.8	17	18.8	SW	15	5	6	20	7.6	32
SPRINGFIELD	386	972.6		11.1	0.6	6.0	3.4	21.7	27	- 6.7	29	0	16			158	103	59	10	4	T	T			26.8	SE	14	5	1	25	8.0	35
MONTANA																																
BILLINGS	1087	886.6	1015.0	- 1.1	-12.8	- 6.8	- 4.8	6.1	22	-23.3	16	0	31	-12.2	69	29	14	18	9	0	310	178	3.4	25	21.9	NW	9	8	7	16	6.5	32
GLASGOW	696	930.6	1016.6	- 6.1	-17.2	-11.8	- 3.8	5.6	9	-28.9	16	0	31	-16.1	70	7	- 5	2	10	0	160	102	0.6	5	10.7	33	25+	6	13	12	6.4	
GREAT FALLS	1116	882.8	1015.3	- 1.7	-13.9	- 7.8	- 5.2	8.3	17	-27.2	16	0	30	-13.9	63	38	22	12	11	0	488	127	4.9	23	21.0	SW	31	7	7	17	6.9	36
HAVRE	788	919.4	1016.2	- 7.2	-20.6	-13.7	- 7.6	5.0	9	-33.9	16	0	31	-17.8	72	21	9	6	11	0	305	178	2.1	25	15.6	SW	31	8	7	16	6.9	52
HELENA	1167	876.1	1017.0	- 2.8	-15.0	- 9.1	- 4.8	8.9	22	-31.1	29+	0	31	-13.9	66	26	12	13	10	0	368	254	1.3	26	17.0	NW	9	4	5	22	7.7	31
KALISPELL	904	907.2	1015.4	- 1.7	-13.3	- 7.6	- 3.7	5.0	17	-27.8	16	0	31	- 9.4	80	39	5	14	20	0	752	406	0.1	16	14.3	2	25	2	3	26	8.7	
MILES CITY	801	918.7	1016.1	- 5.6	-16.7	-11.0	- 6.1	3.3	17	-27.8	12	0	31	-13.9	79	31	22		13	0	320		1.0	28								
MISSOULA	972	900.8	1016.8	- 1.7	-10.6	- 6.1	- 1.3	7.8	17	-23.3	8	0	30	- 7.2	85	41	14	9	18	0	424	203	0.1	8	13.9	NW	22	3	4	24	8.5	21
NEBRASKA																																
GRAND ISLAND	561	949.9	1018.1	3.3	- 5.6	- 1.2	1.5	17.2	23	-12.2	27	0	30	- 5.6	76	13	- 2	5	8	0	69	51	1.2	22	10.3	32	30+	9	7	15	6.3	
LINCOLN U	351			3.3	- 3.9	- 0.4	0.3	13.9	23	-11.7	27	0	26			21	- 2	17	5		58	102			14.3	SE	17	5	5	21	7.6	32
NORFOLK	471			0.6	- 9.4	- 4.3	- 0.6	12.2	23	-15.0	27+	0	31			18	- 1	10	6		114	76						8	7	16	5.5	
NORTH PLATTE	846	916.4	1017.7	5.0	-10.0	- 2.4	0.1	17.2	23	-18.3	28	0	31	- 8.3	71	4	- 6	3	5	0	53	25	0.5	25	12.5	NW	10	12	5	14	5.5	56
OMAHA	298	982.4	1018.9	2.8	- 6.1	- 1.7	0.4	12.8	23	-13.3	28	0	30	- 5.0	81	27	6	15	11	0	112	102	0.2	18	13.4	N	17	4	7	20	7.6	27
SCOTTSBLUFF	1206	876.4	1015.9	6.7	- 9.4	- 1.4	0.4	18.9	25	-17.8	8	0	31	- 9.4	62	3	- 7	3	1	0	33	25	1.8	29	13.0	SO	31	12	8	11	5.5	
VALENTINE	789			3.3	-11.7	- 4.2	- 0.4	14.4	23	-18.9	12	0	31			7	- 2	4	4		94	25			13.9	S	3	10	10	11	5.8	51
NEVADA																																
ELKO	1539	843.2	1020.0	- 1.1	-13.3	- 7.3	- 4.2	7.8	25	-22.2	27	0	28	-11.1	70	40	14	8	18	0	340	127	1.5	23	13.4	19	25	7	9	15	6.9	
ELY	1906	806.3	1018.9	0.6	-15.0	- 7.3	- 4.4	8.3	20+	-23.9	31	0	30	-11.1	75	32	14	11	13	0	345	127	2.6	14	19.2	SE	22+	5	9	17	6.7	60
LAS VEGAS	659	941.1	1019.2	10.6	0.0	5.2	- 2.1	16.7	25	- 6.1	9	0	18	- 6.7	45	13	3	5	7	0	T	0	1.5	29	17.0	NW	7	13	8	10	4.9	83
RENO	1342	864.9	1018.8	4.4	-10.6	- 3.0	- 2.9	16.1	5	-18.3	30	0	31	- 9.4	66	75	48	35	7	3	650	330	0.5	24	17.2	SW	22	7	8	16	6.1	58
WINNEMUCCA	1311	867.9	1018.9	2.8	-11.1	- 4.3	- 3.1	8.3	22+	-21.1	16	0	31	- 8.9	72	37	13	11	13	0	445	102	1.4	19	16.5	SW	14	7	8	16	6.7	42
NEW HAMPSHIRE																																
CONCORD	104	1007.1	1020.1	2.8	- 8.9	- 3.0	0.9	12.2	16+	-22.2	19	0	30	- 8.3	67	60	- 23	13	16	0	442	279	2.2	31	17.4	NW	25	6	8	15	6.2	50
MT WASHINGTON OBS	1909			- 7.8	-17.2	-12.4	0.4	1.1	11	-31.1	22	0	31			242	81	52	25	0	1532	457			[illegible]	W	28+	4	6	21	8.1	45
NEW JERSEY																																
ATLANTIC CITY	20	1019.0	1021.5	10.0	0.0	5.1	2.5	18.9	16+	- 8.9	19	0	17	0.0	71	53	- 29	40	6	0	T	T	2.0	28	14.3	29	18	6	7	18	7.0	28
ATLANTIC CITY U	3			11.1	3.3	7.2	3.7	19.4	28+	- 6.1	2	0	10			72	- 16	56	7						14.8	SW	11					
NEWARK	2	1020.3	1021.4	8.9	1.1	5.2	3.7	18.3	16+	- 6.1	19	0	11	- 0.6	67	38	- 43	14	9	0	10	T	1.9	29	12.5	29	18	6	8	17	6.7	
TRENTON U	17			9.4	2.2	5.6	3.8	18.9	16+	- 5.6	23+	0	11			31	- 41	15	10		13	T			16.1	NW	18	9	5	17	6.6	46
NEW MEXICO																																
ALBUQUERQUE	1619	837.5	1018.6	5.6	- 5.6	- 0.1	- 2.8	12.8	25	-15.0	16	0	29	- 5.0	74	36	24	12	7	0	173	127	0.6	6	17.0	E	1	13	3	15	5.5	97
CLAYTON	1515			7.8	- 4.4	1.6	- 0.7	21.1	25+	-11.1	5+	0	27			13	4	12	3		168	152						16	2	14	4.7	
ROSWELL	1101			12.8	- 3.3	4.9	1.0	22.2	26+	- 8.9	18	0	28			20	7	12	7		140	51			19.4	W	20					63
NEW YORK																																
ALBANY	84	1010.2	1021.1	3.9	- 6.1	- 1.1	1.9	12.8	16	-18.3	31	0	26	- 5.6	72	78	13	28	16	0	257	127	1.5	27	21.0	W	25	5	8	18	7.4	45
BINGHAMTON	485	960.0	1020.7	3.3	- 4.4	- 0.6	2.3	13.3	15	-15.0	5	0	24	- 4.4	77	106	41	28	19	0	206	102	2.1	24	16.1	NW	25	3	6	22	7.9	26
BUFFALO	215	993.2	1019.7	5.0	- 3.3	0.8	3.2	18.3	15	-13.3	31	0	22	- 2.8	79	92	15	25	20	0	328	127	1.9	25	19.2	SW	15+	3	4	24	8.5	27
NEW YORK U	40	1018.0	1021.0	8.3	1.7	4.9	2.7	17.2	16+	- 6.7	19	0	12	- 1.1	69	45	- 38	17	11	0	T	0	1.7	28	14.3	NW	31					42
NEW YORK KENNEDY	4	1020.7	1021.5	9.4	2.2	6.0	4.4	19.4	11	- 5.0	31+	0	11	- 0.6	66	37	- 45	14	8	0	T	T	2.4	30	13.0	20	24+	5	7	18	6.9	
NEW YORK LA GUARDIA	3	1020.0	1021.2	7.8	1.1	4.4	2.0	16.7	16+	- 6.7	19	0	11	- 2.2	64	39	- 47	18	9	0	T	T	2.2	31	16.1	NW	25	7	7	17	6.7	
ROCHESTER	167	999.0	1020.0	3.9	- 5.0	- 0.6	1.2	15.0	15	-13.3	31+	0	24	- 3.2	83	89	28	24	18	0	351	127	2.1	25	21.5	SW	11	3	4	24	8.3	33
SYRACUSE	125	1004.7	1020.0	5.0	- 3.3	0.7	3.0	15.6	15	-13.3	31	0	23	- 3.9	75	83	3	27	17	0	465	178	1.6	25	19.7	W	11	3	4	24	8.4	31

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

DECEMBER 1971

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear 0-3	No. of days (sunrise to sunset): Partly cloudy 4-7	No. of days (sunrise to sunset): Cloudy 8-10	Sky cover tenths (sunrise to sunset)	Possible sunshine
	M	Mb	Mb	C.	C	C	C	C		C.				C.	%	Mm	Mm.	Mm			Mm.	Mm	M.p.s		M.p.s							%
NORTH CAROLINA																																
ASHEVILLE	652	945.1	1022.5	15.0	2.8	8.7	5.4	25.6	26	- 7.2	19	0	8	5.0	82	110	18	37	13	0	414	406	0.3	30	13.4	35	18	9	2	20	7.1	62
CAPE HATTERAS R	2	1022.4	1022.6	17.2	9.4	13.4	4.4	23.3	15	- 1.7	19	0	1	10.0	80	53	- 64	21	8	0	0	0	0.8	34	13.4	25	31+	8	5	18	6.6	36
CHARLOTTE	224	994.9	1022.7	15.6	5.6	10.3	4.4	25.0	28	- 4.4	19	0	7	5.6	74	57	- 35	21	11	1	191	203	0.6	25	13.4	SW	30	5	5	21	7.4	47
GREENSBORO	273	990.5	1022.7	15.0	3.9	9.3	4.9	25.6	16	- 6.7	19	0	8	3.9	71	41	- 39	13	9	0	107	102	0.5	25	15.2	NW	18	5	3	23	7.7	49
RALEIGH	132	1007.1	1023.2	15.6	4.4	10.2	4.7	25.0	16	- 6.1	19	0	8	4.4	69	43	- 34	13	8	1	94	102	0.5	24	12.5	22	30+	5	8	18	7.2	60
WILMINGTON	9	1021.7	1023.1	18.9	8.3	13.7	4.7	26.7	16	- 2.8	19	0	3	10.0	82	38	- 49	13	7	0	T	0	0.2	31	17.9	NW	18	6	5	20	7.4	42
NORTH DAKOTA																																
BISMARCK	502	954.6	1017.6	- 6.1	-17.2	-11.7	- 3.8	1.7	31+	-28.9	17	0	31	-15.0	73	12	3	7	10	0	221	127	0.6	29	12.1	NW	23	6	7	18	6.8	30
FARGO	273	984.1	1018.9	- 6.1	-16.1	-11.0	- 1.2	2.2	23	-27.8	17	0	31	-14.4	74	15	T	5	12	0	254	127	1.5	20	17.0	SE	4	4	8	19	7.4	40
WILLISTON	579	944.8	1016.8	- 6.1	-18.9	-12.4	- 3.7	5.6	2	-27.2	26	0	31	-15.0	80	11	- 2	5	7	0	137	102	1.2	26	14.3	W	31	7	6	18	6.6	47
OHIO																																
AKRON	368	974.9	1020.6	6.7	- 2.2	2.1	2.9	19.4	10	-10.0	3	0	22	- 1.7	77	110	52	30	15	1	53	51	2.3	23	17.4	21	15	3	4	24	8.2	
CINCINNATI ABBE OB	232			9.4	1.1	5.2	3.3	20.6	10	-10.6	18	0	14			88	17	25	13		0	0			14.3	SW	15					19
CLEVELAND	237	990.5	1020.6	7.8	- 0.6	3.4	4.2	20.6	10	- 8.3	3	0	20	- 2.2	69	99	40	27	19	0	48	25	2.8	22	21.9	SW	15	3	3	25	8.5	34
COLUMBUS	247	990.5	1021.2	8.3	- 1.1	3.6	3.8	22.2	10	- 9.4	2	0	20	- 1.1	74	117	58	33	15	1	15	T	1.7	22	21.0	SW	15	5	4	22	7.8	25
DAYTON	305	983.7	1020.7	8.3	- 0.6	3.8	4.2	19.4	10	-11.7	18	0	20	0.0	79	97	36	26	15	1	25	T	1.8	21	20.6	SW	15	3	8	20	7.9	23
MANSFIELD	395			7.8	- 1.7	3.1	4.7	20.0	10	-11.1	2	0	21	- 0.6	80	87	20	23	16	0	43	25	3.1	22	20.6	18	15	5	1	25	8.2	
TOLEDO	204	993.9	1019.9	5.6	- 3.9	0.9	2.9	19.4	10	-15.6	2	0	20	- 2.8	78	95	45	23	16	0	36	25	1.9	24	20.1	SW	30+	4	3	24	8.2	26
YOUNGSTOWN	359	976.6	1020.5	6.1	- 2.2	2.1	3.6	20.6	10	-11.1	3	0	20	- 1.1	80	140	72	38	19	0	183	102	2.1	23	14.3	20	15	3	3	25	8.5	
OKLAHOMA																																
OKLAHOMA CITY	392	970.9	1018.2	10.6	1.1	5.7	1.1	21.1	25	- 3.9	28+	0	13	2.2	83	71	35	27	10	3	132	127	0.4	15	16.5	NW	14	7	4	20	7.2	39
TULSA	198	993.6	1018.3	11.1	2.2	6.5	2.3	22.2	27+	- 4.4	28	0	13	3.3	81	161	120	77	11	2	25	T	0.6	18	15.2	NW	14	5	5	21	7.6	32
OREGON																																
ASTORIA	2	1013.2	1014.1	7.8	2.2	5.1	- 1.1	11.7	8+	- 2.8	7	0	6	2.8	83	351	5	58	28	1	86	76	1.4	20	13.0	19	13+	2	5	24	8.6	
BURNS U	1265	870.6	1017.3	0.6	- 9.4	- 4.5	- 2.9	8.9	24	-16.1	28+	0	31	- 7.8	77	52	16	10	15		559	305	1.1	24				6	9	16	6.8	
EUGENE	109	1003.1	1016.8	6.7	0.6	3.7	- 1.7	12.2	5	- 6.1	28	0	13	1.7	87	240	72	57	19	0	30	T	2.9	18	16.1	17	23	2	2	27	8.7	
MEACHAM	1234	872.3	1016.1	- 1.7	- 6.1	- 4.0	- 2.8	4.4	5	-16.7	28	0	31			170	55		19		851	1092			11.6	26	9					
MEDFORD	396	969.9	1018.5	5.0	- 0.6	2.3	- 0.4	11.1	1	- 6.1	28	0	19	- 1.7	80	62	- 24	14	20	0	71	51	0.4	19	13.4	13	21	1	1	29	9.1	
PENDLETON	452	960.4	1015.0	6.1	- 1.1	2.7	0.2	14.4	24+	- 9.4	28	0	15	- 2.8	69	66	28	27	14	0	300	127	2.3	22	17.9	27	9	3	3	25	8.4	
PORTLAND	6	1013.9	1015.3	7.2	1.7	4.7	- 0.5	12.8	5	- 5.0	28+	0	8	1.7	81	204	42	33	21	0	117	76	2.5	18	15.2	S	25	1	2	28	9.3	09
SALEM	60	1008.5	1015.9	7.2	1.1	4.2	- 1.1	12.2	5	- 5.6	28	0	10	2.2	88	208	21	30	23	0	56	51	3.6	19	15.6	18	11	2	0	29	9.1	
SEXTON SUMMIT R	1169	881.5	1017.5	1.7	- 3.3	- 1.1	- 3.7	8.3	17	- 6.1	7	0	31			241	120	53	20		2040	762			17.4	21	8					
PACIFIC AREA																																
GUAM TAGUAC R	110	998.0	1010.4	29.4	23.3	26.2	0.3	30.0	9+	20.6	29+	0	0	22.2	80	80	- 75	22	25	0	0	0	5.1	8	11.6	E	30					69
JOHNSTON	2	1010.5	1011.0	26.7	23.3	25.0	- 0.6	28.3	4	21.1	8	0	0	20.6	77	91	14	35	16	0	0	0	5.9	9	17.0	NE	15	7	11	13	6.3	67
KOROR R	29	1004.4	1008.0	31.1	24.4	27.8	0.6	32.8	15	22.8	27	6	0	23.9	84	281	- 17	69	24	4	0	0	3.5	8	8.9	NE	17	0	3	28	9.4	49
KWAJALEIN	2	1006.8	1007.6	30.0	25.0	27.6	0.4	30.6	28+	22.8	13	0	0	22.2	75	48	-179	20	16	1	0	0	6.9	6	13.0	8	30	5	12	14	6.4	
MAJURO	3	1007.5	1007.7	28.9	25.0	26.9	0.1	30.0	25+	22.8	28+	0	0	22.8	79	213	- 69	112	18	1	0	0	4.8	6	13.4	E	28	2	7	22	8.3	42
PAGO PAGO	4	1007.1	1007.4	30.0	23.3	26.7		31.1	25+	21.7	15+	0	0	22.8	81	169		36	21	1	0	0	1.5	6	11.6	SE	2	2	8	21	7.7	51
PONAPE R	37	1001.7	1006.7	30.6	24.4	27.3	0.6	32.2	3	22.8	26+	1	0	22.8	78	220	-246	46	23	1	0	0	3.5	11	10.7	NE	8	0	5	26	8.8	38
TRUK MOEN ISLAND	2	1007.1	1007.4	30.0	25.0	27.6	0.5	30.6	23+	23.9	27+	0	0	23.3	78	204	-132	41	25	2	0	0	4.9	6	14.8	E	9	0	4	27	9.3	68
WAKE	3	1013.5	1013.9	27.2	22.8	24.8	- 1.3	29.4	1	20.0	24	0	0	17.8	67	25	- 21	8	11	0	0	0	9.1	5	17.9	NE	7	11	16	4	4.6	49
YAP R	13			30.0	24.4	27.2	- 0.1	31.7	19	22.2	27+	0	0			247	- 11	54	27	2	0	0			9.8	NE	27	0	13	18	7.9	68
PENNSYLVANIA																																
ALLENTOWN	118	1007.5	1021.7	6.7	- 1.7	2.5	2.9	15.6	16	- 9.4	23+	0	18	- 1.7	77	34	- 50	15	7	1	36	25	1.5	30	13.9	31	22	9	5	17	6.5	
ERIE	223	992.6	1020.2	6.1	- 1.7	2.2	2.9	18.3	10	-10.0	2	0	20	- 2.2	76	103	37	28	20	0	236	127	2.5	23	14.8	21	15	2	6	23	8.4	
HARRISBURG	103	1008.8	1021.8	8.3	0.6	4.6	4.1	17.2	16	- 6.1	23	0	14	- 1.1	70	49	- 25	26	13	1	T	T	1.2	31	17.4	W	30	7	10	14	6.5	42
PHILADELPHIA	2	1021.0	1021.9	9.4	1.1	5.3	4.3	20.0	16	- 6.7	3	0	13	- 0.6	66	31	- 44	21	8	0	T	T	1.3	29	13.4	NW	18+	8	5	18	6.9	46
PITTSBURGH	347	976.0	1021.0	8.3	- 0.6	3.8	4.5	22.2	10	-10.0	3	0	18	- 1.7	69	82	21	37	15	0	18	25	2.4	26	14.8	27	30	3	3	25	8.3	22
SCRANTON	283	985.8	1020.9	5.0	- 2.8	1.2	2.6	15.6	15	-12.2	3	0	20	- 2.8	77	53	- 10	19	13	0	104	76	1.5	26	13.4	NW	31	4	7	20	7.8	38
WILLIAMSPORT	160	1001.7	1021.5	5.6	- 2.2	1.7	2.6	14.4	16	-10.6	3	0	21	- 3.3	73	73	- 4	33	15	0	41	25	0.8	33	14.3	27	11	6	4	21	7.3	
RHODE ISLAND																																
BLOCK ISLAND	34			7.8	0.0	3.8	1.6	15.0	11	- 8.3	19	0	14			50	- 41	13	10		25	T										
PROVIDENCE	16	1018.3	1020.5	6.7	- 2.8	1.7	1.7	20.0	11	-10.6	19	0	20	- 3.3	70	60	- 32	20	11	0	119	76	2.1	32	13.9	32	22	9	7	15	6.3	47

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

State and Station	Elevation (ground)	Pressure: Station Ø	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No. of days: Max 32.2 °C or above	Temperature: No. of days: Min. 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No. of days: 25 mm or more	Precipitation: No. of days: With thunderstorms	Snow, Ice pellets: Total	Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No. of days (sunrise to sunset): Clear, 0.3	No. of days (sunrise to sunset): Partly cloudy, 4.7	No. of days (sunrise to sunset): Cloudy, 8.10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M.	Mb	Mb.	C.	C.	C.	C.	C.		C.				C.	%	Mm.	Mm.	Mm			Mm.	Mm	M.p.s		M.p.s							%
SOUTH CAROLINA																																
CHARLESTON	12	1020.7	1022.6	20.6	9.4	14.9	4.9	27.2	16	- 3.3	19	0	2	10.6	79	58	- 14	36	3	0	0	0	0.4	27	18.8Y	NE	3	6	6	19	7.2	58
CHARLESTON U	3			18.9	11.7	15.3	4.3	26.1	16	3.3	3M	0	0			84	14	63	3		0	0			21.0	NE	3					
COLUMBIA	65	1014.6	1022.6	19.4	7.8	13.6	5.6	28.3	16	- 3.3	19	0	3	8.9	75	74	- 16	55	7	0	20	25	0.3	25	10.3	20	15	6	4	21	7.3	39
GRNVLLE-SPRTNBRG	292	987.5	1022.5	15.6	5.0	10.2	3.8	23.9	28+	- 4.4	19	0	7	5.6	76	96	- 6	24	11	1	290	279	0.5	32	16.1	NE	3	5	8	18	7.5	42
SOUTH DAKOTA																																
ABERDEEN	395	969.2	1018.4	- 5.0	-16.1	-10.8	- 3.1	2.2	22	-27.2	17	0	31	-13.3	76	12	- 4	3	12	0	251	229	0.3	21	11.6	1	25+	4	8	19	7.5	
HURON	390	969.5	1018.2	- 3.3	-13.3	- 8.4	- 1.1	2.8	23	-23.3	17	0	31	-11.7	75	10	- 4	4	8	0	264	203	0.9	19	14.3	5	22	5	5	21	7.6	38
RAPID CITY	964	900.4	1015.1	2.2	-11.7	- 4.8	- 2.2	14.4	22	-18.9	27+	0	31	-10.0	70	4	- 4	2	5	0	51	25	0.6	34	19.2	W	23	10	6	15	5.9	70
SIOUX FALLS	432	965.8	1019.7	- 2.8	-13.3	- 8.1	- 2.1	3.3	23	-22.8	9	0	31	-10.0	83	16	- 3	6	6	0	269	203	0.8	21	19.7	31	23	8	5	18	7.2	
TENNESSEE																																
BRISTOL	459	967.2	1022.0	13.9	3.3	8.6	5.1	24.4	10	- 7.8	18	0	9	3.9	73	62	- 20	15	13	0	109	102	0.4	25	11.2	31	18	3	8	20	7.7	
CHATTANOOGA	203	996.6	1021.7	14.4	5.0	9.7	3.8	23.3	16	- 5.6	19	0	6	6.7	81	167	35	50	15	0	T	T	0.3	18	11.6	N	18	5	4	22	7.7	30
KNOXVILLE	299	986.5	1021.9	14.4	5.6	10.2	4.9	22.8	15+	- 5.6	18	0	4	5.6	75	139	32	31	14	0	T	0	0.8	31	15.2	SW	15	4	4	23	7.9	17
MEMPHIS	79	1009.8	1020.1	15.0	5.6	10.4	4.6	23.3	10	- 3.3	18	0	1	5.0	72	170	45	68	14	4	0	0	1.5	15	16.5	20	10	6	5	20	7.4	46
NASHVILLE	180	998.6	1020.8	14.4	4.4	9.6	4.3	23.3	10	- 7.2	18	0	7	5.6	77	131	25	25	15	3	T	T	1.3	18	18.8	S	10	4	7	20	7.8	32
OAK RIDGE R	276			13.3	3.9	8.8	4.3	21.7	15+	- 7.2	18	0	8			175	25	66	14		18	T			19.7Y		15	4	3	24	7.9	
TEXAS																																
ABILENE	544	953.6	1017.1	15.0	3.9	9.4	1.6	24.4	27+	- 3.3	18	0	7	3.3	73	46	14	20	8	3	T	0	1.7	21	16.5	W	14	6	9	16	6.9	94
AMARILLO	1078	889.6	1015.5	8.9	- 2.8	3.1	- 0.9	23.9	23	- 9.4	6	0	26	- 3.9	69	23	3	20	5	0	201	178	1.9	24	16.1	W	23	14	1	17	5.7	96
AUSTIN	182	995.3	1017.6	18.3	8.9	13.6	2.1	26.7	20	1.1	7	0	0	8.9	77	107	43	45	14	4	T	0	0.5	1	15.6	NW	9	6	3	22	7.3	31
BROWNSVILLE	6	1015.9	1016.4	24.4	14.4	19.6	2.4	28.9	31+	5.0	3	0	0	15.6	82	27	- 16	17	5	0	0	0	0.6	14	17.0	S	14	6	14	11	6.1	49
CORPUS CHRISTI	12	1015.2	1016.8	22.8	13.9	18.3	3.2	28.9	30	2.8	3	0	0	15.0	85	87	34	26	8	3	0	0	1.6	7	15.6	SE	14	5	11	15	6.8	49
DALLAS	147	1000.3	1017.8	16.1	6.7	11.4	2.4	25.6	27	1.7	18	0	0	6.7	76	197	129	86	10	3	T	0	0.8	16	17.0	SW	14	9	4	18	6.4	58
DEL RIO	313	980.7	1017.1	19.4	7.8	13.6	2.3	26.7	20	0.6	10	0	0	6.1	68	6	- 14	2	10	0	0	0	1.0	9	19.6	SE	14	8	3	20	6.9	
EL PASO	1194	882.5	1016.6	13.3	0.6	7.1	0.3	21.7	26+	- 5.0	30	0	12	- 1.7	60	13	T	5	9	1	25	25	0.5	29	25.0	SW	14	7	12	12	5.3	69
FORT WORTH	164	997.3	1018.0	16.1	6.1	11.2	2.5	27.2	27	1.1	18	0	0	7.2	80	178	118	79	10	3	0	0	0.6	22	13.4	27	14	6	5	20	7.5	
GALVESTON U	2			19.4	13.9	16.8	2.8	24.4	21	5.6	3	0	0			169	71	87	12		0	0			13.0	N	17					47
HOUSTON INTERCON	29	1014.6	1018.2	20.0	10.6	15.5	3.6	27.8	16	3.3	7	0	0	12.2	83	186	71	87	12	3	0	0	0.8	10	12.5	28	10	4	3	24	8.1	27
LUBBOCK	992	902.8	1015.7	13.3	- 0.6	6.5	1.5	26.1	23	- 6.7	6+	0	16	- 1.7	64	21	4	9	7	0	165	102	1.6	26	15.6	31	29	12	7	24	5.7	
MIDLAND	869	916.4	1015.9	16.1	1.7	8.8	1.1	25.6	24	- 4.4	18	0	14	1.1	68	6	- 11	3	5	0	T	T	1.3	21	14.3	25	14	11	5	15	6.0	
PORT ARTHUR	5	1017.6		20.0	11.1	15.4	2.8	26.7	16	3.9	7	0	0	13.3	89	191	62	87	12	4	0	0	1.6	10	14.8	S	14	8	7	16	7.0	37
SAN ANGELO	580	949.5	1017.0	16.7	3.3	10.1	1.4	27.2	22	- 5.6	18	0	8	3.3	68	22	1	8	6	2	0	0	1.3	23	15.6	20	14	8	4	19	6.7	
SAN ANTONIO	240	989.2	1017.4	19.4	8.3	14.0	1.9	27.8	14	- 1.1	4+	0	2	8.3	75	73	28	30	11	1	0	0	0.8	1	16.5	NW	14	5	7	22	7.5	39
VICTORIA	32	1013.2	1017.3	21.1	11.7	16.6	2.6	27.2	28+	4.4	7+	0	0	12.8	81	57	- 10	26	8	2	0	0	1.3	6	20.6Y	S	14	2	9	20	7.4	
WACO	153	999.3	1017.7	16.1	7.2	11.9	1.7	25.0	27	0.0	18	0	1	7.8	79	109	40	45	9	2	0	0	0.5	23	13.4	26	14	5	7	18	7.2	
WICHITA FALLS	303	979.7	1017.2	13.9	2.2	7.8	0.8	24.4	23	- 1.7	13	0	10	5.0	86	86	49	30	7	2	107	25	0.1	24	17.9	26	14	7	6	18	6.4	
UTAH																																
MILFORD	1533	845.2		2.2	-10.0	- 3.8	- 1.7	11.7	25	-21.7	14	0	27			34	16	19	10		221	51						9	9	13	6.1	
SALT LAKE CITY	1286	871.7	1019.6	1.7	- 7.2	- 2.8	- 1.8	12.8	25	-15.6	8	0	27	- 6.7	73	34	3	7	16	0	450	127	2.5	17	15.6	S	12	4	6	21	7.5	42
WENDOVER	1291	870.6	1019.4	1.7	- 7.2	- 2.8	- 1.6	12.8	25	-13.9	19	0	30	- 7.8	71	10	2	3	8		28	T						7	8	16	6.1	
VERMONT																																
BURLINGTON	101	1007.1	1020.2	0.6	- 8.9	- 4.3	1.6	10.6	11	-25.0	31	0	26	- 8.9	73	49	- 5	14	19	0	490	305	0.8	24	16.5	NW	25	3	6	22	8.2	24
VIRGINIA																																
LYNCHBURG	279			13.9	3.3	8.5	4.9	25.6	16	- 7.8	19	0	9			35	- 45	21	7		T	T			13.0	SW	10	5	7	19	7.2	43
NORFOLK	7	1021.7	1022.5	16.1	6.7	11.3	5.4	26.1	16	- 3.9	19	0	2	5.6	69	37	- 33	11	6	2	T	0	0.5	27	18.8	NW	18	4	11	15	6.7	54
RICHMOND	50	1016.3	1022.8	15.0	2.8	8.9	4.6	26.7	16	- 7.2	19	0	11	3.3	69	19	- 56	9	5	2	0	0	0.7	25	15.6	NW	18	4	5	20	8.2	44
ROANOKE	350	979.3	1022.3	12.8	1.7	7.4	3.8	23.9	16	- 7.2	23+	0	11	1.1	66	21	- 55	12	6	0	6	T	1.4	29	14.3	24	18	5	9	17	6.7	
WALLOPS ISLAND	3			12.8	4.4	8.6		25.6	16	- 4.4	19	0	9			38		25	6		0	0			25.5Y	NW	18					
WASHINGTON																																
OLYMPIA	59	1006.4	1013.9	5.0	- 0.6	2.2	- 2.6	10.6	8	- 6.7	7	0	16	1.7	96	233	3	38	29	0	437	76	2.4	19	16.1	25	8	1	1	29	9.4	
QUILLAYUTE	55	1004.7	1012.3	6.1	- 1.1	2.4	- 2.7	11.7	1	- 8.3	27	0	20	1.1	89	392	- 35	58	26	0	211	76	0.5	11	14.3	NE	1	4	2	25	8.4	17
SEATTLE-TACOMA	122	997.0	1013.5	5.6	0.6	3.1	- 1.8	10.0	8+	- 3.9	27	0	13	0.0	80	169	10	42	26	0	269	127	1.4	16	15.2	SW	8	2	0	29	9.4	06
SPOKANE	718	927.9	1013.9	0.0	- 7.2	- 3.4	- 2.4	6.7	24	-19.4	7	0	28	- 6.1	81	73	12	23	16	0	869	508	2.3	20	30.1	SW	9	1	11	19	8.3	26
STAMPEDE PASS R	1206	872.3		- 2.2	- 6.7	- 4.5	- 1.7	2.2	17+	-13.9	28	0	31			474	63	84	28		3965	2845						0	1	30	9.7	

See footnotes at end of table

CLIMATOLOGICAL DATA

METRIC UNITS

DECEMBER 1971

State and Station	Elevation (ground)	Pressure: Station O	Pressure: Sea level	Temperature: Average maximum	Temperature: Average minimum	Temperature: Average	Temperature: Departure from normal	Temperature: Highest	Temperature: Date	Temperature: Lowest	Temperature: Date	Temperature: No of days: Max 32.2 °C or above	Temperature: No of days: Min 0 °C or lower	Temperature: Average dew point	Average relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: No of days: 25 mm or more	Precipitation: No of days: With thunderstorms	Precipitation: Snow, Ice pellets: Total	Precipitation: Snow, Ice pellets: Maximum depth on ground	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile (1.6 kilometers): Speed	Wind: Fastest mile (1.6 kilometers): Direction	Wind: Fastest mile (1.6 kilometers): Date	No of days sunrise to sunset: Clear, 0-3	No of days sunrise to sunset: Partly cloudy, 4-7	No of days sunrise to sunset: Cloudy, 8-10	Sky cover, tenths (sunrise to sunset)	Possible sunshine
	M	Mb.	Mb	C	C.	C.	C	C.		C.				C.	%	Mm.	Mm	Mm.			Mm	Mm.	M p.s		M p s							%
WASHINGTON																																
WALLA WALLA U	289			6.7	- 0.6	3.1	- 0.2	16.1	24	-11.1	30	0	16			82	35	36	18		241	102			17.0	S	22	2	2	27	9.0	10
YAKIMA	321	975.3	1014.9	2.2	- 7.2	- 2.3	- 2.1	11.7	17	-16.7	30	0	30	- 5.6	79	37	8	7	11	0	373	102	1.0	28	13.0	26	9	2	6	23	8.4	
WEST INDIES																																
SAN JUAN P.R.	4	1013.9	1016.6	28.9	23.3	26.0	1.4	30.0	20+	21.7	19	0	0	17.8	65	100	- 39	20	21	0	0	0	4.2	9	16.5	NE	7	3	24	4	5.5	54
WEST VIRGINIA																																
BECKLEY	763	931.9	1022.0	10.6	1.1	5.8	4.7	22.8	10	-12.2	18	0	14	0.6	71	49	- 45	27	10	0	23	25	2.1	21	13.4	20	15	2	10	19	7.9	
CHARLESTON	286	986.8	1021.2	13.9	3.3	8.5	5.7	26.7	10	- 7.8	2	0	12	1.7	64	43	- 39	26	12	0	20	25	1.3	24	13.0	23	30+	2	10	19	8.1	
ELKINS	594	949.2		11.1	- 1.1	5.1	4.5	22.2	10	-15.6	19	0	19			42	- 36	16	14		41	25						4	4	23	7.9	
HUNTINGTON	252	990.9	1021.5	12.2	2.8	7.6	4.6	24.4	10	- 8.3	18	0	12	1.7	67	38	- 33	14	11	0	5	T	1.1	21	13.0	23	15+	2	9	20	8.2	
PARKERSBURG U	187			11.1	1.7	6.4	4.3	25.0	10	- 8.3	2	0	12			44	- 28	14	12		T	T			15.2	SW	30					27
WISCONSIN																																
GREEN BAY	208	992.2	1018.9	- 0.6	- 8.9	- 4.7	0.8	5.6	10	-19.4	1	0	30	- 7.2	80	80	50	30	12	0	335	254	1.7	26	15.2	NE	30	3	8	20	7.9	30
LA CROSSE	198	994.9	1020.3	- 0.6	- 7.8	- 4.2	1.5	5.0	23	-16.7	17	0	28	- 6.7	83	65	36		11	0	305		0.4	27								
MADISON	262	986.1	1018.9	1.7	- 7.2	- 2.9	2.6	7.8	11+	-18.3	1	0	26	- 5.6	82	92	59	42	12	0	226	178	1.2	25	13.9	NW	17	5	4	22	8.0	31
MILWAUKEE	205	992.9	1019.1	2.2	- 5.0	- 1.4	2.7	12.2	15	-14.4	18	0	26	- 3.9	81	110	69	39	11	0	69	25	2.0	26	14.8	E	30	4	6	21	7.8	35
WYOMING																																
CASPER	1627	832.4	1015.0	0.6	- 9.4	- 4.5	- 1.9	10.6	25	-21.1	27	0	29	-10.0	68	9	- 4	5	4	0	119	51	7.2	22	19.2	21	9	8	10	13	6.0	
CHEYENNE	1867	806.3	1014.3	3.9	- 7.2	- 1.6	- 0.2	14.4	25	-18.9	8	0	28	-12.8	47	2	- 10	2	2	0	36	25	5.1	27	22.4	NW	10	10	8	13	5.7	59
LANDER	1696	823.6	1015.6	0.6	-12.2	- 5.8	- 0.9	8.9	22	-24.4	8	0	31	-12.8	62	9	- 2	6	5	0	168	229	1.1	22	16.1	SW	23	8	12	11	5.7	59
SHERIDAN	1208	873.4	1016.0	- 1.1	-16.1	- 8.7	- 5.6	13.9	23	-30.0	8	0	31	-13.3	70	13	- 3	10	8	0	234	178	1.4	28	16.5	NW	31	7	5	19	6.8	55

Data from airport unless otherwise specified U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed "Greatest in 24 hours" are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column "Fastest Mile" is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which "Fastest Mile" data can be evaluated.

B Number of days maximum 21.1°C. or above for Alaskan Stations.
Y Peak Gust.
+ And also on an earlier date or dates.
Ø Station pressures apply to elevations shown in the "Elevations - Station Pressure" table of the annual issue of this publication.

Data in this table are obtained by conversion from data in the English Units table.

Z Sun continuously below horizon.

HEATING DEGREE DAYS

(Base 65°F.)

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
ALABAMA			
BIRMINGHAM	[illegible]	785	1017
HUNTSVILLE	447	963	1228
MOBILE	136	348	592
MONTGOMERY	242	603	925
ALASKA			
ANCHORAGE	[illegible]	[illegible]	4789
ANNETTE	[illegible]	3190	2981
BARROW	2372	8621	8611
BARTER I. LAND	[illegible]	8592	8260
BETHEL	1611	5554	5667
BETTLES	2254	7311	
BIG DELTA	2162	6536	
COLD BAY	1004	4425	4236
FAIRBANKS	2195	6275	6435
GULKANA	[illegible]	6746	
HOMER	1297	[illegible]	
JUNEAU	1360	4193	[illegible]
KING SALMON	1436	4848	4952
KOTZEBUE	2014	6581	6654
MC GRATH	[illegible]	[illegible]	6386
NOME	[illegible]	6012	6039
ST. PAUL ISLAND	1079	4904	4778
SHEMYA	1006	4346	4256
SUMMIT	1941	6806	
TALKEETNA	1772	5677	5201
UNALAKLEET	1791	5936	
YAKUTAT	1326	4481	3955
ARIZONA			
FLAGSTAFF	1310	[illegible]	2813
PHOENIX	455	719	671
TUCSON	548	917	662
WINSLOW	1168	2092	1970
YUMA	415	646	467
ARKANSAS			
FORT SMITH	571	1061	1293
LITTLE ROCK	466	918	1317
CALIFORNIA			
BAKER FIELD	[illegible]	1105	[illegible]
BISHOP	972	2111	1663
BLUE CANYON	[illegible]	2546	1896
EUREKA U	612	2210	2027
FRESNO	678	1330	975
LONG BEACH	379	580	498
LOS ANGELES	371	646	559
LOS ANGELES U	369	616	[illegible]
MT SHASTA R	1799	2663	2186
OAKLAND	559	1288	1065
RED BLUFF	689	1302	926
SACRAMENTO	673	1260	1033
SANDBERG R	[illegible]	[illegible]	1403
SAN DIEGO	[illegible]	564	432
SAN FRANCISCO	579	1381	1130
SAN FRANCISCO U	490	1424	1205
SANTA MARIA	596	1526	1095
STOCKTON	676	1250	1029
COLORADO			
ALAMOSA	1518	[illegible]	3567
COLORADO SPRINGS	1067	2677	2479
DENVER	1019	2566	2414
GRAND JUNCTION	1204	2519	2242
PUEBLO	968	2245	2116
CONNECTICUT			
BRIDGEPORT	813	1637	1974
HARTFORD	[illegible]	2030	2307
DELAWARE			
WILMINGTON	702	1405	1836
DIST.OF COLUMBIA			
WASHINGTON DULLES	[illegible]	[illegible]	[illegible]
WASHINGTON NATIONAL	597	1188	1403
FLORIDA			
APALACHICOLA U	106	232	488
DAYTONA BEACH	[illegible]	90	286
FORT MYERS	3	6	133
JACKSONVILLE	[illegible]	242	466
KEY WEST	[illegible]	0	28
LAKELAND U	14	[illegible]	221
MIAMI	[illegible]	0	65
ORLANDO	9	[illegible]	270
PENSACOLA	[illegible]	314	467
TALLAHASSEE	[illegible]	368	586
TAMPA	13	54	[illegible]
WEST PALM BEACH	[illegible]	[illegible]	71
GEORGIA			
ATHENS	381	829	1164
ATLANTA	390	862	1185
AUGUSTA	301	674	[illegible]
COLUMBUS	[illegible]	576	963
MACON	[illegible]	[illegible]	870
ROME	[illegible]	[illegible]	1360
SAVANNAH	187	433	[illegible]

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
IDAHO			
BOISE	1069	2540	2356
LEWISTON	948	2427	2215
POCATELLO	[illegible]	3363	2731
ILLINOIS			
CAIRO U	562	[illegible]	1504
CHICAGO O HARE	948	1869	[illegible]
CHICAGO MIDWAY	871	1763	2273
MOLINE	1026	2075	2398
PEORIA	945	1966	2291
ROCKFORD	1031	2125	2587
SPRINGFIELD	820	1658	[illegible]
INDIANA			
EVANSVILLE	701	[illegible]	1788
FORT WAYNE	894	[illegible]	2410
INDIANAPOLIS	813	1643	[illegible]
SOUTH BEND	[illegible]	[illegible]	[illegible]
IOWA			
BURLINGTON	993	1998	2318
DES MOINES	1132	2180	[illegible]
DUBUQUE	1150	2414	2842
SIOUX CITY	1252	2481	2593
WATERLOO	1266	2720	2802
KANSAS			
CONCORDIA	[illegible]	[illegible]	[illegible]
DODGE CITY	[illegible]	1918	1889
GOODLAND	998	2346	2351
TOPEKA	[illegible]	1723	1979
WICHITA	897	1771	1785
KENTUCKY			
COVINGTON	731	1539	[illegible]
LEXINGTON	591	1204	1804
LOUISVILLE	610	1225	1801
LOUISIANA			
ALEXANDRIA	251	584	760
BATON ROUGE	142	[illegible]	616
LAKE CHARLES	[illegible]	353	570
NEW ORLEANS	137	355	533
SHREVEPORT	304	597	821
MAINE			
CARIBOU	1648	3797	3790
PORTLAND	1164	2593	2790
MARYLAND			
BALTIMORE	652	1343	1802
MASSACHUSETTS			
BLUE HILL OBS R	[illegible]	2124	2286
BOSTON	882	1741	1971
WORCESTER	1061	2299	2583
MICHIGAN			
ALPENA	1154	2786	3206
DETROIT	906	1802	[illegible]
DETROIT METRO	977	2069	2417
FLINT	1005	2200	2550
GRAND RAPIDS	1016	2182	2614
HOUGHTON LAKE	1197	2784	3154
LANSING	1016	2245	2573
MARQUETTE U	1218	2860	3111
MUSKEGON	1031	2251	2410
SAULT STE MARIE	1324	3352	3378
MINNESOTA			
DULUTH	1593	3700	3854
INTERNATIONAL FALLS	1745	4090	4207
MINNEAPOLIS	1438	3015	3215
ROCHESTER	1387	2895	3162
ST CLOUD	1528	3324	3414
MISSISSIPPI			
JACKSON	235	582	851
MERIDIAN	244	[illegible]	938
MISSOURI			
COLUMBIA REGIONAL	[illegible]	1547	1923
KANSAS CITY	863	1549	1776
ST JOSEPH	983	1955	[illegible]
ST LOUIS	751	1469	1874
SPRINGFIELD	683	1425	1745
MONTANA			
BILLINGS	1397	3262	2726
GLASGOW	1676	3578	3526
GREAT FALLS	1455	3302	2972
HAVRE	1785	3759	3414
HELENA	1524	3734	3252
KALISPELL	1440	3772	3384
MILES CITY	1636	3418	2964
MISSOULA	1353	3469	3384

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
NEBRASKA			
GRAND ISLAND	1083	2247	[illegible]
LINCOLN U	1042	2051	2174
NORFOLK	1257	2571	2624
NORTH PLATTE	1157	2680	2620
OMAHA	1113	2149	[illegible]
SCOTTSBLUFF	1096	2696	2601
VALENTINE	1251	2844	2858
NEVADA			
ELKO	1426	3376	2950
ELY	1422	3556	3020
LAS VEGAS	724	1352	1082
RENO	1183	2876	2651
WINNEMUCCA	1260	3057	2747
NEW HAMPSHIRE			
CONCORD	1185	2791	[illegible]
MT WASHINGTON OBS	1714	[illegible]	5889
NEW JERSEY			
ATLANTIC CITY	736	1565	1719
ATLANTIC CITY U	[illegible]	1362	1597
NEWARK	724	1401	1842
TRENTON	700	1442	1821
NEW MEXICO			
ALBUQUERQUE	1022	2051	[illegible]
CLAYTON	930	2143	[illegible]
ROSWELL	[illegible]	[illegible]	1599
NEW YORK			
ALBANY	1080	2403	2568
BINGHAMTON	1250	2492	[illegible]
BUFFALO	971	2071	2570
NEW YORK U	743	1459	1705
NEW YORK KENNEDY	[illegible]	1311	1781
NEW YORK LA GUARDIA	768	[illegible]	1665
ROCHESTER	1048	2158	2453
SYRACUSE	980	2236	2478
NORTH CAROLINA			
ASHEVILLE	[illegible]	1241	1821
CAPE HATTERAS R	278	573	872
CHARLOTTE	444	1010	1259
GREENSBORO	501	1134	1516
RALEIGH	456	1016	1351
WILMINGTON	276	605	886
NORTH DAKOTA			
BISMARCK	1672	3666	3407
FARGO	1630	3551	[illegible]
WILLISTON	1713	3780	3571
OHIO			
AKRON	899	[illegible]	[illegible]
CINCINNATI ABBE OB	729	1440	1836
CLEVELAND	828	1785	2262
COLUMBUS	815	1789	2190
DAYTON	806	1614	2135
MANSFIELD	840	1801	2160
TOLEDO	966	2084	2469
YOUNGSTOWN	898	2025	2432
OKLAHOMA			
OKLAHOMA CITY	702	1324	1443
TULSA	653	1212	1485
OREGON			
ASTORIA	728	2148	2101
BURNS U	1267	3294	2754
EUGENE	811	2175	1867
MEACHAM	[illegible]	3574	3085
MEDFORD	883	2147	[illegible]
PENDLETON	868	2131	2056
PORTLAND	756	1883	1834
SALEM	784	2079	[illegible]
SEXTON SUMMIT R	1072	2870	2316
PENNSYLVANIA			
ALLENTOWN	877	[illegible]	2181
ERIE	895	2084	2505
HARRISBURG	759	1591	2001
PHILADELPHIA	719	[illegible]	1936
PITTSBURGH	807	1768	2278
SCRANTON	951	2114	2451
WILLIAMSPORT	921	1944	2285
RHODE ISLAND			
BLOCK ISLAND	[illegible]	1629	[illegible]
PROVIDENCE	922	1888	2167
SOUTH CAROLINA			
CHARLESTON	220	494	812
CHARLESTON U	194	421	669
COLUMBIA	292	659	1006
GRNVLLE-SPRTNBRG	449	1017	1213
SOUTH DAKOTA			
ABERDEEN	1621	3369	3261
HURON	1486	3161	[illegible]
RAPID CITY	1284	[illegible]	2749
SIOUX FALLS	[illegible]	3042	3007

State and station	Current season: This month	Current season: Period July through this month	Normals: July through this month
TENNESSEE			
BRISTOL	[illegible]	1184	1688
CHATTANOOGA	478	1019	1327
KNOXVILLE	450	[illegible]	1415
MEMPHIS	435	[illegible]	1293
NASHVILLE	483	984	[illegible]
OAK RIDGE R	[illegible]	[illegible]	1534
TEXAS			
ABILENE	492	892	1051
AMARILLO	843	1784	1500
AUSTIN	271	468	644
BROWNSVILLE	67	83	[illegible]
CORPUS CHRISTI	112	[illegible]	[illegible]
DALLAS	384	662	907
DEL RIO	263	413	643
EL PASO	624	1148	1146
FORT WORTH	389	678	925
GALVESTON U	131	222	408
HOUSTON INTERCON	184	397	622
LUBBOCK	656	1284	1449
MIDLAND	528	1000	1060
PORT ARTHUR	199	413	559
SAN ANGELO	450	795	922
SAN ANTONIO	266	396	[illegible]
VICTORIA	152	250	426
WACO	360	601	[illegible]
WICHITA FALLS	578	1004	1112
UTAH			
MILFORD	1229	2964	2550
SALT LAKE CITY	1176	2729	2431
WENDOVER	1174	2756	2333
VERMONT			
BURLINGTON	1254	2728	3079
VIRGINIA			
LYNCHBURG	546	1282	1636
NORFOLK	390	811	1242
RICHMOND	526	1118	1529
ROANOKE	603	1327	1654
WALLOPS ISLAND	534	1015	
WASHINGTON			
OLYMPIA	891	2478	2148
QUILLAYUTE	879	2618	2340
SEATTLE-TACOMA	843	2155	2054
SPOKANE	1208	3111	2656
STAMPEDE PASS R	1265	3997	3844
WALLA WALLA U	842	2018	1921
YAKIMA	1146	2840	2473
WEST VIRGINIA			
BECKLEY	692	1680	2158
CHARLESTON	543	1213	1773
ELKINS	731	[illegible]	2290
HUNTINGTON	597	[illegible]	1761
PARKERSBURG U	656	1397	[illegible]
WISCONSIN			
GREEN BAY	[illegible]	2756	2993
LA CROSSE	1244	2572	[illegible]
MADISON	[illegible]	2537	2973
MILWAUKEE	[illegible]	2405	[illegible]
WYOMING			
CASPER	1268	3363	[illegible]
CHEYENNE	1108	3030	2828
LANDER	1343	3592	3103
SHERIDAN	[illegible]	3539	2962

[illegible]

MONTHLY AND SEASONAL COOLING DEGREE DAYS

(Base 65°F)

Year 1971

State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
ALABAMA														
BIRMINGHAM	1	0	0	35	90	394	393	403	309	105	10	13	1753	
HUNTSVILLE	0	0	0	50	75	397	386	364	263	90	13	0	1638	
MOBILE	18	13	37	151	260	531	541	534	441	261	37	94	2918	
MONTGOMERY	4	3	2	58	142	453	460	454	388	185	22	43	2214	
ALASKA														
ANCHORAGE	0	0	0	0	0	0	1	0	0	0	0	0	1	
ANNETTE	0	0	0	0	0	0	51	2	0	0	0	0	53	
BARROW	0	0	0	0	0	0	0	0	0	0	0	0	0	
BARTER ISLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	
BETHEL	0	0	0	0	0	0	0	0	0	0	0	0	0	
BETTLES	0	0	0	0	0	74	9	0	0	0	0	0	83	
BIG DELTA	0	0	0	0	0	15	7	0	0	0	0	0	22	
COLD BAY	0	0	0	0	0	0	0	0	0	0	0	0	0	
FAIRBANKS	0	0	0	0	0	73	16	0	0	0	0	0	89	
GULKANA	0	0	0	0	0	1	11	0	0	0	0	0	12	
HOMER	0	0	0	0	0	0	0	1	0	0	0	0	1	
JUNEAU	0	0	0	0	0	0	0	0	0	0	0	0	0	
KING SALMON	0	0	0	0	0	0	5	0	0	0	0	0	5	
KOTZEBUE	0	0	0	0	0	14	2	0	0	0	0	0	16	
MC GRATH	0	0	0	0	0	27	2	0	0	0	0	0	29	
NOME	0	0	0	0	0	4	0	0	0	0	0	0	4	
ST. PAUL ISLAND	0	0	0	0	0	0	0	0	0	0	0	0	0	
SHEMYA	0	0	0	0	0	0	0	0	0	0	0	0	0	
SUMMIT	0	0	0	0	0	0	0	0	0	0	0	0	0	
TALKEETNA	0	0	0	0	0	0	3	0	0	0	0	0	3	
UNALAKLEET	0	0	0	0	0	0	0	0	0	0	0	0	0	
YAKUTAT	0	0	0	0	0	0	0	0	0	0	0	0	0	
ARIZONA														
FLAGSTAFF	0	0	0	0	0	28	108	17	0	0	0	0	153	
PHOENIX	7	2	76	107	265	614	934	773	623	220	30	0	3651	
TUCSON	6	0	45	61	152	493	706	514	430	101	12	0	2510	
WINSLOW	0	0	1	0	20	276	551	408	156	4	0	0	1416	
YUMA	22	11	84	116	259	589	868	799	627	205	15	0	3595	
ARKANSAS														
FORT SMITH	0	0	2	25	86	416	482	408	321	86	9	0	1835	
LITTLE ROCK	0	0	11	19	79	435	470	411	355	146	10	3	1939	
CALIFORNIA														
BAKERSFIELD	0	0	7	32	126	389	691	660	372	144	0	0	2421	
BISHOP	0	0	0	0	8	197	423	411	148	12	0	0	1199	
BLUE CANYON	0	0	0	0	0	10	162	201	97	32	0	0	502	
EUREKA U	0	0	0	0	0	0	0	2	0	0	0	0	2	
FRESNO	0	0	0	8	64	296	529	505	279	89	0	0	1770	
LONG BEACH	12	7	25	12	24	111	286	453	342	171	11	0	1454	
LOS ANGELES	23	8	0	13	23	33	148	292	184	101	14	0	839	
LOS ANGELES U	71	28	16	46	60	131	291	435	296	176	17	0	1557	
MT SHASTA R	0	0	0	0	0	8	165	158	15	1	0	0	347	
OAKLAND	0	0	0	0	0	9	9	33	84	5	0	0	140	
RED BLUFF	0	0	0	0	53	263	569	529	316	117	0	0	1847	
SACRAMENTO	0	0	0	0	22	186	355	375	254	82	0	0	1274	
SANDBERG R	0	0	0	0	0	82	287	301	204	83	0	0	957	
SAN DIEGO	5	3	0	19	7	31	142	327	224	107	1	0	866	
SAN FRANCISCO	0	0	0	0	0	12	5	34	91	11	0	0	153	
SAN FRANCISCO U	0	0	0	0	0	7	0	6	83	12	0	0	108	
SANTA MARIA	7	0	0	0	0	3	7	32	35	20	0	0	104	
STOCKTON	0	0	0	0	37	233	442	459	287	90	0	0	1548	
COLORADO														
ALAMOSA	0	0	0	0	0	3	35	8	0	0	0	0	46	
COLORADO SPRINGS	0	0	0	0	1	126	158	138	41	0	0	0	464	
DENVER	0	0	0	0	0	149	203	248	53	0	0	0	653	
GRAND JUNCTION	0	0	0	0	36	284	479	425	86	3	0	0	1313	
PUEBLO	0	0	0	0	4	259	329	305	101	0	0	0	998	
CONNECTICUT														
BRIDGEPORT	0	0	0	0	1	161	269	233	154	9	2	0	829	
HARTFORD	0	0	0	0	7	201	274	243	142	11	4	0	882	
DELAWARE														
WILMINGTON	0	0	0	0	16	261	345	287	214	34	16	0	1173	
DIST.OF COLUMBIA														
WASHINGTON DULLES	0	0	0	0	21	237	316	255	181	35	19	0	1064	
WASHINGTON NATIONAL	0	0	0	0	52	337	422	372	258	60	22	0	1523	
FLORIDA														
APALACHICOLA U	0	5	17	124	272	492	519	509	453	307	51	53	2802	
DAYTONA BEACH	39	65	45	150	270	420	484	495	445	348	106	113	2980	
FORT MYERS	128	111	96	182	383	467	532	517	458	438	188	236	3736	
JACKSONVILLE	15	42	32	121	231	421	516	504	424	274	51	79	2710	
KEY WEST	204	220	241	334	492	544	599	570	536	505	334	355	4934	
LAKELAND U	61	85	73	190	358	466	511	511	439	385	128	175	3382	
MIAMI	176	219	202	315	444	488	558	531	476	443	274	292	4418	
ORLANDO	77	97	90	238	411	505	569	573	510	440	167	214	3891	
PENSACOLA	14	12	20	126	263	487	523	503	428	277	37	75	2765	
TALLAHASSEE	3	13	22	70	174	439	443	476	414	214	30	74	2372	
TAMPA	54	86	58	174	342	490	541	526	463	396	128	155	3413	
WEST PALM BEACH	121	147	116	227	434	484	542	569	486	440	249	257	4072	
GEORGIA														
ATHENS	0	0	0	39	111	394	389	385	286	105	18	5	1732	
ATLANTA	0	0	0	38	115	374	358	371	265	95	13	5	1634	
AUGUSTA	0	0	0	26	122	415	452	428	336	146	19	17	1961	
COLUMBUS	0	2	1	61	160	468	444	467	394	179	23	33	2222	
MACON	0	1	2	80	185	486	506	505	439	205	27	24	2460	
ROME	0	0	0	20	82	392	387	404	301	100	14	4	1704	
SAVANNAH	1	13	18	92	210	474	502	495	414	248	34	56	2557	

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MONTHLY AND SEASONAL COOLING DEGREE DAYS

(Base 65°F)

State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
HAWAII														
HILO	223	201	142	185	232	306	366	357	354	328	271	188	3143	
HONOLULU	216	269	284	326	366	376	435	456	431	408	328	265	4149	
KAHULUI	157	212	271	286	323	375	409	401	413	370	322	247	3785	
LIHUE	156	253	283	336	376	393	456	471	456	423	365	301	4267	
IDAHO														
BOISE	0	0	0	0	31	81	32	435	42	2	0	0	911	
LEWISTON	0	0	0	0	15	42	323	424	20	1	0	0	847	
POCATELLO	0	M	0	0	0	29	146	212	9	0	0	0	396	
ILLINOIS														
CAIRO U	0	0	0	49	80	460	399	376	295	106	9	0	1774	
CHICAGO O HARE	0	0	0	0	27	275	218	228	213	59	0	0	1015	
CHICAGO MIDWAY	0	0	0	2	29	341	246	237	226	64	0	0	1145	
MOLINE	0	0	0	9	32	365	203	225	212	44	0	0	1090	
PEORIA	0	0	0	14	22	359	217	214	210	37	0	0	1073	
ROCKFORD	0	0	0	1	16	288	197	190	193	36	0	0	920	
SPRINGFIELD	0	0	0	32	33	425	248	241	254	69	2	0	1304	
INDIANA														
EVANSVILLE	0	0	0	28	49	437	382	367	260	53	0	0	1576	
FORT WAYNE	0	0	0	2	19	294	188	150	149	28	0	0	830	
INDIANAPOLIS	0	0	0	2	17	324	237	202	189	40	0	0	1011	
SOUTH BEND	0	0	0	3	17	283	163	114	155	34	0	0	769	
IOWA														
BURLINGTON	0	0	0	20	30	348	218	239	216	34	0	0	1105	
DES MOINES	0	0	0	13	26	362	234	263	194	52	0	0	1144	
DUBUQUE	0	0	0	1	15	260	124	97	130	30	0	0	657	
SIOUX CITY	0	0	0	7	19	329	251	273	134	30	0	0	1043	
WATERLOO	0	0	0	2	5	217	87	100	104	21	0	0	536	
KANSAS														
CONCORDIA	0	0	0	5	24	344	303	359	201	25	0	0	1261	
DODGE CITY	0	0	2	1	53	369	404	366	213	23	0	0	1431	
GOODLAND	0	0	0	0	5	254	270	291	106	2	0	0	928	
TOPEKA	0	0	3	21	42	381	309	345	273	42	0	0	1416	
WICHITA	0	0	0	19	65	425	414	372	259	34	0	0	1588	
KENTUCKY														
COVINGTON	0	0	0	0	33	335	313	236	195	25	0	0	1137	
LEXINGTON	0	0	0	0	25	266	281	285	239	65	10	0	1171	
LOUISVILLE	0	0	0	2	35	351	310	291	237	58	3	0	1287	
LOUISIANA														
ALEXANDRIA	17	3	17	81	152	449	508	444	357	171	22	16	2237	
BATON ROUGE	21	12	21	132	249	481	530	523	421	236	35	77	2738	
LAKE CHARLES	25	15	28	120	295	521	563	524	457	313	53	63	2977	
NEW ORLEANS	29	25	44	151	252	456	514	508	424	221	40	92	2756	
SHREVEPORT	22	1	24	82	203	510	576	488	403	191	28	9	2537	
MAINE														
CARIBOU	0	0	0	0	2	36	38	33	16	0	0	0	125	
PORTLAND	0	0	0	0	0	66	135	149	43	1	0	0	394	
MARYLAND														
BALTIMORE	0	0	0	0	24	278	363	293	208	36	20	0	1222	
MASSACHUSETTS														
BLUE HILL OBS R	0	0	0	0	4	111	216	203	97	6	0	0	637	
BOSTON	0	0	0	0	6	155	269	271	132	15	1	0	849	
WORCESTER	0	0	0	0	0	87	184	141	57	2	0	0	471	
MICHIGAN														
ALPENA	0	0	0	0	0	86	33	43	57	19	0	0	238	
DETROIT	0	0	0	1	23	248	237	224	133	26	0	0	892	
DETROIT METRO	0	0	0	0	14	205	161	177	128	17	0	0	702	
FLINT	0	0	0	0	11	187	116	111	105	25	0	0	555	
GRAND RAPIDS	0	0	0	0	8	218	154	129	132	31	0	0	672	
HOUGHTON LAKE	0	0	0	0	5	131	68	50	62	17	0	0	333	
LANSING	0	0	0	0	14	202	112	103	113	28	0	0	572	
MARQUETTE U	0	0	0	0	6	57	73	81	73	4	0	0	294	
MUSKEGON	0	0	0	0	5	151	125	82	114	28	0	0	505	
SAULT STE MARIE	0	0	0	0	0	34	7	14	34	4	0	0	93	
MINNESOTA														
DULUTH	0	0	0	0	0	32	24	60	47	1	0	0	164	
INTERNATIONAL FALLS	0	0	0	0	0	56	27	59	42	0	0	0	184	
MINNEAPOLIS	0	0	0	2	5	218	141	168	106	3	0	0	643	
ROCHESTER	0	0	0	0	2	218	100	123	88	11	0	0	542	
ST CLOUD	0	0	0	0	1	160	102	125	66	0	0	0	454	
MISSISSIPPI														
JACKSON	9	7	10	69	138	453	503	487	406	181	29	20	2312	
MERIDIAN	5	2	4	57	129	450	462	460	367	177	18	19	2150	
MISSOURI														
COLUMBIA REGIONAL	0	0	0	28	41	379	304	306	266	58	5	0	1387	
KANSAS CITY	0	0	5	54	81	437	366	421	295	64	3	0	1726	
ST JOSEPH	0	0	4	54	97	407	235	212	191	33	0	0	1233	
ST LOUIS	0	0	2	35	45	427	326	340	279	62	10	0	1526	
SPRINGFIELD	0	0	0	19	43	384	353	353	267	45	1	0	1465	
MONTANA														
BILLINGS	0	0	0	0	4	69	162	377	29	0	0	0	641	
GLASGOW	0	0	0	0	9	67	153	383	22	0	0	0	634	
GREAT FALLS	0	0	0	0	4	60	120	351	22	8	0	0	557	
HAVRE	0	0	0	0	18	52	126	338	7	0	0	0	541	
HELENA	0	0	0	0	0	14	42	154	0	0	0	0	210	
KALISPELL	0	0	0	0	0	6	66	155	0	0	0	0	227	
MILES CITY	0	0	0	0	15	136	236	449	38	0	0	0	874	
MISSOULA	0	0	0	0	1	14	146	220	0	0	0	0	381	

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MONTHLY AND SEASONAL COOLING DEGREE DAYS

(Base 65°F)

Year 1971

State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
NEBRASKA														
GRAND ISLAND	0	0	0	6	15	338	256	327	122	15	0	0	1079	
LINCOLN U	0	0	0	8	40	397	309	356	188	38	0	0	1336	
NORFOLK	0	0	0	3	3	288	214	276	103	7	0	0	894	
NORTH PLATTE	0	0	0	0	1	177	167	229	59	1	0	0	634	
OMAHA	0	0	0	12	34	303	295	308	188	42	0	0	1272	
SCOTTSBLUFF	0	0	0	0	1	150	179	254	50	0	0	0	634	
VALENTINE	0	0	0	0	4	201	214	330	78	0	0	0	827	
NEVADA														
ELKO	0	0	0	0	0	7	140	191	4	0	0	0	342	
ELY	0	0	0	0	0	8	122	117	2	0	0	0	249	
LAS VEGAS	0	0	24	63	148	556	871	752	390	112	0	0	2906	
RENO	0	0	0	0	0	11	217	197	15	0	0	0	440	
WINNEMUCCA	0	0	0	0	0	45	295	313	13	0	0	0	666	
NEW HAMPSHIRE														
CONCORD	0	0	0	0	0	95	135	118	55	0	0	0	403	
MT WASHINGTON OBS	0	0	0	0	0	0	0	0	0	0	0	0	0	
NEW JERSEY														
ATLANTIC CITY	0	0	0	0	6	178	228	191	129	17	12	0	761	
ATLANTIC CITY U	0	0	0	0	2	122	219	194	122	7	2	0	668	
NEWARK	0	0	0	0	25	307	403	350	222	46	12	0	1365	
TRENTON U	0	0	0	0	14	237	327	276	182	30	10	0	1076	
NEW MEXICO														
ALBUQUERQUE	0	0	5	0	26	277	414	282	149	0	0	0	1153	
CLAYTON	0	0	4	0	17	200	239	149	82	0	0	0	691	
ROSWELL	0	0	14	17	146	402	463	315	220	17	0	0	1594	
NEW YORK														
ALBANY	0	0	0	0	9	98	132	107	109	1	0	0	456	
BINGHAMTON	0	0	0	0	13	101	82	61	84	5	0	0	346	
BUFFALO	0	0	0	0	9	119	136	122	107	15	0	0	508	
NEW YORK U	0	0	0	0	29	290	404	347	218	40	7	0	1335	
NEW YORK KENNEDY	0	0	0	0	16	231	384	365	221	45	8	0	1270	
NEW YORK LA GUARDIA	0	0	0	0	12	229	352	308	199	32	6	0	1138	
ROCHESTER	0	0	0	0	10	133	143	159	155	15	0	0	615	
SYRACUSE	0	0	0	0	17	145	145	124	117	4	0	0	552	
NORTH CAROLINA														
ASHEVILLE	0	0	0	3	25	232	238	231	149	37	8	0	923	
CAPE HATTERAS R	0	0	0	1	67	294	419	402	325	194	26	10	1738	
CHARLOTTE	0	0	0	12	83	354	354	341	251	69	16	5	1485	
GREENSBORO	0	0	0	0	50	298	321	261	195	47	13	5	1190	
RALEIGH	0	0	0	6	78	320	364	329	222	61	17	5	1402	
WILMINGTON	0	0	0	31	152	397	465	433	319	199	28	23	2047	
NORTH DAKOTA														
BISMARCK	0	0	0	0	0	67	94	230	32	0	0	0	423	
FARGO	0	0	0	0	3	109	65	142	56	0	0	0	375	
WILLISTON	0	0	0	0	3	62	90	262	23	0	0	0	440	
OHIO														
AKRON	0	0	0	0	15	217	196	130	123	13	0	0	694	
CINCINNATI ABBE OB	0	0	0	0	41	334	296	253	200	49	1	0	1174	
CLEVELAND	0	0	0	0	22	198	158	143	152	19	0	0	692	
COLUMBUS	0	0	0	0	21	266	181	135	144	24	0	0	771	
DAYTON	0	0	0	3	28	298	247	196	153	39	0	0	964	
MANSFIELD	0	0	0	0	16	211	175	131	147	25	0	0	705	
TOLEDO	0	0	0	1	15	219	148	143	138	18	0	0	680	
YOUNGSTOWN	0	0	0	0	16	164	119	109	114	10	0	0	532	
OKLAHOMA														
OKLAHOMA CITY	0	0	4	31	117	416	493	388	313	45	3	0	1810	
TULSA	0	0	3	40	97	442	471	444	298	65	7	0	1867	
OREGON														
ASTORIA	0	0	0	0	0	2	0	11	4	2	0	0	19	
BURNS U	0	0	0	0	0	8	187	219	0	0	0	0	414	
EUGENE	0	0	0	0	0	3	119	129	2	0	0	0	253	
MEACHAM	0	0	0	0	0	4	161	167	1	0	0	0	333	
MEDFORD	0	0	0	0	2	16	275	302	44	2	0	0	641	
PENDLETON	0	0	0	0	36	50	363	379	12	13	0	0	853	
PORTLAND	0	0	0	0	5	14	170	217	7	3	0	0	416	
SALEM	0	0	0	0	0	5	140	152	2	0	0	0	299	
SEXTON SUMMIT R	0	0	0	0	4	3	147	124	18	18	0	0	314	
PACIFIC AREA														
GUAM TAGUAC R	411	372	427	448	461	443	429	412	429	437	429	449	5147	
JOHNSTON	342	350	349	374	423	424	470	478	487	476	427	382	4982	
KOROR R	514	463	537	539	539	488	495	517	521	499	519	536	6167	
KWAJALEIN	519	470	538	469	498	484	494	509	488	505	500	521	5995	
MAJURO	494	454	500	443	473	462	486	476	480	487	492	489	5736	
PAGO PAGO	474	410	454	438	448	410	412	429	410	448	458	475	5266	
PONAPE R	491	408	454	450	465	442	457	452	467	468	476	506	5536	
TRUK MOEN ISLAND	517	465	515	507	507	487	482	519	491	509	517	525	6041	
WAKE	394	324	426	440	517	531	568	547	479	518	463	368	5575	
YAP R	480	443	530	490	504	469	468	478	481	470	474	498	5775	
PENNSYLVANIA														
ALLENTOWN	0	0	0	0	4	184	239	194	140	10	4	0	775	
ERIE	0	0	0	0	7	105	96	55	75	3	0	0	341	
HARRISBURG	0	0	0	0	17	241	331	236	195	17	6	0	1043	
PHILADELPHIA	0	0	0	0	19	292	394	326	223	37	14	0	1305	
PITTSBURGH	0	0	0	0	13	204	171	158	153	17	0	0	716	
SCRANTON	0	0	0	0	16	145	160	132	113	4	3	0	573	
WILLIAMSPORT	0	0	0	1	19	189	221	178	160	15	2	0	785	
RHODE ISLAND														
BLOCK ISLAND	0	0	0	0	0	38	186	177	111	2	0	0	513	
PROVIDENCE	0	0	0	0	3	157	296	263	158	8	5	0	890	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural, sites.

MONTHLY AND SEASONAL COOLING DEGREE DAYS

(Base 65°F)

State and Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Season	Normals Jan.- Dec.
SOUTH CAROLINA														
CHARLESTON	2	5	5	65	215	469	480	457	[illegible]	199	31	32	2329	
CHARLESTON U	[illegible]	1	2	75	215	458	495	491	[illegible]	221	38	31	2440	
COLUMBIA	0	2	6	51	185	465	470	473	[illegible]	168	25	[illegible]	2246	
GRNVLLE SPRTNBRG	0	0	0	20	88	342	369	345	246	[illegible]	15	3	[illegible]	
SOUTH DAKOTA														
ABERDEEN	0	0	0	7	1	184	138	269	67	[illegible]	[illegible]	0	669	
HURON	[illegible]	0	0	0	1	217	175	293	69	[illegible]	[illegible]	[illegible]	755	
RAPID CITY	0	0	0	0	0	81	142	[illegible]	43	[illegible]	[illegible]	0	550	
SIOUX FALLS	0	0	0	4	1	211	167	268	79	2	[illegible]	0	732	
TENNESSEE														
BRISTOL	0	0	0	6	32	[illegible]	[illegible]	276	[illegible]	44	10	2	1155	
CHATTANOOGA	0	0	0	27	81	406	[illegible]	411	324	96	16	2	1747	
KNOXVILLE	0	0	0	20	50	333	328	350	252	69	13	[illegible]	1418	
MEMPHIS	0	0	3	46	107	474	489	426	349	154	14	[illegible]	2062	
NASHVILLE	0	0	0	23	[illegible]	380	374	360	[illegible]	101	16	1	1603	
OAK RIDGE R	0	0	0	16	46	323	316	312	232	47	0	0	[illegible]	
TEXAS														
ABILENE	0	4	26	88	[illegible]	469	[illegible]	376	297	83	20	0	2226	
AMARILLO	0	0	13	18	94	[illegible]	381	232	180	10	0	0	1271	
AUSTIN	14	20	86	[illegible]	355	570	656	511	436	[illegible]	53	13	3100	
BROWNSVILLE	185	142	266	294	459	541	578	566	496	375	153	143	4200	
CORPUS CHRISTI	98	74	187	207	423	542	625	556	489	367	121	116	[illegible]	
DALLAS	0	9	36	112	[illegible]	607	662	511	[illegible]	120	36	3	2877	
DEL RIO	10	19	114	196	421	[illegible]	534	429	[illegible]	201	43	8	[illegible]	
EL PASO	0	0	45	45	235	492	543	[illegible]	[illegible]	[illegible]	0	0	2071	
FORT WORTH	0	6	21	71	[illegible]	566	606	456	382	171	36	1	2491	
GALVESTON U	8	5	15	130	316	[illegible]	574	549	449	340	103	49	3037	
HOUSTON INTERCON	48	18	55	126	292	466	594	486	400	229	52	44	2818	
LUBBOCK	0	0	14	[illegible]	157	[illegible]	476	269	[illegible]	34	4	0	1649	
MIDLAND	0	0	19	59	245	410	491	301	256	47	3	0	1831	
PORT ARTHUR	42	24	42	167	325	[illegible]	527	451	[illegible]	223	42	43	2791	
SAN ANGELO	0	4	49	139	332	482	557	328	[illegible]	[illegible]	23	0	2318	
SAN ANTONIO	14	36	130	189	414	564	658	509	459	281	81	31	3366	
VICTORIA	70	35	104	172	380	[illegible]	630	548	452	303	78	58	3370	
WACO	6	14	66	142	325	576	655	489	436	[illegible]	40	7	2962	
WICHITA FALLS	0	0	14	78	[illegible]	573	672	[illegible]	357	124	11	0	2525	
UTAH														
MILFORD	0	0	0	0	0	118	336	291	41	0	0	0	786	
SALT LAKE CITY	[illegible]	0	0	0	5	136	[illegible]	374	50	0	0	0	[illegible]	
WENDOVER	0	0	0	0	5	184	474	454	66	0	0	0	1183	
VERMONT														
BURLINGTON	0	0	0	0	17	[illegible]	138	118	90	4	0	0	454	
VIRGINIA														
LYNCHBURG	0	0	0	[illegible]	36	263	304	242	170	44	16	5	1083	
NORFOLK	0	[illegible]	0	[illegible]	76	336	[illegible]	343	[illegible]	87	23	5	[illegible]	
RICHMOND	0	0	0	0	56	297	367	327	209	62	22	5	1345	
ROANOKE	0	0	0	4	40	[illegible]	270	245	163	35	13	1	1010	
WALLOPS ISLAND	0	0	0	0	17	204	343	306	281	89	16	1	1257	
WASHINGTON														
OLYMPIA	0	0	0	0	0	3	71	67	0	0	0	0	141	
QUILLAYUTE	0	0	0	0	0	[illegible]	[illegible]	18	0	0	0	0	26	
SEATTLE TACOMA	0	0	0	0	4	2	106	107	0	0	0	0	[illegible]	
SPOKANE	0	0	0	0	10	17	216	[illegible]	9	0	0	0	558	
STAMPEDE PASS R	0	0	0	0	0	0	88	42	0	0	0	0	[illegible]	
WALLA WALLA U	[illegible]	0	0	0	35	48	373	443	[illegible]	10	0	0	931	
YAKIMA	0	0	0	0	[illegible]	16	257	256	1	0	0	0	564	
WEST INDIES														
SAN JUAN P.R.	398	353	438	[illegible]	511	[illegible]	562	573	[illegible]	531	473	438	5844	
WEST VIRGINIA														
BECKLEY	0	0	0	0	14	132	119	91	86	11	5	0	458	
CHARLESTON	0	0	0	0	[illegible]	[illegible]	237	219	190	49	11	5	[illegible]	
ELKINS	0	0	0	0	6	128	105	88	[illegible]	11	[illegible]	0	[illegible]	
HUNTINGTON	0	0	0	0	35	258	225	215	197	56	7	2	[illegible]	
PARKERSBURG U	0	0	0	0	33	270	258	214	181	47	3	0	[illegible]	
WISCONSIN														
GREEN BAY	0	0	0	0	1	[illegible]	125	71	77	15	0	0	484	
LA CROSSE	0	0	0	1	[illegible]	237	129	128	[illegible]	19	0	0	643	
MADISON	0	0	0	0	13	229	144	131	[illegible]	20	0	0	677	
MILWAUKEE	0	0	0	0	0	148	[illegible]	105	123	20	0	0	516	
WYOMING														
CASPER	0	0	0	0	0	58	109	202	26	0	0	0	[illegible]	
CHEYENNE	0	0	0	0	0	58	77	128	13	0	0	0	276	
LANDER	0	0	0	0	0	66	123	246	25	0	0	0	460	
SHERIDAN	0	0	0	0	0	49	96	276	21	0	0	0	442	

Data from airport unless otherwise specified.
U indicates Urban, R indicates Rural sites.

STORM SUMMARY

DECEMBER 1971

STATE	TORNADOES					HAILSTORMS				WINDSTORMS				LIGHTNING				‡ HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				Ø ALL OTHER			
								†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE				†DAMAGE	
	NUMBER	DAYS	DEATHS	INJURIES	†DAMAGE	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS	DEATHS	INJURIES	PROP-ERTY	CROPS
Alabama	1	1		1	5							4																	
Alaska*																													
Arizona																												5	
Arkansas	3	2		12	5					1	10	5																	
California												5	4																
Colorado												4																	
Connecticut												4																	
Delaware*																													
Florida	5	1		10	5					4		5	5																
Georgia																			2	5				4				5	
Hawaii	2	2																								2	2		
Idaho												4							15	3									
Illinois	2	2		24	5						40	6	3																
Indiana										2	13	5																	
Iowa												5																	
Kansas																4													
Kentucky	4	1			5						15	5																	
Louisiana	2	1			4						3	4																?	?
Maine										1		4																	
Maryland												5																	
Massachusetts											1	5								4									
Michigan										1	9	5																	
Minnesota*																													
Mississippi	4	2		7	5							4																6	5
Missouri	5	2	2	53	7			4		4	21	6																	
Montana												5																	
Nebraska*																													
Nevada												4								?									
New Hampshire												4												3					
New Jersey*																													
New Mexico*																													
New York										2	9	5											2						
North Carolina										6	1	5				3				5	4							4	4
North Dakota*																													
Ohio										2	52†	6																	
Oklahoma	4	1			5						1	4																°7	C
Oregon												4								4						1			
Pacific Area*																													
Pennsylvania												4																	
Puerto Rico*																													
Rhode Island																			?	4			?	5					
South Carolina												5								4		2	1	6	6				
South Dakota*																													
Tennessee	1	1		3	5							5																?	
Texas	23	1		19	6			4			34	7														1		6	
Utah*																													
Vermont												4																	
U. S. Virgin Is.*																													
Virginia												4																	
Washington	1	1			2						2	4								4								4	
West Virginia											1	3																	
Wisconsin*																													
Wyoming											11	5																	

´ Includes crop damage.
C Crop damage.
* No occurrence of storms or unusual weather phenomena reported.
‡ Includes heavy sleet storm.
Freezing drizzle and freezing rain, commonly known as glaze.
Ø For breakdown of "All Others", and for detailed listing of other storms, see the Environmental Data Service, NOAA, monthly publication STORM DATA.
† Storm damages are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion.

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS DECEMBER 1971

Elmer R. Nelson, Office of Hydrology

Major flooding occurred on tributaries of the Arkansas River in northeastern and extreme eastern Oklahoma during December. The Poteau River at Panama, Okla., rose nearly 15.5 feet above flood stage which was the fourth highest stage of record. Bird Creek and Polecat Creek crested 1 foot to 1.5 feet lower than the September 1971 flood. The Arkansas River experienced the most flooding since completion of the Arkansas River Navigation project. Flood damages were heavy and estimated at nearly $16 million.

The flooding along the East Fork of the Trinity River near Crandall, Tex., was the second highest since records began in 1949.

Serious flooding and landslides occurred in southern California during the latter part of December. The damages were estimated at $3.5 million.

HUDSON BAY DRAINAGE

Red River of the North - Precipitation amounts were light over the Souris Basin during December, ranging from a trace to 0.26 inch. Snow depths at the end of the month ranged from 1 inch to 4 inches over most of the basin, except 8 inches over the Turtle Mountains along the Canadian border.

Monthly precipitation totals ranged from 0.08 to 0.86 inch over the Red River of the North Basin. Snow depths at the end of the month ranged from 2 to 4 inches over the North Dakota tributaries and the central portion of the Basin. In the Minnesota portion of the Basin, snow depths ranged from 10 inches over the upper portion (Otter Tail and Wild Rice) to 5 to 7 inches in the lower basin (Thief River and portions of the Red Lake River).

Drainage of earlier precipitation continued with nearly all tributaries of the Red River flowing above normal for the month of December.

ST. LAWRENCE DRAINAGE

Lake Erie - Minor flooding occurred on the St. Mary's River at Decatur, Ind., on December 15-17. No damage was reported.

Lake Ontario - Heavy precipitation (about 1 inch) towards the end of December caused a rise in the Genesee Basin but no flooding along the main streams. Two to three inches of snow occurred in the southern half of the valley, followed by freezing rain. Some water crossed route 258, west from Groveland flats in the lower Canaseraga Creek Basin. No damage was reported.

ATLANTIC SLOPE DRAINAGE

Average precipitation for the Delaware River Basin above Trenton, N. J., during December was 3.18 inches or 98 percent of normal. Only a few stations in New York State reported precipitation amounts over 4 inches during the month. The Delaware River Basin below Trenton averaged around 1.4 inches or about 40 percent of normal. Precipitation averaged 1.6 inches or 48 percent of normal over northern, central, and southern interior sections of New Jersey. The snow cover averaged 8 to 11 inches in the upper third of the Delaware Valley in the beginning of December. The heaviest snow depth reported was 18 inches at Pleasant Mount, Pa. Very mild weather from the 10th to the 17th reduced the snowpack to 3 inches or less by the 12th and mostly to a trace by the 18th. In the upper portions of the Delaware Valley, light snows at the end of the month produced a snow cover that ranged from 1 inch to 3 inches on December 31.

The 13 principal water-supply reservoirs in New Jersey were at 99 percent of total capacity at the end of December. Due to snowmelt and normal December precipitation, New York City's three reservoirs on the upper Delaware increased storage by 66.4 billion gallons during December and were at 67 percent of capacity by the end of the month.

The Lumber River at Lumberton, N. C., rose to flood stage on the 6th and remained at flood stage through the 8th. The main flooding in South Carolina during December was along the Broad River from the North Carolina-South Carolina state line downstream to Columbia, S. C., the Congaree Basin below Columbia and the upper Saluda. The important feature of the flooding on the Broad River was that it remained above flood stage at Blair for 4 days. Moderate flooding occurred in the Congaree Basin below Columbia to St. Matthews. Storage in Lake Greenwood prevented flooding of the Saluda River on downstream. The flooding was due to 1 inch to 3.5 inches of rain plus snowmelt on the 6th-8th. Eight to sixteen inches of snow occurred over northwest South Carolina and adjacent North Carolina on the 3d. Flood damages were light.

Heavy rains during the early part of the month caused minor flooding on the middle and lower Savannah and Ogeechee Rivers in Georgia. Additional release of water from the Hartwell and Clark Hill Dams, to bring pool levels down to normal, was responsible for part of the high water on the Savannah River, especially the latter part of the month. Damage is estimated to be light.

EAST GULF OF MEXICO DRAINAGE

Locally heavy rains during the first and third weeks of December caused two periods of flooding on the Apalachicola River at Blountstown, Fla. The first flooding began on the 8th and continued to the 11th with a crest 2.4 feet above flood stage. The second overflow occurred on the 23d through the 25th with a crest 1.5 feet above flood stage. The total damage was estimated at $21,200 by the Corps of Engineers.

Heavy rain (2 to 4 inches) on the 6th-7th caused minor flooding on the Cahaba River at Centreville, Ala., on the 7th. Damage from the overflow was negligible.

Minor flooding occurred on the Tombigbee River at Coffeeville Lock and Dam, Ala., on the 9th-12th. Only minor damage resulted from the 2.5-foot overflow. This flooding was due to rains averaging nearly 3 inches on the 6th preceded by 2-inch rains on the 2d.

Rainfall in Mississippi was exceptionally heavy during December. Amounts ranged from 3 inches over the northern delta area to over 17 inches at a few locations in southwest Mississippi. Rain fell almost every day during the first 3 weeks of the month. Heavy rainfall during the first week of December produced rapid rises on streams to near or slightly above flood stage by the 10th. The continuing rains kept streams at, near, or above flood stage the rest of the month. Lowland flooding occurred along the Pearl and Leaf Rivers. Widespread lowland flooding occurred on the Bogue Chitto River where a stage of 16.35 feet (flood stage, 11 feet) was reached at Franklinton, La., on the 9th. Farming and timber cutting operations were at a standstill for most of the month. Scattered flash flooding occurred as drainage was slowed down by the already bankfull streams. Over 6.5 inches of rain occurred in a short period on the 6th, flooding drains and hampering traffic in the Brookhaven, Miss., area.

Trash moving downstream on the Bogue Chitto River washed out a bridge near Clifton, La. Considerable damage occurred to some secondary roads in the area of overflow. The total flood damages in Mississippi and Louisiana were estimated at $776,400. There were no reports of injuries or fatalities attributed to the flooding.

MISSISSIPPI SYSTEM

Upper Mississippi Basin - Precipitation was near normal over Minnesota and above, to much above normal, over Wisconsin during December. Snow cover at the end of the month ranged from 4 inches to near 20 inches with the greatest depths over the St. Croix, Chippewa, and mid-Mississippi Basins. Ice jams occurred at several locations on the Mississippi River with some overflow reported in the Monticello-Coon Rapids, Minn., area on the 23d. Ice jams were also reported on the Chippewa River at Durand, Wis ., on the 27th-30th and on the Wisconsin River at Portage, Wis., on the 22d-30th with a 5-foot rise at each location.

Heavy precipitation (2 to 4 inches) on the 13th-14th caused flooding along the Sangamon and Kaskaskia Rivers in Illinois and along the Meramec River at Pacific, Mo. Crests were generally 1 foot to 3 feet above flood stage except on the Sangamon River at Riverton, Ill., where it was nearly 8 feet above flood stage.

Mississippi River navigation for the 1971 season ended at St. Paul, Minn., on Dec. 7 and at Guttenberg, Iowa, on December 16.

Missouri Basin - Temperatures in South Dakota during December averaged below normal, but with no prolonged cold spells. Precipitation was above normal over the eastern two-thirds of South Dakota and adjoining areas and below normal in the western one-third of the State. Two snowstorms occurred during December. The first, on the 7th-8th, deposited 6 to 10 inches of snow in north-central South Dakota and the other on the 29th-30th, produced 2 to 7 inches of snow over the eastern half of the State. At the end of December, snow depths were 4 to 10 inches in northwest Iowa, 1 inch to 6 inches in northeast Nebraska, 6 to 9 inches in southwest Minnesota and 2 to 12 inches in the eastern two-thirds and northwest South Dakota. In southwest South Dakota there was little snow on the ground at lower elevations, with up to 1 foot in higher elevations in the Black Hills and eastern Wyoming. Streams were frozen over in the upper Missouri Basin except the main stem which was half or more covered with shore and floating ice. Missouri River navigation ended on the 4th.

Flooding in the Missouri Basin during December was confined to small streams in the lower portion during the middle of the month. The overflows were due to heavy precipitation during the evening of the 14th and the morning of the 15th. Showers and thunderstorms over a large portion of Missouri, much of the eastern half of Kansas, and extreme southern Iowa produced heavy rains ranging from 1.5 to 4 inches. Flash flooding occurred around the Metropolitan Kansas City, Mo., area as well as in other portions of west-central and central Missouri. Most larger streams rose to near bankfull or above. The Little Blue River at Lake City, Mo., rose 6.5 feet above flood stage. Several roads or county highways were closed temporarily due to the high water. Little loss resulted as flooding was confined to agricultural lowlands where most crops had been harvested. The Petite Saline River and Moniteau Creek in central Missouri rose to near bankfull stage toward the end of the month due to heavy rains on the 29th.

Heavy rainfall (2 to 4 inches) on the 13th and 14th caused some flooding along the Osage River and its tributaries in Missouri. Flooding was minor except moderate on the Osage River at Schell City, Mo., and on the Marmaton at Nevada, Mo. No flood damage was reported.

Ohio Basin - It was a very warm and wet month in the upper Ohio Basin in Pennsylvania during December. In parts of the Allegheny Basin, rainfall was over twice the December normal. Daily temperature at Pittsburgh, Pa., averaged 8° above normal and the monthly precipitation was 0.92 inch above normal. Rainfall was above normal in the Beaver, Youghiogheny, and Ohio River Basins but below normal over most of the Monongahela Basin. A moderate rise occurred on the upper Allegheny River and a strong rise on the Clarion River on the 30th and 31st. The Clarion River at Ridgway, Pa., exceeded flood stage on the 30th. No damage resulted as the river channel at Ridgway was improved several years ago.

December was a very wet month over most of Indiana. Several 24-hour totals exceeded 1 inch at one or more points around the 8th, 15th, and 30th. The total precipitation recorded at Indianapolis, Ind., was 6.02 inches, or more than twice the normal. Nearly all the precipitation was in the form of rain. Minor flooding occurred in the Wabash Basin from the 15th through the 22d. No damage was reported.

Five to over six inches of rain in the headwater area of the French Broad Basin in North Carolina on the 6th-7th caused flooding along the mainstem at Rosman on the 7th and at Blantyre, N. C., on the 7th-10th. This rain coupled with melting snow, produced some flash flooding in Transylvania and Henderson Counties. Up to 20 inches of snow fell at the higher elevations of the mountains on the 2d. The saturated ground prolonged the flooding at Blantyre. No damage was reported from the flooding.

Light flooding was reported on South Chickamauga Creek near Chickamauga, Tenn., on the 7th and on the main stem of the Tennessee at Whitesburg, Ala., on the 8th-10th. No damage was reported.

White Basin - Record flooding occurred on the Buffalo River at Gilbert, Ark., on the 10th. It rose from a stage of 4.9 feet at 7 a.m. on the 9th to a record crest of 44.0 feet at 5 p.m. on the 10th, or a rise of 39.1 feet in 34 hours. This flooding was due to excessive rain (8 to 10 inches) on the 8th-10th. Widespread local and flash-flooding and some flooding occurred on the Black, Cache, and White Rivers. The Black River was above flood stage at Black Rock, Ark., from the 11th to the 13th. The crest on the 12th was 4.7 feet above flood stage. The Cache River at Patterson, Ark., was above flood stage from the 12th to the 21st.

The main stem of the White River was above flood stage at Calico Rock, Ark., for a few hours on the 11th. The crest was 6.25 feet above flood stage. Downstream at Batesville, Ark., the crest was 7 feet above flood stage on the 12th. One person was drowned when her car stalled in floodwaters from the Middle Fork of the White River in Washington County, Ark.

Arkansas Basin - Flooding occurred between the 9th and 21st on the major tributaries of the Arkansas River in northeastern and extreme eastern Oklahoma and along the main stem of the Arkansas in the reach from Van Buren to Morrilton, Ark. Overflows ranged from around 2 feet above flood stage on the Illinois, Little Caney, and Caney to nearly 15.5 feet above flood stage on the Poteau River at Panama, Okla., where it reached a stage of 39.4 feet. This was the fourth highest stage of record at

Panama. Upstream at Poteau, Okla., the crest was 8.5 feet above flood stage.

Bird Creek and Polecat Creek crested 1 foot to 1.5 feet lower than the September 1971 flood. Crests on Bird Creek ranged from 6 feet above flood stage at Avant, Okla., to 7 feet above flood stage at Sperry and Owasso, Okla. The crest on Polecat Creek at Sapulpa, Okla., was more than 5 feet above flood stage. This flooding was due to 5 to 9 inches of precipitation on the 9th-10th.

The Arkansas River experienced the most flooding since completion of the Arkansas River Navigation project. The crests on the 10th-11th in the Van Buren-Morrilton, Ark., reach ranged from 4 to 5 feet above flood stage. Navigation was suspended on the 10th-15th due to the high water.

Flood damages in eastern and southeastern Oklahoma were heavy. Homes, farms, small businesses, livestock, roads, bridges, sanitation systems, and sewers suffered the heaviest damages from the high water. The Tulsa World newspaper estimated the damages at nearly $16 million. Due to the dormant growing season, damages were negligible along the Little Caney, Caney, Neosho, and Illinois Rivers.

Red Basin - Major flooding occurred during December in portions of the Red River and its tributaries in southeastern Oklahoma, Little River and its tributaries in southwestern Arkansas and the Sulphur River in northeast Texas. The greatest damage occurred along the Rolling Fork and Cossatot Rivers, where damages were estimated at $1.5 million. Damages along tributaries of the Little River were estimated at $80,000. Minor flooding occurred on the Red River at Arthur, Tex., on the 10th-11th. This flooding was due to heavy rain which ranged from 8 inches in northeast Texas to 13 inches at Vandervoort in Polk County.

Lower Mississippi Basin - Minor flooding occurred on the St. Francis River at Fisk, Mo., on the 13th-21st and at St. Francis, Ark., on the 19th-22d. This flooding was due to heavy rains that averaged over 3 inches, with 5-inch totals in the upper reaches early in December. No damage resulted from the overflow.

Heavy rainfall during the first week in December produced a rapid rise on the Big Black River to above flood stage at West, Miss., on the 7th. Continuing rains kept the stream above flood stage until the 25th. The crest on the 19th was nearly 6 feet above flood stage. Farming and timber cutting operations were at a standstill most of the month.

WEST GULF OF MEXICO DRAINAGE

Heavy rainfall during the first 3 days of the month caused the Calcasieu and Mermentau Rivers in Louisiana to rise above flood stage on the 3d-6th. Very heavy rain on the 6th caused sharp rises on both streams. Flooding continued on the Mermentau at Mermentau, La., until the 22d and on the Calcasieu at Hineston, La., to the 24th. There was considerable loss of pastureland for cattle grazing as large areas of the coastal plain remained under water for a prolonged period. There was some loss to the local trapping industry and minor economic loss due to water erosion of local roads.

Major flooding occurred along the Sabine River in northeast Texas beginning on the 6th and continuing into January at Mineola, Gladwater, and Longview, Texas. Cattle and machinery were moved out of the river bottom to higher land so no damage was reported.

Flooding occurred on the Elm Fork at Carrollton, Tex., and along the Trinity River from Dallas to Moss Bluff, Tex., during December. The overflow along the East Fork near Crandall, Tex., was the second highest since records began in 1949. It began overflowing on the 6th and reached a crest stage of 21.25 feet on the 10th. This was 1.6 feet lower than the highest stage of record (22.81 feet) which occurred on May 28, 1957. The total damages along the East Fork were estimated at $150,000.

Minor flooding occurred on the Elm Fork at Carrollton, Tex., on the 9th and on the Trinity River at Dallas, Tex., on the 6th. Heavy rains on the 8th-9th caused additional flooding at Dallas on the 9th-12th with a crest of nearly 9 feet above flood stage on the 10th. Flooding moved downstream to Long Lake, Tex., by the 11th and to Liberty, Tex., by the 15th where it continued above flood stage to the 31st. Damages along the Trinity River from Dallas to Long Lake were estimated at $797,000. Eighty-five homes were partially flooded in south Dallas according to the Dallas Office of Civil Defense. A special bulletin by the National Weather Service on the 9th urged evacuation of the Roosevelt Heights section in south Dallas. Richland Creek near Richland, Tex., crested near 22 feet, which was 2 feet above flood stage, on the 10th and Chambers Creek near Corsicana, 4 feet above flood stage on the 11th.

Minor flooding occurred on the Navasota River on the 7th-19th. Damages, if any, were light.

Heavy rains during the first few days of December caused minor flooding on the Navidad River at Ganado, Tex., on the 6th-9th. Some flooding occurred on the Guadalupe River south of Victoria on the 7th-10th. No damage was reported.

GULF OF CALIFORNIA DRAINAGE

Colorado River - Local flooding occurred in Tucson, Ariz., on the 4th and in southern Navajo County along the Mogollon Rim on the 26th. The latter overflow was due to heavy rains and snowmelt.

Minor flooding was reported north of Winslow, Ariz., on the Little Colorado River, on the 26th.

GREAT BASIN

Warm weather and moderate rain in late December, over a substantial snow cover in the upper Sevier Basin, caused minor flooding from Panguitch to Junction, Utah. The Sevier River overflowed its banks late on the 25th and by early the next morning a ditch had to be cut to prevent flooding in Circleville, Utah. No damage estimates are available.

The Great Basin was generally cold, windy, and wet during December. Most stations in Utah, southwest Wyoming, and western Colorado received above normal precipitation during the month. Some areas reported over 200 percent of average.

PACIFIC SLOPE DRAINAGE

Southern California - A series of storms in southern California on December 22-28 produced heavy rainfall and toward the end of the period, heavy snowfall in the mountains.

A 40-minute period of heavy rain in the Summerland-Carpenteria-Montecito area in Santa Barbara County caused a rush of water, rocks, and mud down the following creeks. Santa Monica, Romero, Franklin, Carpenteria, arroyo Parita and Toro, including the east and west branches. Several homes were flooded with water and mud. U. S. Highway 101 was closed for about 5 hours and California Highway 192 was closed for weeks. California 192 is the alternate highway for that area.

In Los Angeles County, numerous catch basins were

flooded. Several homes in Carson and Torrance, Calif., were flooded, mainly due to trash obstructing drains. This is not unusual in winter rains. The Pacific Coast Highway was closed for a short period due to mud slides which damaged a few homes. There was a small earth slide above Sylmar in a canyon where the earthquake of February 9, 1971, had loosened the earth.

Runoff in San Bernardino, Ventura, San Diego, Orange, and Riverside Counties was very light. No significant damage was reported in these counties.

The heaviest damage reported was in Santa Barbara County where the total loss was estimated at $3.5 million. There was no loss of life.

Coquille Basin - Moderately heavy precipitation on the 6th and 24th caused minor flooding on the Coquille River at Myrtle Point, Oreg., on the 6th-7th and 24th. There were no protracted periods of heavy precipitation although more than 4 inches was reported at some coastal locations. Freezing levels rose briefly to 10,000 feet on the 5th but stayed relatively low during the second rainy period. Some river bank erosion siltation and road damage resulted from the high water.

Columbia Basin - Heavy rains over the north Oregon coast and northern Willamette Valley on the 4th caused near bankfull stages on some Oregon coastal streams and near or above bankfull on most Cascade Range Willamette tributaries. Minor rises were noted on Coast Range Willamette tributaries. On the east side of the Cascades more than 1 inch of precipitation occurred at Pendleton, Oreg., and near 2-inch amounts in the surrounding area. Heavy runoff occurred in the low elevation Wildhorse Creek drainage and other normally dry canyons causing the Umatilla River to rise sharply to 0.1 foot above flood stage on the 6th.

Continued precipitation on the 10th-15th kept flows high in all parts of the Willamette Basins with the more sluggish Coast Range tributaries remaining over bankfull until mid-month. Little or no precipitation on the 16th-20th permitted all streams in western Oregon to recede toward base flow levels.

Heavy precipitation on the 20th-24th over the coastal drainages and Coast Range Willamette tributaries produced minor rises on the west side of the Coast Range and above bankfull stages on several streams on the Willamette side. The Marys and Luckiamute Rivers crested above bankfull stage on the 22d and 24th. The Tualatin River at Farmington, Oreg., exceeded flood stage by 2 feet at midnight on the 25th-26th. The South Yamhill River near Whiteson, Oreg., had twin crests above flood stage on the 23d (38.7 feet) and 24th (39.0 feet). Very little change was noted along the main stem Willamette during this period.

The Corps of Engineers estimated the damages in western Oregon at $322,000 and east of the Cascades, at $2,000.

FLOOD STAGE DATA

(All dates in December unless otherwise noted)

DECEMBER 1971

River and station	Flood stage	Above flood stages -dates		Crest*	
		From-	To-	Stage	Date
	Ft.			Ft.	
ST LAWRENCE DRAINAGE					
Lake Erie					
St. Marys:					
Decatur, Ind.	15	15	17	16.4	16
ATLANTIC SLOPE DRAINAGE					
Lumber:					
Lumberton, N. C.	9	6	8	9.0	6-8
Broad:					
Gaffney, S. C.	10	7	8	#10.7	8
Blair, S. C.	14	7	10	#22.0	9
Saluda:					
West Pelzer, S. C.	9	8	8	9.8	8
Savannah:					
Wade-Plantalion, Ga.	15	18	21	#15.3	20
Clyo, Ga.	11	5	Jan 1	13.8	22-25
Ogeechee:					
Scarboro, Ga.	8	6	16	# 8.6	8-9
Dover, Ga.	7	4	23	# 7.8	12
Eden, Ga.	9	8	26	# 9.7	13-14
EAST GULF OF MEXICO DRAINAGE					
Apalachicola:					
Blountstown, Fla.	15	8	11	17.4	10
		23	25	16.5	23
Cahaba:					
Centreville, Ala.	23	7	7	#23.3	7
Tombigbee:					
Coffeeville L & D, Ala.	43	9	12	45.5	12
Chickasawhay:					
Enterprise, Miss.	20	8	10	24.9	9
Leaf:					
Beaumont, Miss.	20	11	14	20.3	11
Bogue Chitto:					
Franklinton, La.	11	7	14	16.35	9
Pearl:					
Edinburg, Miss.	20	9	14	23.8	10
Jackson, Miss.	18	7	28	28.2	16
Monticello, Miss.	19	7	23	25.15	8
Columbia, Miss.	17	8	16	19.8	11
Bogalusa, La.	15	4	Jan. 2	19.9	13
Pearl River, La.	12	10	Feb. 26	15.75	16
				14.4	Feb. 7
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Sangamon:					
Monticello, Ill.	13	15	18	13.8	15
Riverton, Ill.	13	13	28	20.7	19
Petersburg, Ill.	497	21	22	497.4	21
Meramec:					
Pacific, Mo.	11	16	17	12.6	17
Kaskaskia:					
Vandalia, Ill.	18	16	18	20.6	17
Missouri Basin					
Blue:					
Kansas City (Bannister Rd)Mo	21	15	15	21.7	15
Little Blue:					
Lake City, Mo.	18	14	16	24.5	16
Grand:					
Sumner, Mo.	26	15	17	28.5	16

River and station	Flood stage	Above flood stages -dates		Crest*	
		From-	To-	Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM-Cont.					
Missouri Basin-Cont.					
Charlton:					
Prairie Hill, Mo.	15	15	16	17.8	16
Blackwater:					
Valley City, Mo.	22	14	16	27.6	15
Blue Lick, Mo.	25	15	17	25.4	18
		18	19	25.35	19
Pottawatomie Creek:					
Garnett, (nr), Kans.	26	15	16	28.3	16
Lane, Kans.	23	16	17	26.7	16
Marmaton:					
Fort Scott, (nr), Kans.	38	15	15	40.0	15
Nevada, Mo.	22	16	20	28.4	17
Little Osage:					
Horton, Mo.	23	15	20	26.7	17
Big Creek:					
Blairstown, Mo.	20	M	M	24.7	18
South Grand:					
Urich, Mo.	22	15	16	25.1	16
Brownington, Mo.	19	19	20	20.7	19
Maries Creek:					
Westphalia, Mo.	10	M	M	10.5	15
Marais des Cygnes:					
Osawatomie, Kans.	28	16	17	30.2	16
La Cygne, Kans.	25	16	18	#28.2	18
Kansas-Missouri St.Line(Mo)	25	17	17	25.0	17
Osage:					
Rich Hill, Mo.	26	16	20	27.65	17-19
Schell City, Mo.	25	15	23	30.5	20
Ohio Basin					
East Fork White:					
Shelbyville, Ind.	7	15	17	9.0	16
White:					
Anderson, Ind.	10	15	16	10.4	16
Spencer, Ind.	14	17	19	14.4	18
Elliston, Ind.	18	17	18	19.0	18
Little Wabash:					
Wilcox, Ill.	16	18	19	16.25	19
Wabash:					
Lafayette, Ind.	11	11	11	11.1	11
		15	17	15.6	16
Covington, Ind.	16	16	20	18.6	18
Montezuma, Ind.	14	15	20	18.7	18
Terre Haute, Ind.	14	15	22	16.6	19
French Broad:					
Rosman, N. C.	8	7	7	9.6	7
Blantyre, N. C.	17	7	10	19.7	8
South Chickamauga Creek:					
Chickamauga,(nr), Tenn.	10	7	7	10.1	7
Tennessee:					
Whitesburg, Ala.	560	8	10	561.3	9
White Basin					
Buffalo:					
Gilbert, Ark.	30	10	10	#44.0	10
Black:					
Black Rock, Ark.	14	11	13	18.7	12
Cache:					
Patterson, Ark.	7	12	21	7.6	17

FLOOD STAGE DATA

(All dates in December unless otherwise specified) DECEMBER 1971

River and station	Flood stage	Above flood stages -dates From-	To-	Crest * Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM - Cont.					
White Basin - Cont.					
White:					
[illegible]	19	11	11	25.25	11
Batesville, Ark.	23	11	12	30.0	12
Arkansas Basin					
Pole Cat Creek:					
Sapulpa, Okla.	21	11	11	22.95	11
		14	16	26.2	15
Little Caney:					
Copan, Okla.	21	15	17	22.4	17
Caney:					
Ramona, Okla.	27	15	17	28.7	16
Bird Creek:					
Avant, Okla.	16	15	15	21.9	15
Sperry, Okla.	21	15	17	28.2	16
Owasso, Okla.	24.5	15	18	31.5	17
Neosho:					
Oswego, Kans.	17	15	18	21.8	17
Commerce, Okla.	15	14	19	19.2	17
Illinois:					
Tahlequah, Okla.	11	11	12	13.0	12
Deep Fork:					
Beggs, Okla.	18	15	21	22.0	16
Fourche Maline:					
Red Oak, Okla.	15	9	11	17.0	10
Poteau:					
Poteau, Okla.	24	9	11	32.5	10
Panama, Okla.	24	9	14	39.4	11
Petit Jean:					
Danville, Ark.	20	10	12	26.4	11
Fourche La Fave:					
Houston, Ark.	25	10	20	31.8	12
Arkansas:					
Van Buren, Ark.	22	10	12	26.2	11
		15	21	23.6	17
Ozark, L&D, Ark.	357	10	11	361.7	11
Dardanelle, Ark.	32	10	11	37.0	10
Morrilton, Ark.	30	11	12	34.0	11
Red Basin					
Blue:					
Blue, Okla.	21	9	11	27.8	10
Clear Boggy Creek:					
Caney, Okla.	19	9	13	23.1	10
Muddy Boggy Creek:					
Farris, Okla.	38	11	11	38	11
Kiamichi:					
Belzoni, Okla.	28	9	13	41.0	10
Little:					
Idabel, Okla.	30	9	13	38.6	10
Horatio, Ark.	27	10	15	32.3	12
Sulphur:					
Hagansport, Tex.	44	3	4	44.9	3
		5	18	49.8	10
Naples, Tex.	22	8	27	36.8	13
Texarkana, Tex.	25	13	17	25.1	13
Glover:					
Glover, Okla.	16	9	10	29.0	10

River and station	Flood stage	Above flood stages -dates From-	To-	Crest * Stage	Date
	Ft.			Ft.	
MISSISSIPPI SYSTEM - Cont.					
Red Basin - Cont.					
Red:					
Arthur City, Tex.	26	10	11	26.4	11
Lower Mississippi					
St. Francis:					
Fisk, Mo.	20	13	21	22.7	15
St. Francis, Ark.	18	19	22	18.2	20
Big Black:					
West, Miss.	12	7	25	17.8	19
WEST GULF OF MEXICO DRAINAGE					
Mermentau:					
Mermentau, La.	5	6	22	11.1	10
Calcasieu:					
Hineston, La.	12	3	24	17.05	7
Oakdale, La.	8	4	20	13.75	7
Kinder, La.	12	5	17	21.4	9
Lake Fork Creek:					
Quitman, Tex.	16	8	14	24.1	11
Sabine:					
Emory, Tex.	12	6	25	17.6	10
Mineola, Tex.	14	6	Jan. 12	17.6	Jan. 4
				21.5	11
Gladewater, Tex.	26	12	Jan. 3	38.8	15
Longview, Tex.	25	15	Jan. 19	35.8	18
Tatum, Tex.	25	18	25	26.9	19
Logansport, La.	28	27	30	#28.4	28
Deweyville, Tex.	14	7	11	#14.4	9
		23	26	#14.2	24
		30	31	#14.0	30
Elm Fork:					
Carrollton, Tex.	6	9	9	6.8	9
East Fork:					
Crandall, Tex.	14	6	21	21.25	10
		25	31	M	M
Trinity:					
Dallas, Tex.	30	6	6	32.4	6
		9	12	38.8	10
Rosser, Tex.	26	9	17	34.8	12
Trinidad, Tex.	28	7	24	44.0	11
				41.0	14
Long Lake, Tex.	35	11	27	46.35	13
Crockett(12 W), Tex.	50	16	20	#51.1	16
Liberty, Tex.	24	15	31	#27.4	31
Moss Bluff, Tex.	4	Nov. 25	Feb. 12	# 8.05	29-Jan 1
				6.7	Feb. 3
Navasota:					
Easterly, Tex.	14	9	9	#14.0	9
		12	15	#17.2	12
Bryan 17 NE, Tex.	12	7	19	#14.1	14
Navidad:					
Ganado, Tex.	21	6	9	23.3	8
PACIFIC SLOPE DRAINAGE					
Coquille Basin					
Coquille:					
Myrtle Point, Oreg.	35	6	7	37.85	6
		24	24	36.7	24
Columbia Basin					
Umatilla:					
Pendleton, Oreg.	8	6	6	8.1	8
Santiam:					
Jefferson, Oreg.	15	6	6	15.3	6

FLOOD STAGE DATA

(All dates A.D. because [illegible])

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft.			*Ft*	
PACIFIC SLOPE DRAINAGE-Cont.					
Columbia Basin - Cont.					
South Yamhill:					
[illegible], Oreg.	38	23	25	38.7	23
				39.0	24
[illegible]:					
[illegible], Oreg.	20	7	16	21.0	10

River and station	Flood stage	Above flood stages -dates		Crest *	
		From—	To—	Stage	Date
	Ft			*Ft*	
PACIFIC SLOPE DRAINAGE-Cont.					
Columbia Basin - Cont.					
Tualatin:					
Farmington, Oreg.	20	21	29	31.0	25-26

* Provisional

\# Highest Stage Observed

— Highest Stage of Record

1/ Continued at the end of the month

M Missing

RAWINSONDE DATA

Average monthly values

DECEMBER 1971

ALBANY, N. Y. — 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	86	-2.1	-5.5	26	1.5
1000	31	171			28	1.9
950	31	578	-3.0	-6.7	28	5.4
900	31	1,006	-4.5	-8.2	29	9.0
850	31	1,456	-5.5	-10.3	29	11.8
800	31	1,931	-6.2	-12.1	29	14.0
750	31	2,435	-7.0	-15.7	29	16.9
700	31	2,972	-9.1	-19.9	29	19.0
650	31	3,543	-11.5	-22.6	28	22.3
600	31	4,153	-14.6	-25.5	28	25.6
550	31	4,808	-18.1	-29.3	28	28.8
500	31	5,514	-22.4	-33.3	28	30.5
450	31	6,280	-27.4	-37.9	28	32.9
400	31	7,118	-33.3	-42.1	28	33.7
350	31	8,047	-39.5	-46.1	28	38.8
300	31	9,084	-45.9		28	44.5
250	31	10,280	-52.6		28	45.9
200	31	11,704	-57.8		29	49.0
175	31	12,544	-58.7		29	46.1
150	31	13,510	-59.6		28	37.3
125	31	14,649	-60.5		28	32.5
100	31	16,036	-60.8		28	25.4
80	31	17,422	-61.5		28	21.7
70	30	18,251	-61.8		28	19.2
60	[illegible]	19,210	-62.5		28	16.9
50	28	20,336	-61.6		29	14.1
40	27	21,720	-61.2		28	13.6
30	27	23,512	-59.4		28	12.2
25	26	24,665	-58.6		28	13.5
20	[illegible]	26,067	-57.4		28	15.5
15	24	27,884	-56.4		27	21.5
10	[illegible]	30,479	-55.3		27	26.8
7						

ALBUQUERQUE, N. MEX. — 837 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,619	-3.2	-5.7	06	1.3
1000	31	192				
950	31	603				
900	31	1,044				
850	31	1,500				
800	31	1,984	-.9	-7.9	27	.9
750	31	2,499	-2.0	-11.0	26	4.7
700	31	3,045	-4.2	-15.1	26	8.3
650	31	3,627	-6.5	-19.6	26	12.6
600	31	4,249	-9.9	-23.3	25	17.6
550	31	4,915	-13.6	-28.3	25	21.4
500	31	5,633	-18.4	-33.8	25	23.8
450	31	6,412	-23.2	-38.2	25	25.7
400	31	7,265	-29.1	-42.4	25	27.3
350	31	8,209	-35.7	-47.6	25	29.9
300	31	9,262	-42.8	-53.1	24	32.8
250	31	10,472	-50.6		24	37.1
200	31	11,904	-57.0		25	35.5
175	30	12,747	-58.7		25	33.3
150	29	13,706	-60.6		25	27.3
125	28	14,828	-62.7		25	25.6
100	27	16,199	-64.3		26	20.6
80	26	17,565	-63.5		25	14.6
70	25	18,387	-63.5		26	12.3
60	25	19,336	-62.5		26	8.5
50	24	20,462	-61.7		28	4.9
40	24	21,850	-59.4		29	2.7
30	22	23,669	-56.7		01	3.2
25	21	24,835	-55.4		36	4.3
20	20	26,267	-53.1		33	5.6
15	16	28,127	-51.7		35	7.7
10	10	30,772	-50.2			
7						

AMARILLO, TEXAS — 890 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,095	.1	-3.9	25	2.3
1000	31	149				
950	31	567				
900	31	1,004				
850	31	1,467	5.1	-6.5	26	6.2
800	31	1,962	4.5	-9.5	26	7.6
750	31	2,486	2.7	-13.1	25	9.9
700	31	3,041	.3	-17.5	25	12.5
650	31	3,632	-2.6	-20.2	25	15.3
600	31	4,263	-6.3	-25.0	25	17.6
550	31	4,938	-10.8	-28.9	24	20.0
500	31	5,663	-16.1	-32.1	24	22.3
450	31	6,448	-21.5	-34.8	24	25.3
400	31	7,306	-27.6	-41.0	24	30.3
350	31	8,255	-34.8	-46.9	24	33.2
300	31	9,311	-42.5	-50.2	24	34.6
250	31	10,520	-50.7		25	39.3
200	30	11,952	-59.0		25	37.0
175	29	12,777	-60.8		24	38.0
150	29	13,732	-62.6		25	34.4
125	27	14,853	-64.6		25	32.9
100	23	16,222	-66.8		25	27.9
80	22	17,573	-66.9		25	22.3
70	22	18,381	-66.3		25	16.3
60	20	19,315	-65.7		26	14.0
50	19	20,434	-62.3		26	9.6
40	18	21,819	-60.3		30	4.3
30	18	23,624	-57.9		32	4.7
25	17	24,780	-56.3		32	6.7
20	17	26,204	-54.7		32	8.3
15	13	28,022	-53.8		30	11.5
10	5	30,713	-50.1			
7						

* ANCHORAGE, ALASKA — 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	45	-8.6	-12.1	36	1.1
1000	31	64			01	2.4
950	31	462	-8.2	-12.8	06	.5
900	31	883	-8.0	-13.8	16	1.7
850	31	1,327	-9.2	-15.3	17	2.5
800	31	1,794	-11.2	-17.5	20	2.4
750	31	2,287	-13.5	-20.0	24	2.7
700	31	2,810	-16.2	-23.4	26	4.1
650	31	3,364	-19.4	-25.9	27	5.7
600	31	3,955	-22.9	-29.4	27	6.3
550	31	4,589	-26.7	-32.8	27	8.6
500	31	5,270	-31.2	-36.3	28	11.1
450	31	6,010	-36.1	-38.3	28	12.8
400	31	6,818	-41.4	-40.8	28	16.6
350	31	7,717	-46.8		28	17.2
300	31	8,726	-50.9		27	17.8
250	31	9,908	-52.1		28	20.8
200	30	11,359	-52.4		28	21.2
175	30	12,223	-51.9		27	20.3
150	28	13,222	-52.0		27	21.1
125	28	14,404	-51.7		27	20.9
100	28	15,849	-52.8		27	19.7
80	28	17,288	-53.2		28	20.6
70	26	18,145	-52.3		27	21.0
60	23	19,143	-53.4		28	22.6
50	22	20,313	-53.4		28	23.5
40	20	21,751	-53.2		29	25.9
30	17	23,612	-52.1		29	29.9
25	15	24,831	-50.8		29	32.3
20	11	26,276	-52.5			
15	9	28,134	-53.5			
10						
7						

* ANNETTE, ALASKA — 1006 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	37	-.8	-4.8	06	1.2
1000	31	84			04	1.3
950	31	492	-3.7	-7.3	17	1.5
900	31	917	-6.2	-9.5	22	2.0
850	31	1,363	-8.6	-13.3	26	3.2
800	31	1,831	-10.6	-16.2	28	5.0
750	31	2,326	-12.8	-19.3	28	6.7
700	31	2,849	-15.7	-22.3	28	8.2
650	31	3,405	-19.0	-25.6	28	9.1
600	31	3,997	-22.6	-30.0	28	10.2
550	31	4,630	-26.9	-33.8	28	11.5
500	31	5,311	-31.2	-37.0	28	14.7
450	31	6,051	-35.7	-38.7	29	17.7
400	31	6,861	-40.7	-39.7	29	21.6
350	31	7,764	-45.4	-43.0	29	24.2
300	31	8,779	-49.8		30	24.6
250	30	9,961	-52.0		30	23.2
200	29	11,399	-52.1		31	22.9
175	29	12,264	-51.8		31	22.4
150	29	13,264	-52.0		30	20.4
125	29	14,442	-53.2		30	20.1
100	28	15,875	-53.6		30	18.4
80	27	17,308	-53.7		30	17.5
70	25	18,168	-53.5		30	18.4
60	25	19,159	-53.9		30	18.2
50	23	20,342	-54.1		31	17.7
40	21	21,778	-53.3		31	17.8
30	19	23,646	-52.0		31	17.5
25	15	24,836	-52.0		32	22.3
20	15	26,284	-51.3		32	24.9
15	11	28,226	-50.4			
10	8	30,796	-52.4			
7	5	32,920	-57.5			

ATHENS, GEORGIA — 993 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	246	8.5	5.3	08	.6
1000	30	184				
950	30	610	10.1	4.7	20	1.0
900	30	1,060	9.9	3.4	22	5.0
850	30	1,535	8.8	-1.3	24	7.9
800	30	2,036	7.3	-6.6	24	9.6
750	30	2,565	5.3	-10.2	25	11.5
700	30	3,126	3.0	-16.5	25	13.6
650	30	3,723	.1	-17.4	26	15.6
600	30	4,360	-3.7	-21.1	26	17.0
550	30	5,041	-8.1	-26.5	26	18.8
500	30	5,775	-12.8	-31.2	26	20.5
450	30	6,570	-18.4	-34.8	27	22.1
400	30	7,438	-24.8	-41.1	27	24.2
350	30	8,398	-32.1	-43.7	27	27.0
300	30	9,464	-40.6	-50.8	27	28.1
250	30	10,681	-50.1		27	30.7
200	30	12,106	-60.2		27	32.9
175	30	12,932	-63.6		27	33.6
150	30	13,871	-66.1		27	32.5
125	30	14,972	-67.6		28	30.2
100	29	16,307	-69.7		28	25.3
80	29	17,631	-71.2		28	19.0
70	28	18,420	-69.8		28	14.6
60	28	19,343	-67.7		28	10.5
50	28	20,447	-65.1		29	9.1
40	26	21,816	-61.8		29	7.6
30	25	23,610	-58.4		29	9.2
25	24	24,762	-56.0		28	10.8
20	[illegible]	26,186	-53.1		28	14.4
15	21	28,064	-49.6		27	19.4
10	17	30,726	-46.0		26	28.9
7	10	33,087	-41.8			

* BARROW, ALASKA — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	8	-24.3	-30.0	08	2.1
1000	31	114			08	2.2
950	31	494	-19.2	-22.1	08	3.7
900	31	899	-17.1	-22.4	08	3.2
850	31	1,328	-17.3	-23.6	08	2.8
800	31	1,781	-18.7	-25.4	08	2.5
750	31	2,261	-20.5	-27.6	07	2.1
700	31	2,769	-22.8	-31.2	07	2.0
650	31	3,310	-25.5	-33.8	05	1.3
600	31	3,887	-28.8	-36.3	01	1.2
550	31	4,505	-32.5	-39.3	34	1.1
500	31	5,171	-36.7	-41.8	31	1.6
450	31	5,894	-41.0	-41.2	33	2.7
400	31	6,686	-46.2		32	3.3
350	31	7,566	-51.6		31	4.6
300	31	8,551	-56.8		30	6.8
250	31	9,698	-59.3		28	9.3
200	31	11,101	-57.7		27	13.3
175	31	11,945	-57.3		27	15.6
150	30	12,922	-57.5		27	17.5
125	30	14,073	-57.9		27	20.4
100	28	15,479	-58.4		27	23.4
80	27	16,875	-58.7		27	27.9
70	27	17,713	-59.4		27	30.7
60	27	18,677	-60.1		27	33.4
50	[illegible]	19,811	-61.2		27	35.5
40	[illegible]	21,198	-62.3		26	39.0
30	[illegible]	23,000	-62.8		27	46.5
25	5	24,156	-67.1			

BARTER IS., ALASKA — 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-24.3	-27.3	25	1.2
1000	31	107			25	.6
950	31	488	-18.4	-22.0	10	.5
900	31	894	-16.4	-21.4	29	.6
850	31	1,323	-17.1	-22.9	30	1.2
800	31	1,777	-18.5	-25.0	32	1.1
750	31	2,257	-20.0	-27.4	33	1.5
700	31	2,766	-22.5	-30.0	32	2.1
650	31	3,308	-25.4	-33.4	31	2.3
600	31	3,885	-28.4	-36.5	32	2.7
550	31	4,504	-32.2	-39.5	31	3.7
500	31	5,170	-36.5	-42.6	31	4.6
450	31	5,894	-41.2	-43.3	31	4.5
400	31	6,685	-46.3	-44.9	30	5.7
350	31	7,565	-51.5		31	7.4
300	31	8,552	-56.1		31	8.8
250	31	9,705	-58.0		29	10.4
200	30	11,120	-56.3		28	14.5
175	30	11,970	-55.5		28	17.1
150	30	12,952	-55.9		28	19.3
125	30	14,112	-56.3		28	22.7
100	29	15,526	-57.2		28	25.8
80	29	16,934	-58.2		28	30.4
70	27	17,776	-58.6		28	32.1
60	27	18,742	-59.5		28	35.0
50	25	19,891	-60.2		28	38.2
40	25	21,280	-61.1		28	42.5
30	19	23,109	-61.5		28	46.8
25	19	24,238	-62.2		28	50.3
20	17	25,624	-63.5		28	49.8
15	9	27,417	-62.2			

BETHEL, ALASKA — 1003 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	22	39	-13.6	-15.4	21	.6
1000	22	55			26	3.6
950	22	450	-9.5	-12.9	22	3.2
900	22	868	-9.7	-13.6	23	5.2
850	22	1,309	-10.5	-15.6	25	5.2
800	22	1,775	-12.1	-18.2	26	5.7
750	22	2,266	-14.7	-20.1	26	6.3
700	22	2,786	-17.3	-22.6	25	6.8
650	22	3,339	-20.2	-26.8	26	8.3
600	22	3,928	-23.7	-30.0	26	9.2
550	22	4,559	-27.5	-34.1	26	10.1
500	22	5,238	-32.2	-38.3	25	12.6
450	22	5,974	-37.1	-37.7	25	14.5
400	22	6,780	-42.3	-36.6	25	17.0
350	22	7,675	-47.4		26	16.6
300	22	8,681	-51.0		25	19.9
250	22	9,867	-51.5		25	20.7
200	22	11,316	-51.2		24	22.3
175	22	12,184	-51.5		24	20.7
150	22	13,185	-51.3		24	21.7
125	22	14,368	-51.9		24	20.6
100	22	15,812	-52.6		25	21.6
80	22	17,253	-52.4		25	19.7
70	21	18,117	-52.3		25	21.4
60	21	19,114	-53.1		25	21.8
50	21	20,288	-53.6		26	24.0
40	20	21,722	-53.5		26	23.5
30	19	23,599	-50.2		26	29.7
25	18	24,806	-50.2		26	30.8
20	16	26,255	-51.0		27	33.0
15	8	28,100	-53.4			

* BISMARCK, N. DAK. — 955 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	503	-12.8	-16.3	28	.9
1000	31	146				
950	31	539			31	1.2
900	31	954	-9.6	-13.8	28	4.2
850	31	1,399	-6.7	-14.6	28	6.2
800	31	1,872	-7.6	-16.2	28	8.1
750	31	2,372	-9.7	-17.8	27	9.8
700	31	2,902	-12.6	-20.2	27	11.8
650	31	3,465	-15.2	-24.6	27	13.7
600	31	4,066	-18.6	-28.2	27	14.7
550	31	4,710	-23.0	-31.8	27	15.9
500	31	5,401	-28.0	-36.7	27	17.2
450	31	6,149	-33.2	-40.3	27	19.8
400	31	6,967	-38.9	-44.3	27	21.5
350	31	7,874	-44.9		27	24.6
300	31	8,890	-49.8		27	28.1
250	31	10,074	-52.6		27	30.7
200	31	11,512	-53.7		27	32.0
175	31	12,369	-54.5		27	31.1
150	31	13,355	-54.9		27	29.1
125	30	14,516	-55.7		27	26.2
100	30	15,934	-57.0		27	22.3
80	29	17,345	-57.8		28	20.1
70	29	18,188	-57.9		28	18.1
60	29	19,158	-58.6		28	16.5
50	29	20,303	-58.8		29	16.0
40	27	21,699	-59.4		29	16.9
30	27	23,500	-59.0		30	17.2
25	25	24,654	-59.3		31	19.9
20	21	26,072	-59.8		32	19.5
15	17	27,903	-59.8		32	19.3

BOISE, IDAHO — 915 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	871	-1.5	-5.8	13	2.7
1000	31	153				
950	31	567				
900	31	1,000	-1.0	-6.1	13	2.5
850	31	1,455	-2.9	-8.1	21	2.6
800	31	1,933	-5.5	-9.6	24	5.0
750	31	2,437	-8.2	-12.2	26	6.6
700	31	2,970	-10.9	-16.1	27	8.5
650	31	3,537	-13.5	-20.7	27	10.1
600	31	4,142	-16.9	-24.1	28	13.2
550	31	4,790	-21.2	-28.0	27	14.3
500	31	5,487	-26.0	-32.7	27	15.0
450	31	6,242	-31.0	-37.1	28	16.0
400	30	7,065	-36.9	-39.4	28	17.8
350	30	7,979	-43.3	-44.3	28	17.2
300	30	9,000	-49.1		29	19.6
250	30	10,184	-53.3		28	20.7
200	29	11,616	-55.3		28	21.5
175	28	12,471	-56.0		28	19.4
150	28	13,452	-55.9		28	18.4
125	28	14,609	-57.1		27	16.3
100	27	16,021	-58.2		28	12.1
80	[illegible]	17,422	-58.5		27	10.4
70	[illegible]	18,257	-58.2		28	8.2
60	[illegible]	19,227	-58.1		29	[illegible]
50	25	20,376	-57.8		31	5.3
40	24	21,794	-56.8		33	4.5
30	[illegible]	23,630	-56.1		01	5.5
25	21	24,805	-55.5		01	6.8
20	18	26,237	-54.6		36	8.9
15	[illegible]	28,111	-55.1		01	12.7
10						
7						

BOOTHVILLE, LA. — 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1	17.4	16.3	10	1.6
1000	31	158	18.1	16.1	13	3.2
950	31	597	16.2	12.6	16	6.3
900	31	1,057	14.4	8.9	18	6.2
850	31	1,539	13.1	3.2	21	6.7
800	31	2,048	11.0	-.3	22	7.0
750	31	2,584	8.7	-4.7	23	7.7
700	31	3,152	6.3	-10.2	24	9.0
650	31	3,756	2.9	-13.7	24	10.5
600	31	4,400	-.9	-17.8	25	10.9
550	31	5,088	-5.4	-22.8	25	11.8
500	31	5,829	-10.6	-27.9	25	13.6
450	31	6,631	-16.2	-32.3	25	15.5
400	31	7,506	-22.7	-37.5	25	17.1
350	31	8,474	-30.0	-43.8	25	18.1
300	31	9,550	-38.5	-51.0	25	19.5
250	31	10,777	-48.3		26	20.2
200	31	12,212	-58.5		26	25.3
175	30	13,044	-62.7		26	25.7
150	30	13,985	-66.4		26	25.4
125	29	15,084	-68.9		26	24.6
100	28	16,405	-73.2		26	10.3
80	25	17,709	-74.5		26	11.0
70	25	18,488	-73.3		27	6.7
60	25	19,397	-69.6		28	4.1
50	[illegible]	20,498	-64.9		29	2.9
40	22	21,869	-61.5		29	3.8
30	22	23,673	-57.0		29	5.4
25	21	24,835	-54.7		28	7.0
20	19	26,271	-51.6		28	9.5
15	14	28,169	-48.5		27	13.8
10	8	30,871	-42.5			
7						

* BROWNSVILLE, TEXAS — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	7	16.7	14.5	31	.6
1000	30	137	17.5	15.2	16	.7
950	30	576	17.2	13.6	16	4.7
900	30	1,038	16.0	10.3	17	6.0
850	30	1,522	14.0	6.2	19	6.0
800	30	2,034	13.0	.3	20	5.3
750	30	2,574	10.7	-5.1	20	5.9
700	30	3,145	7.3	-8.6	22	6.3
650	30	3,751	3.5	-12.3	22	5.6
600	30	4,395	-.8	-17.1	22	7.1
550	30	5,085	-5.0	-24.0	22	8.3
500	30	5,827	-9.7	-30.1	22	9.8
450	30	6,632	-15.2	-34.2	23	11.8
400	30	7,510	-21.8	-41.0	23	13.2
350	30	8,481	-29.3	-46.6	23	14.9
300	30	9,561	-37.9	-53.2	23	15.8
250	30	10,790	-48.2		24	17.2
200	30	12,224	-58.8		24	20.5
175	30	13,054	-63.3		24	22.2
150	30	13,993	-66.8		24	22.2
125	30	15,089	-69.7		24	21.9
100	29	16,406	-73.9		24	14.6
80	28	17,704	-75.7		23	8.2
70	27	18,479	-73.8		23	4.2
60	27	19,386	-70.5		23	2.9
50	27	20,484	-64.7		28	1.0
40	26	21,862	-60.9		31	1.3
30	25	23,671	-56.6		27	4.3
25	23	24,836	-54.4		27	5.9
20	22	26,276	-51.8		27	7.8
15	20	28,153	-48.5		27	7.9
10	14	30,878	-42.6		26	12.9
7	8	33,301	-40.2			

BUFFALO, N. Y. — 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	218	-.7	-3.2	25	2.2
1000	31	169				
950	31	579	-1.7	-5.7	25	4.7
900	31	1,008	-3.7	-7.6	26	7.4
850	31	1,458	-4.7	-10.1	27	10.0
800	31	1,935	-5.2	-14.9	27	11.7
750	31	2,441	-6.7	-18.5	28	15.2
700	31	2,978	-9.0	-20.9	28	18.5
650	31	3,549	-11.4	-24.3	28	21.5
600	31	4,159	-14.7	-27.3	28	23.5
550	31	4,813	-18.6	-31.3	28	26.2
500	31	5,518	-22.9	-35.0	28	28.6
450	31	6,283	-27.8	-38.3	28	32.1
400	31	7,120	-33.6	-43.7	27	33.9
350	31	8,048	-39.5	-47.4	27	36.4
300	31	9,085	-45.9		27	40.1
250	30	10,279	-52.8		27	42.2
200	30	11,697	-58.7		27	44.7
175	30	12,535	-59.5		28	40.7
150	28	13,504	-59.4		28	30.9
125	26	14,639	-59.7		28	26.9
100	25	16,025	-61.0		27	23.9
80	23	17,410	-61.5		28	17.9
70	23	18,240	-60.8		28	15.4
60	22	19,207	-61.5		28	14.9
50	22	20,339	-60.8		28	9.4
40	19	21,734	-60.8		27	7.6
30	16	23,537	-58.6		28	11.3
25	15	24,685	-57.7		29	11.3
20	14	26,081	-58.5			
15	12	27,895	-58.5			
10	8	30,467	-56.9			

CAPE HATTERAS, N. C. — 1022 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	4	13.0	9.6	34	1.5
1000	31	189	13.5	8.9	32	2.0
950	31	621	11.3	6.6	28	3.8
900	31	1,071	9.1	1.6	27	6.2
850	31	1,543	7.5	-3.0	27	8.5
800	31	2,041	5.7	-7.0	27	10.5
750	31	2,568	3.7	-11.0	28	12.6
700	31	3,125	1.5	-14.8	28	15.4
650	31	3,720	-1.1	-19.1	28	17.9
600	31	4,354	-4.7	-22.1	28	21.5
550	31	5,033	-9.0	-25.3	28	24.4
500	31	5,764	-13.9	-29.6	28	26.9
450	31	6,556	-19.5	-34.5	28	29.3
400	31	7,420	-25.7	-37.4	28	30.1
350	31	8,377	-32.7	-43.8	28	32.9
300	31	9,442	-40.9	-49.1	28	37.5
250	31	10,656	-50.5		29	40.8
200	31	12,078	-60.2		28	42.8
175	31	12,905	-63.3		28	40.0
150	31	13,848	-65.0		29	38.4
125	29	14,959	-67.1		28	33.2
100	29	16,298	-69.1		28	28.3
80	29	17,632	-69.1		28	22.3
70	29	18,432	-68.2		28	18.3
60	28	19,365	-66.0		29	10.8
50	26	20,475	-63.9		29	9.1
40	25	21,852	-61.3		29	6.8
30	25	23,653	-57.8		28	8.7
25	25	24,810	-55.4		28	11.2
20	21	26,244	-52.8		28	16.9
15	18	28,108	-49.2		27	21.8
10	13	30,798	-43.8		27	35.6

See reference note at end of table

RAWINSONDE DATA

Average monthly values

* CARIBOU, MAINE — 994 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	191	-13.4	-16.4	29	3.6
1000	31	142				
950	31	534	-12.2	-15.3	30	4.7
900	31	948	-12.5	-16.5	30	5.7
850	31	1,384	-12.4	-18.[illegible]	29	8.2
800	31	1,848	-12.9	-19.0	29	11.1
750	31	2,339	-14.2	-21.9	29	12.9
700	31	2,861	-16.0	-24.6	29	15.0
650	31	3,418	-18.0	-2[illegible]	29	16.8
600	31	4,013	-21.1	-30.5	29	19.2
550	31	4,650	-24.8	-34.[illegible]	29	2[illegible].7
500	31	5,338	-28.7	-39.5	29	25.5
450	31	6,085	-33.5	-40.7	29	28.0
400	31	6,902	-39.1	-44.[illegible]	28	29.7
350	31	7,810	-44.4	-48.5	29	34.5
300	30	8,822	-49.3		28	37.7
250	30	10,011	-51.8		29	42.4
200	30	11,452	-52.9		28	36.7
175	29	12,320	-53.1		29	32.9
150	29	13,310	-54.7		29	32.3
125	29	14,473	-55.7		28	29.6
100	28	15,898	-57.3		28	25.3
80	28	17,303	-59.0		28	22.5
70	28	18,140	-59.7		27	21.4
60	25	19,103	-60.1		27	20.6
50	24	20,239	-60.6		27	21.2
40	2[illegible]	21,633	-60.3		27	19.9
30	2[illegible]	23,426	-60.3		27	20.8
25	27	24,565	-59.7		27	23.2
20	25	25,957	-59.1		27	24.4
15	24	27,759	-60.0		27	29.6
10	2[illegible]	30,295	-56.9		26	38.4
7	15	32,551	-54.4		26	43.1
5	7	34,833	-50.7			

CHARLESTON, S. C. — 1021 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	13	12.4	10.2	35	.5
1000	31	189	13.3	10.4	28	.6
950	31	618	13.2	7.3	23	3.4
900	31	1,072	11.9	3.9	23	4.7
850	31	1,549	10.2	-1.[illegible]	25	5.5
800	31	2,052	8.4	-7.1	26	7.3
750	31	2,582	5.7	-11.[illegible]	26	8.5
700	31	3,144	3.6	-16.6	26	11.0
650	31	3,742	.6	-20.0	27	12.6
600	31	4,380	-3.2	-24.1	27	14.5
550	31	5,063	-7.6	-27.6	27	16.5
500	31	5,798	-12.4	-32.4	27	19.2
450	31	6,594	-17.9	-36.7	27	21.1
400	31	7,464	-24.4	-41.7	27	23.1
350	31	8,426	-31.5	-47.4	27	27.0
300	31	9,494	-40.2	-52.5	27	28.9
250	31	10,712	-50.0		28	30.7
200	31	12,137	-60.1		28	33.3
175	31	12,963	-63.9		29	33.6
150	31	13,902	-66.1		28	32.9
125	31	15,005	-68.0		28	30.4
100	30	16,336	-71.0		28	24.7
80	30	17,652	-72.0		28	17.9
70	31	18,442	-70.8		29	13.7
60	31	19,360	-68.8		29	9.2
50	30	20,462	-65.0		28	7.5
40	28	21,834	-61.8		29	7.2
30	27	23,633	-57.2		28	8.4
25	27	24,793	-54.6		28	11.6
20	24	26,232	-51.2		27	15.1
15	2[illegible]	28,117	-48.1		27	17.3
10	13	30,782	-45.1		26	27.4
7	5	33,165	-38.9			

CHATHAM, MASS. — 10[illegible]8 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	29	16	1.4	-1.4	29	2.8
1000	29	160	2.2	-2.9	29	4.5
950	29	573	.3	-4.9	29	8.1
900	29	1,005	-1.9	-7.8	30	9.4
850	29	1,459	-3.4	-11.7	29	11.8
800	29	1,938	-4.4	-14.3	29	14.3
750	29	2,445	-6.1	-16.4	29	17.7
700	29	2,982	-8.5	-18.8	28	19.9
650	29	3,555	-10.9	-21.1	28	22.5
600	29	4,167	-13.8	-25.1	29	25.7
550	29	4,823	-17.5	-29.4	29	29.2
500	29	5,531	-22.0	-33.7	29	31.2
450	29	6,299	-27.0	-37.7	29	35.4
400	29	7,138	-33.0	-42.[illegible]	28	38.7
350	29	8,067	-39.4	-46.4	28	42.6
300	29	9,104	-46.2		29	46.4
250	29	10,299	-52.5		29	49.4
200	29	11,728	-56.8		29	47.1
175	2[illegible]	12,568	-57.7		28	43.1
150	27	13,532	-58.4		28	36.8
125	26	14,678	-60.0		28	33.1
100	26	16,066	-61.5		28	27.7
80	24	17,452	-61.3		28	21.1
70	24	18,281	-61.2		28	18.4
60	23	19,233	-61.2		28	16.9
50	23	20,367	-60.9		27	14.0
40	2[illegible]	21,758	-59.9		28	14.1
30	2[illegible]	23,561	-58.5		27	13.5
25	21	24,707	-57.8		27	16.1
20	2[illegible]	26,115	-55.2		27	19.2
15	2[illegible]	27,957	-53.6		26	25.1
10	19	30,578	-50.1		26	35.7
7	14	32,906	-46.7			

CHIHUAHUA, MEXICO — 8[illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	1,428	5.3	-2.4	25	.7
1000	31	142				
950	31	572				
900	31	1,021				
850	31	1,491			25	.9
800	31	1,994	9.2	-1.4	23	5.9
750	31	2,527	7.0	-5.3	24	9.3
700	31	3,093	5.2	[illegible]	24	11.1
650	31	3,694	1.6	-13.2	24	11.8
600	31	4,334	-2.7	-17.1	24	13.7
550	31	5,018	-7.2	-21.0	24	15.5
500	31	5,754	-12.1	-25.6	24	17.7
450	31	6,551	-17.7	-29.9	24	19.9
400	31	7,423	-23.6	-34.5	24	20.7
350	31	8,387	-31.1	-39.9	24	22.3
300	31	9,458	-39.6	-46.2	24	24.7
250	31	10,680	-49.3		24	26.9
200	31	12,111	-58.9		24	25.9
175	30	12,942	-62.0		24	23.1
150	30	13,890	-64.6		24	25.2
125	31	15,001	-66.0		24	22.4
100	31	16,345	-68.6		24	19.3
80	29	17,683	-69.5		24	11.4
70	2[illegible]	18,480	-68.5		25	7.0
60	28	19,410	-66.4		25	4.0
50	28	20,522	-63.3		27	3.5
40	27	21,898	-60.4		29	1.3
30	27	23,710	-55.8		28	3.4
25	2[illegible]	24,877	-53.8		28	4.7
20	2[illegible]	26,316	-52.1		28	6.5
15	19	28,213	-48.5		27	7.3
10	10	30,926	-43.1			

* COLD BAY, ALASKA — 10[illegible]5 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	2[illegible]	30	-.[illegible]	-2.3	2[illegible]	3.7
1000	2[illegible]	69			25	5.5
950	2[illegible]	480	-.9	-5.1	25	6.6
900	2[illegible]	911	-2.5	-7.8	25	9.0
850	29	1,363	-4.5	-11.2	25	10.7
800	29	1,838	-7.1	-14.0	25	12.0
750	29	2,339	-9.7	-18.3	26	13.5
700	29	2,869	-12.6	-21.9	26	15.3
650	29	3,431	-16.1	-24.7	26	16.4
600	29	4,030	-19.6	-28.1	26	17.9
550	29	4,672	-23.0	-31.1	26	20.6
500	29	5,365	-27.2	-33.9	26	21.8
450	29	6,117	-31.8	-36.8	26	22.0
400	29	6,940	-37.4	-40.4	25	24.4
350	29	7,854	-42.9	-42.5	25	28.2
300	29	8,879	-48.1		25	29.6
250	29	10,068	-52.4		25	32.[illegible]
200	29	11,506	-53.2		26	28.7
175	29	12,366	-53.1		25	30.5
150	28	13,357	-52.9		25	21.0
125	28	14,532	-52.7		25	22.3
100	28	15,973	-52.6		25	15.9
80	27	17,409	-52.7		25	15.3
70	27	18,271	-53.4		26	15.0
60	25	19,267	-52.8			
50	2[illegible]	20,444	-52.5			
40	21	21,887	-51.6			
30	21	23,760	-50.7			
25	21	24,949	-50.4			
20	19	26,374	-51.6			
15	17	28,220	-53.1			
10	15	30,828	-55.6			
7	7	33,143	-59.1			

DAYTON, OHIO — 985 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	299	2.2	-.8	20	1.6
1000	31	171				
950	31	587	2.6	-1.5	23	4.5
900	31	1,025	2.3	-3.9	25	7.6
850	31	1,486	1.6	-7.9	26	10.7
800	31	1,974	.3	-11.8	25	13.0
750	31	2,490	-1.4	-14.5	26	15.1
700	31	3,038	-4.0	-16.6	26	17.7
650	31	3,619	-7.0	-21.1	26	20.6
600	31	4,240	-9.9	-22.7	26	23.4
550	31	4,907	-13.8	-26.2	26	26.5
500	31	5,625	-18.2	-30.7	26	29.6
450	31	6,405	-22.9	-35.0	26	32.9
400	31	7,258	-28.7	-39.4	27	36.8
350	31	8,204	-35.4	-44.2	27	42.1
300	31	9,258	-43.1	-47.8	26	44.9
250	30	10,471	-52.1		26	47.7
200	30	11,887	-60.5		27	49.5
175	30	12,715	-61.9		27	46.5
150	30	13,667	-62.5		27	40.5
125	30	14,790	-63.7		27	36.0
100	29	16,151	-64.4		27	30.3
80	26	17,514	-64.8		27	23.5
70	23	18,331	-64.0		27	19.0
60	22	19,283	-64.0		28	14.7
50	21	20,408	-62.9		28	13.5
40	21	21,786	-61.6		28	12.6
30	20	23,573	-59.5		29	10.1
25	20	24,718	-58.1		29	10.7
20	19	26,141	-56.3		28	13.0
15	17	27,970	-54.3		28	20.2
10	11	30,576	-48.7			

DEL RIO, TEXAS — 980 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	30	314	9.6	5.9	08	1.3
1000	30	146				
950	30	575	11.4	5.0	15	2.8
900	30	1,027	11.0	3.6	19	4.5
850	30	1,504	11.1	.5	21	5.5
800	30	2,010	10.8	-4.4	22	7.5
750	30	2,546	8.8	-9.1	23	9.2
700	30	3,113	5.0	-12.7	24	10.0
650	30	3,713	1.3	-17.5	24	11.3
600	30	4,352	-2.8	-20.9	24	13.7
550	30	5,035	-7.4	-24.4	24	15.1
500	30	5,771	-12.2	-28.6	24	16.8
450	30	6,568	-18.1	-33.6	24	18.3
400	30	7,437	-24.6	-39.1	24	20.5
350	30	8,398	-31.3	-45.5	24	23.1
300	30	9,469	-39.6	-51.8	24	25.8
250	30	10,691	-49.2		24	29.0
200	30	12,120	-59.4		25	29.9
175	30	12,949	-63.2		24	29.3
150	30	13,891	-65.9		25	27.9
125	30	14,995	-67.3		25	24.3
100	30	16,331	-70.1		24	19.8
80	30	17,650	-72.0		25	13.2
70	30	18,439	-70.6		25	8.3
60	30	19,359	-68.4		25	5.1
50	29	20,465	-64.1		26	3.4
40	29	21,840	-60.9		28	2.8
30	28	23,647	-56.7		28	5.4
25	26	24,810	-54.5		28	5.5
20	25	26,241	-52.6		28	3.4
15	24	28,114	-49.3		28	10.1
10	13	30,804	-43.2			

DENVER, COLO. — 834 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	1,611	-4.4	-9.1	19	2.0
1000	31	154				
950	31	569				
900	31	1,002				
850	31	1,457				
800	31	1,940	.1	-13.7	23	3.1
750	31	2,454	-2.5	-16.7	26	4.5
700	31	2,999	-5.5	-19.3	27	6.3
650	31	3,577	-8.7	-22.0	27	8.3
600	31	4,192	-12.5	-26.4	27	12.9
550	31	4,851	-16.8	-30.1	26	16.5
500	31	5,560	-21.6	-34.1	26	18.8
450	31	6,329	-26.5	-39.1	25	21.8
400	31	7,170	-32.3	-44.0	25	25.2
350	31	8,102	-38.9	-48.5	25	28.4
300	31	9,141	-45.8		25	30.0
250	31	10,338	-51.8		26	32.9
200	30	11,770	-56.6		25	33.1
175	29	12,607	-56.8		26	29.8
150	29	13,578	-59.0		26	27.6
125	29	14,718	-60.7		25	25.2
100	29	16,103	-61.5		26	19.6
80	28	17,488	-61.1		26	14.3
70	27	18,319	-61.0		26	10.9
60	2[illegible]	19,277	-61.0		27	9.8
50	26	20,415	-59.2		28	6.4
40	26	21,815	-58.8		30	4.6
30	25	23,629	-57.1		34	5.3
25	24	24,796	-56.6		34	8.0
20	21	26,235	-55.1		36	7.5
15	15	28,101	-53.3		35	12.8

DODGE CITY, KANS. — 924 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	791	-1.2	-3.9	24	1.5
1000	31	151				
950	31	554				
900	31	998	1.3	-5.2	22	2.5
850	31	1,460	3.2	-8.1	24	3.8
800	31	1,951	2.7	-11.1	24	5.7
750	31	2,472	.7	-14.1	25	8.0
700	31	3,023	-2.1	-17.3	25	10.6
650	31	3,608	-5.3	-21.2	25	14.7
600	31	4,232	-8.8	-24.6	25	18.2
550	31	4,902	-12.8	-28.6	25	22.6
500	31	5,622	-17.6	-32.9	25	25.4
450	31	6,402	-22.9	-36.9	25	29.5
400	31	7,255	-29.1	-41.7	25	33.0
350	31	8,199	-36.0	-48.2	25	36.9
300	31	9,249	-44.0		25	40.4
250	31	10,452	-51.9		25	43.0
200	31	11,875	-58.0		25	40.6
175	31	12,712	-59.8		25	38.4
150	31	13,672	-61.6		25	33.8
125	31	14,798	-63.1		26	30.4
100	31	16,165	-64.5		26	23.8
80	29	17,528	-64.8		26	17.8
70	27	18,343	-64.2		26	14.4
60	2[illegible]	19,290	-63.3		26	11.3
50	23	20,417	-62.0		28	6.8
40	21	21,801	-59.9		28	5.0
30	19	23,603	-58.2		30	5.7
25	18	24,747	-57.4		32	5.7
20	16	26,168	-54.9		30	7.2
15	11	28,059	-52.1		30	8.8

EL PASO, TEXAS — 882 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	1,193	3.0	-1.5	32	1.1
1000	31	164				
950	31	588				
900	31	1,031				
850	31	1,497	6.2	-3.0	30	1.7
800	31	1,993	4.7	-5.8	25	5.4
750	31	2,517	2.7	-9.6	25	9.4
700	31	3,073	.3	-13.5	25	11.6
650	31	3,664	-2.8	-18.0	25	13.7
600	31	4,294	-6.4	-21.2	25	16.6
550	31	4,969	-10.6	-25.2	25	19.3
500	31	5,695	-15.6	-30.3	24	20.8
450	31	6,483	-20.8	-34.3	24	24.2
400	31	7,343	-26.9	-39.2	24	27.1
350	31	8,295	-33.8	-45.0	24	30.8
300	31	9,355	-41.6	-49.9	24	32.9
250	31	10,570	-50.0		24	34.8
200	31	11,999	-58.7		24	34.8
175	31	12,833	-61.3		24	32.8
150	31	13,786	-63.0		25	30.2
125	31	14,903	-65.0		25	26.0
100	31	16,257	-66.9		24	18.9
80	30	17,600	-68.2		24	15.3
70	30	18,405	-66.2		25	11.7
60	27	19,344	-65.9		25	7.4
50	25	20,456	-63.4		26	4.5
40	25	21,836	-60.6		28	3.3
30	24	23,646	-56.8		31	2.4
25	23	24,807	-55.2		32	2.7
20	23	26,240	-52.8		32	4.7
15	17	28,114	-50.5		29	8.0
10	7	30,767	-46.4			

ELY, NEV. — 806 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	1,908	-10.5	-13.5	20	3.7
1000	31	219				
950	31	626				
900	31	1,051				
850	31	1,497				
800	31	1,967	-7.5	-10.8	19	3.2
750	31	2,472	-6.8	-11.0	20	1.9
700	31	3,009	-9.3	-15.1	26	3.7
650	31	3,580	-11.3	-18.6	27	6.1
600	31	4,191	-14.3	-23.1	28	8.3
550	31	4,845	-18.3	-27.6	27	9.9
500	31	5,550	-23.2	-32.7	27	11.1
450	31	6,314	-28.3	-37.7	27	12.7
400	31	7,148	-34.3	-41.3	27	14.9
350	31	8,073	-40.4	-45.4	27	16.8
300	31	9,108	-46.3		27	20.3
250	31	10,305	-51.4		27	23.2
200	31	11,739	-55.6		26	24.6
175	31	12,587	-56.6		26	22.3
150	31	13,562	-57.5		26	19.8
125	30	14,709	-58.5		26	17.9
100	28	16,095	-60.8		26	15.6
80	28	17,485	-59.8		26	12.1
70	2[illegible]	18,320	-59.4		27	7.6
60	28	19,285	-60.0		27	5.5
50	26	20,427	-58.7		29	3.1
40	26	21,830	-58.1		35	2.4
30	22	23,656	-56.4		01	3.4
25	22	24,816	-55.6		02	4.8
20	18	26,267	-54.2		03	5.2
15	16	28,133	-53.0		03	6.2
10	1[illegible]	30,789	-52.8			
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EMPALME, MEXICO — 1015 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	30	12	10.8	4.5	33	1.6
1000	30	134	14.8	3.5	34	2.4
950	30	569	15.3	1.3	33	3.5
900	30	1,025	13.1	-2.3	31	2.1
850	30	1,504	11.2	-5.5	26	3.0
800	30	2,008	9.2	-8.8	25	5.7
750	30	2,540	6.5	-11.7	25	7.5
700	30	3,103	3.5	-14.7	25	9.0
650	30	3,700	.4	-18.3	26	11.5
600	30	4,337	-3.6	-22.1	26	13.4
550	30	5,019	-8.2	-25.6	25	15.6
500	30	5,752	-12.9	-29.3	25	19.0
450	30	6,546	-18.7	-32.8	26	19.6
400	30	7,413	-25.1	-38.7	26	22.0
350	30	8,373	-32.1	-43.5	25	25.7
300	30	9,440	-40.4	-48.2	25	27.7
250	30	10,658	-49.9		24	31.4
200	29	12,089	-59.3		24	31.7
175	27	12,913	-61.8		24	29.1
150	25	13,863	-63.7		24	26.2
125	25	14,976	-65.8		24	24.1
100	24	16,320	-67.3		24	19.7
80	23	17,660	-68.6		24	13.2
70	2[illegible]	18,456	-67.6		24	11.8
60	20	19,388	-65.2		24	8.6
50	18	20,502	-62.8		26	4.6
40	17	21,886	-61.3		26	2.8
30	16	23,697	-57.0		28	3.0
25	16	24,857	-55.2		28	4.1
20	15	26,294	-52.3		27	6.4
15	12	28,195	-49.9		28	12.9
10	7	30,831	-44.0			

* FAIRBANKS, ALASKA — 995 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	135	-21.3	-25.1	23	.5
1000	31	96			09	.4
950	31	479	-16.7	-19.4	10	2.0
900	31	888	-14.4	-18.5	13	3.1
850	31	1,322	-13.9	-19.4	20	2.3
800	31	1,782	-14.7	-20.5	23	2.7
750	31	2,269	-17.0	-22.2	24	3.3
700	31	2,784	-19.3	-24.9	26	4.1
650	31	3,332	-22.5	-28.2	27	4.9
600	31	3,916	-25.9	-31.5	28	6.4
550	31	4,541	-30.0	-35.1	28	7.8
500	31	5,213	-34.5	-39.3	28	9.3
450	31	5,943	-38.9	-41.4	28	10.4
400	31	6,742	-44.3	-43.9	29	10.8
350	31	7,629	-49.6		29	13.0
300	31	8,626	-53.6		29	16.4
250	31	9,795	-54.3		29	18.2
200	31	11,229	-53.4		29	18.6
175	31	12,090	-52.9		28	18.9
150	31	13,084	-53.2		28	20.3
125	31	14,257	-53.8		28	22.4
100	31	15,690	-53.9		28	23.9
80	30	17,126	-54.4		28	25.6
70	30	17,982	-54.8		28	26.3
60	30	18,967	-55.2		28	28.2
50	30	20,129	-56.0		28	30.4
40	3[illegible]	21,548	-55.1		28	33.4
30	3[illegible]	23,376	-56.4		28	38.5
25	27	24,557	-56.1		28	41.0
20	25	25,991	-55.5		29	46.5
15	15	27,894	-54.7		29	52.9
10	8	30,609	-53.0			

FLINT, MICH. — 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	236	-1.4	-4.6	24	1.6
1000	31	158				
950	31	566	-2.5	-5.9	24	3.7
900	31	996	-2.4	-9.4	26	6.7
850	31	1,449	-3.4	-11.9	27	9.9
800	31	1,928	-3.7	-15.7	27	11.4
750	31	2,436	-5.7	-18.2	27	14.3
700	31	2,975	-8.3	-20.2	27	16.4
650	31	3,547	-11.1	-22.5	27	19.0
600	31	4,158	-14.4	-25.7	27	22.1
550	31	4,813	-17.9	-30.3	27	26.4
500	31	5,520	-22.4	-34.8	27	30.6
450	31	6,286	-27.2	-38.5	27	33.9
400	31	7,125	-32.8	-41.9	27	38.2
350	31	8,056	-38.9	-44.2	27	42.4
300	31	9,096	-45.2		27	50.3
250	31	10,294	-52.3		27	53.1
200	31	11,718	-58.0		27	49.0
175	31	12,557	-59.2		27	45.8
150	31	13,521	-59.9		27	41.5
125	2[illegible]	14,661	-59.8		27	34.2
100	2[illegible]	16,056	-59.9		27	29.2
80	2[illegible]	17,445	-61.2		27	21.4
70	25	18,270	-61.3		28	19.4
60	2[illegible]	19,225	-61.3		28	18.4
50	21	20,352	-61.0		28	15.7
40	2[illegible]	21,747	-60.1		29	14.7
30	18	23,541	-60.8		29	13.2
25	17	24,685	-59.6		29	15.1
20	15	26,095	-58.3			
15	1[illegible]	27,931	-56.7			
10	[illegible]	30,486	-57.0			

FORT WORTH, TEXAS — 996 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point *	Resultant Wind Direction	Resultant Wind Speed M.P.S.
SURFACE	31	180	8.3	4.3	22	.8
1000	31	148			01	.8
950	31	573	8.9	2.3	23	4.7
900	31	1,022	9.9	-1.8	23	6.7
850	31	1,497	9.4	-4.2	23	7.8
800	31	1,999	8.4	-6.0	24	9.3
750	31	2,530	6.3	-9.4	24	10.8
700	31	3,093	3.6	-13.1	24	12.6
650	31	3,691	.5	-16.8	25	14.5
600	31	4,329	-3.4	-20.5	25	16.0
550	31	5,011	-7.9	-25.4	25	18.0
500	31	5,745	-12.6	-28.3	25	21.0
450	31	6,541	-18.0	-31.8	24	24.2
400	31	7,410	-24.7	-37.4	24	27.6
350	31	8,371	-31.8	-43.0	24	29.9
300	31	9,440	-40.1	-50.8	24	32.9
250	31	10,659	-49.5		25	36.1
200	30	12,093	-58.8		25	38.3
175	29	12,920	-62.4		25	37.2
150	28	13,866	-64.7		25	35.0
125	28	14,978	-65.5		25	29.0
100	28	16,325	-68.4		25	24.2
80	27	17,658	-68.9		26	17.5
70	2[illegible]	18,455	-68.4		26	12.6
60	2[illegible]	19,383	-66.6		26	8.0
50	2[illegible]	20,496	-63.5		27	4.8
40	2[illegible]	21,875	-61.0		29	3.0
30	2[illegible]	23,679	-57.1		31	4.2
25	23	24,841	-55.7		30	5.1
20	23	26,270	-53.5		29	8.4
15	2[illegible]	28,122	-51.2		28	11.8
10	9	30,743	-47.9			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

GLASGOW, MONT. 931 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	696	-13.7	-17.6	10	1.0
1000	31	148				
950	31	541				
900	31	955	-10.6	-13.4	27	2.6
850	31	1,397	-8.4	-14.0	28	6.6
800	31	1,868	-7.8	-15.3	28	8.7
750	31	2,368	-10.2	-18.9	28	10.2
700	31	2,897	-13.3	-21.9	28	11.6
650	31	3,458	-16.5	-24.7	28	12.7
600	31	4,055	-20.3	-28.4	28	14.9
550	31	4,695	-24.0	-31.5	28	16.4
500	31	5,385	-28.2	-35.7	29	17.6
450	31	6,133	-33.5	-39.9	29	18.7
400	31	6,950	-39.4	-43.7	29	18.5
350	31	7,855	-45.6		29	20.7
300	31	8,865	-51.5		28	23.1
250	31	10,040	-54.3		28	25.9
200	31	11,469	-53.8		28	25.0
175	30	12,331	-53.3		27	22.1
150	30	13,322	-54.0		27	21.4
125	30	14,491	-54.6		27	20.8
100	30	15,915	-56.0		28	18.3
80	30	17,333	-56.8		28	17.0
70	30	18,178	-57.4		28	17.8
60	30	19,153	-57.4		29	17.4
50	30	20,306	-57.4		29	15.4
40	29	21,714	-57.6		30	14.7
30	28	23,524	-57.8		31	14.8
25	27	24,673	-58.6		31	17.2
20	27	26,074	-59.2		31	19.7
15	[illegible]	27,918	-59.9		32	18.5
10	7	30,468	-57.9			

GRAND JUNCTION, COLO. 852 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,472	-5.5	-8.3	12	2.1
1000	31	199				
950	31	611				
900	31	1,041				
850	31	1,493			12	3.0
800	31	1,972	-4.4	-10.0	17	2.8
750	31	2,479	-6.1	-10.9	21	4.3
700	31	3,017	-8.8	-14.3	23	7.2
650	31	3,588	-11.3	-18.8	25	9.3
600	31	4,199	-14.7	-22.6	25	11.7
550	31	4,853	-18.3	-27.1	26	14.7
500	31	5,559	-22.8	-31.3	25	16.5
450	31	6,324	-27.8	-36.4	26	18.0
400	31	7,161	-33.3	-42.4	26	20.9
350	31	8,090	-39.1	-44.7	26	24.8
300	31	9,130	-45.5		26	27.8
250	31	10,329	-51.3		26	31.3
200	31	11,764	-55.7		25	31.5
175	29	12,615	-57.1		26	30.7
150	29	13,590	-57.4		25	27.1
125	29	14,739	-58.9		25	22.9
100	29	16,131	-61.5		26	18.6
80	26	17,513	-62.4		26	15.8
70	25	18,338	-61.6		26	13.1
60	24	19,295	-61.1		27	10.3
50	21	20,430	-59.2		27	5.5
40	20	21,834	-58.5		30	3.8
30	18	23,657	-56.2		35	3.8
25	15	24,828	-55.2		35	6.0
20	14	26,263	-53.0		33	8.2
15	8	28,152	-50.9			
10						

*** GREAT FALLS, MONT. 882 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	1,118	-8.0	-13.9	23	6.2
1000	31	126				
950	31	532				
900	31	956				
850	31	1,403	-6.2	-14.5	24	9.7
800	31	1,876	-7.3	-14.9	25	11.3
750	31	2,379	-8.6	-16.0	26	12.7
700	31	2,910	-11.9	-19.1	27	13.1
650	31	3,474	-14.9	-22.8	27	14.5
600	31	4,076	-18.3	-26.3	28	14.8
550	31	4,721	-22.4	-30.2	28	16.5
500	31	5,414	-27.3	-35.7	28	16.6
450	31	6,164	-32.8	-37.9	28	17.6
400	31	6,983	-38.8	-41.5	28	20.0
350	31	7,890	-44.9		27	22.7
300	31	8,903	-51.2		27	23.2
250	31	10,078	-54.2		28	26.0
200	31	11,507	-55.0		27	24.0
175	31	12,363	-53.8		27	23.5
150	30	13,351	-54.0		27	17.9
125	30	14,519	-54.8		27	18.3
100	30	15,943	-55.3		28	15.8
80	29	17,359	-55.9		28	13.6
70	28	18,203	-56.4		28	13.2
60	25	19,182	-56.8		29	12.5
50	24	20,334	-56.9		29	11.1
40	23	21,755	-55.9		30	11.3
30	21	23,594	-56.4		32	9.6
25	21	24,751	-56.6		32	13.1
20	18	26,206	-55.4		35	13.9
15	10	28,099	-55.6		36	20.3
10	5	30,722	-55.3			

GREEN BAY, WIS. 991 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	25	210	-4.4	-6.7	28	1.4
1000	25	137				
950	25	542	-5.1	-6.9	26	3.0
900	25	966	-5.5	-9.1	26	4.5
850	25	1,415	-5.4	-11.2	27	7.3
800	25	1,890	-6.6	-13.4	27	10.1
750	25	2,393	-8.2	-16.9	27	12.0
700	25	2,926	-10.7	-21.0	27	13.9
650	25	3,493	-13.4	-24.2	27	17.1
600	25	4,099	-16.7	-27.1	27	20.0
550	25	4,748	-20.4	-31.0	26	23.8
500	25	5,448	-24.8	-34.5	26	27.0
450	25	6,207	-29.5	-38.8	26	29.8
400	25	7,039	-34.8	-42.2	26	33.9
350	25	7,963	-40.4	-45.0	26	40.4
300	25	8,997	-46.6		26	44.4
250	25	10,190	-52.5		26	43.8
200	24	11,619	-56.4		26	44.5
175	24	12,464	-57.6		26	36.3
150	24	13,436	-58.5		26	33.0
125	24	14,581	-58.8		27	29.0
100	23	15,979	-60.2		27	24.3
80	23	17,365	-61.6		27	25.2
70	23	18,192	-62.2		27	23.6
60	23	19,146	-62.0		28	18.6
50	22	20,283	-61.3		28	15.1
40	21	21,677	-61.7		29	16.4
30	20	23,455	-61.8		29	14.4
25	19	24,589	-61.2		29	16.8
20	17	25,956	-61.5		29	19.8
15	15	27,741	-60.9		29	24.5
10	10	30,308	-58.5			

GREENSBORO, N. C. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	275	6.2	2.7	32	.7
1000	31	191				
950	31	614	8.0	1.1	27	2.0
900	31	1,061	7.8	-.2	25	5.5
850	31	1,531	6.7	-5.1	26	7.7
800	31	2,028	5.7	-9.6	26	10.4
750	31	2,554	3.5	-14.4	27	12.7
700	31	3,111	.7	-17.5	27	15.3
650	31	3,704	-1.7	-19.9	27	18.6
600	31	4,337	-5.1	-22.9	27	21.1
550	31	5,015	-9.5	-26.4	27	24.1
500	31	5,744	-14.3	-31.1	27	27.3
450	31	6,534	-19.8	-35.6	27	29.6
400	31	7,398	-26.2	-39.1	27	32.3
350	31	8,353	-33.1	-44.3	28	33.0
300	31	9,416	-41.1	-48.3	28	36.3
250	31	10,629	-50.8		28	38.9
200	30	12,045	-60.5		28	39.2
175	30	12,871	-63.4		28	39.0
150	30	13,813	-65.2		28	35.5
125	30	14,921	-66.2		28	32.8
100	30	16,268	-68.4		28	27.5
80	30	17,603	-69.2		28	19.6
70	30	18,403	-68.2		28	15.6
60	29	19,332	-65.7		28	11.8
50	28	20,447	-63.8		28	11.5
40	28	21,823	-61.5		29	8.5
30	27	23,623	-57.9		28	9.6
25	27	24,778	-55.9		28	10.9
20	26	26,207	-53.2		28	13.7
15	23	28,083	-49.7		27	18.8
10	15	30,781	-44.6		27	31.0

GUADALUPE IS., MEXICO 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	23	13.6	10.2	34	4.5
1000	31	158	12.9	5.7	34	5.9
950	31	588	10.2	3.0	32	4.9
900	31	1,036	9.1	-2.8	30	3.9
850	31	1,508	7.6	-8.5	28	4.9
800	31	2,007	6.9	-12.6	28	5.7
750	31	2,536	5.4	-16.2	28	7.1
700	31	3,096	2.3	-17.8	28	7.6
650	31	3,692	-.7	-20.4	28	9.4
600	31	4,327	-4.3	-24.9	26	10.6
550	31	5,007	-8.5	-28.7	26	11.6
500	31	5,739	-14.0	-32.5	27	12.1
450	31	6,531	-19.6	-36.7	26	16.7
400	31	7,394	-26.2	-42.1		
350	31	8,349	-33.6	-47.1		
300	31	9,408	-42.0	-48.8		
250	31	10,619	-51.1			
200	31	12,043	-59.2			
175	31	12,875	-61.1			
150	29	13,830	-62.7			
125	27	14,951	-64.9			
100	25	16,305	-66.3			
80	[illegible]	17,650	-65.6			
70	21	18,466	-63.5			
60	21	19,414	-63.1			
50	21	20,540	-61.3			
40	21	21,934	-58.2			
30	20	23,759	-55.2			
25	19	24,928	-53.5			
20	18	26,380	-50.4			
15	[illegible]	28,248	-48.2			
10	5	30,915	-45.0			
7						

*** GUAM, MARIANA IS. 999 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	111	25.5	22.4	08	5.9
1000	31	98				
950	31	550	22.8	20.2	08	13.5
900	31	1,020	19.6	17.1	08	13.3
850	31	1,511	17.0	11.6	08	12.2
800	31	2,028	15.7	4.1	08	11.2
750	31	2,574	13.8	-4.6	08	11.2
700	31	3,152	11.2	-11.5	08	12.1
650	31	3,766	7.7	-16.0	08	12.0
600	31	4,421	3.7	-20.3	09	12.2
550	31	5,121	-.4	-24.1	09	12.4
500	31	5,876	-5.3	-28.2	09	12.9
450	31	6,695	-10.5	-32.8	09	12.1
400	31	7,590	-16.9	-38.0	09	11.4
350	31	8,582	-23.9	-43.5	08	9.5
300	31	9,686	-32.1	-49.6	08	7.7
250	31	10,946	-42.0		07	4.9
200	31	12,420	-53.6		08	2.6
175	31	13,265	-60.3		08	2.3
150	30	14,210	-68.0		10	3.4
125	28	15,286	-75.2		11	4.9
100	26	16,554	-83.4		11	9.8
80	23	17,793	-82.2		10	9.4
70	23	18,551	-75.8		11	5.6
60	21	19,455	-69.2		11	.9
50	21	20,558	-64.5		24	1.7
40	20	21,935	-60.7		27	2.0
30	19	23,744	-55.8		33	.9
25	19	24,914	-52.5		07	2.0
20	18	26,367	-49.5		08	5.5
15	18	28,264	-46.7		08	8.8
10	17	30,979	-42.6		09	12.1
7	14	33,411	-38.8		09	16.2

HILO, HAWAII 1016 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	10	19.3	16.8	24	1.5
1000	31	143	20.1	17.0	18	.9
950	31	585	17.1	15.0	11	3.9
900	31	1,045	14.0	12.1	11	4.7
850	31	1,525	10.6	9.1	11	4.8
800	31	2,029	8.2	5.3	11	5.0
750	31	2,561	6.4	-7.7	11	5.7
700	31	3,125	4.7	-15.3	11	5.7
650	31	3,726	1.8	-18.8	11	5.2
600	31	4,367	-2.0	-21.9	10	3.7
550	31	5,053	-6.1	-24.6	09	1.8
500	31	5,792	-11.1	-29.6	35	.6
450	31	6,593	-16.3	-34.6	31	3.7
400	31	7,468	-22.5	-40.8	31	7.5
350	31	8,438	-29.2	-45.5	29	14.3
300	31	9,519	-37.0	-51.3	29	20.5
250	31	10,756	-46.2		28	26.4
200	31	12,205	-56.7		29	30.8
175	31	13,041	-61.9		29	30.0
150	31	13,982	-67.0		29	25.1
125	31	15,071	-71.5		29	20.7
100	31	16,375	-75.0		31	12.3
80	31	17,669	-74.5		34	5.4
70	31	18,452	-71.3		03	3.1
60	31	19,372	-67.5		08	1.3
50	31	20,482	-63.1		32	.6
40	29	21,863	-59.6		30	1.0
30	29	23,683	-54.8		05	1.7
25	27	24,860	-52.4		06	1.4
20	27	26,311	-50.1		08	1.4
15	25	28,197	-48.1		15	1.3
10	25	30,900	-43.8		17	1.8
7	21	33,312	-39.3			
	5	35,590	-40.3			

HUNTINGTON W. VA. 992 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	246	5.7	1.0	21	.9
1000	31	177				
950	31	598	6.3	.8	23	4.4
900	31	1,041	5.0	-1.8	24	8.5
850	31	1,507	3.9	-4.2	25	11.1
800	31	1,999	2.8	-8.2	26	13.8
750	31	2,520	1.2	-11.0	26	16.0
700	31	3,072	-1.8	-15.1	26	17.9
650	31	3,659	-4.5	-19.9	27	21.0
600	31	4,286	-7.7	-23.8	27	24.1
550	31	4,957	-11.4	-26.2	27	27.8
500	31	5,682	-16.0	-29.9	27	31.0
450	31	6,468	-21.3	-33.7	27	33.8
400	31	7,327	-27.1	-37.7	27	36.9
350	31	8,278	-34.0	-43.7	27	40.5
300	31	9,338	-41.9	-50.3	27	45.1
250	31	10,548	-51.1		27	47.7
200	31	11,969	-59.9		27	49.6
175	31	12,798	-62.2		27	46.2
150	30	13,748	-62.6		27	40.9
125	30	14,867	-64.5		27	35.4
100	30	16,227	-65.7		27	28.4
80	30	17,582	-65.7		28	22.0
70	29	18,396	-65.5		28	17.8
60	28	19,337	-63.6		28	13.9
50	27	20,455	-62.8		28	12.0
40	25	21,839	-61.0		29	10.7
30	23	23,630	-59.1		30	8.8
25	23	24,778	-57.2		29	10.0
20	22	26,200	-54.2		29	14.1
15	21	28,056	-52.6		28	18.0
10	15	30,686	-49.8			

*** INTERNATIONAL FALLS, MINN. 973 MB**

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	359	-13.7	-16.8	22	1.6
1000	31	147				
950	31	538	-13.4	-16.1	24	3.5
900	31	951	-12.0	-14.6	25	6.1
850	31	1,389	-11.0	-15.9	26	7.0
800	31	1,855	-11.3	-18.5	27	8.4
750	31	2,349	-12.5	-20.5	27	9.8
700	31	2,874	-14.7	-24.0	27	11.0
650	31	3,432	-17.7	-25.5	27	12.5
600	31	4,027	-20.8	-28.5	27	14.0
550	31	4,666	-24.8	-32.8	27	16.1
500	31	5,353	-29.4	-37.0	27	17.2
450	31	6,097	-34.6	-40.4	27	19.6
400	31	6,910	-40.5	-44.1	27	22.2
350	31	7,812	-46.2		27	25.7
300	31	8,823	-50.4		27	27.6
250	31	10,003	-53.2		27	27.5
200	31	11,436	-54.0		27	28.9
175	31	12,292	-54.4		27	27.9
150	31	13,279	-55.0		27	27.2
125	30	14,442	-55.6		27	25.1
100	29	15,860	-56.6		28	23.3
80	28	17,271	-57.6		28	20.7
70	28	18,113	-58.4		28	17.6
60	27	19,089	-58.7		29	16.3
50	24	20,247	-58.6		29	16.1
40	22	21,669	-58.8		30	15.5
30	18	23,489	-58.8		31	12.9
25	16	24,650	-59.2		31	15.1
20	10	26,138	-58.9			
15	6	27,954	-61.6			

JACKSON, MISS. 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	100	12.1	10.4	16	1.5
1000	31	165	11.5	8.9	15	2.0
950	31	596	12.2	7.7	19	5.1
900	31	1,049	11.5	3.4	22	6.5
850	31	1,527	10.7	.3	23	8.7
800	31	2,031	9.0	-3.4	24	10.2
750	31	2,564	7.1	-7.7	24	12.3
700	31	3,128	4.1	-12.5	24	13.1
650	31	3,727	.8	-15.7	25	13.7
600	31	4,366	-2.8	-19.7	25	15.0
550	31	5,050	-7.1	-23.8	25	16.9
500	31	5,786	-12.0	-28.0	26	18.6
450	31	6,584	-17.4	-34.2	26	20.6
400	31	7,455	-24.0	-39.6	26	22.7
350	31	8,419	-31.1	-45.3	25	24.7
300	31	9,491	-39.5	-51.1	26	27.7
250	31	10,712	-49.5		26	30.8
200	31	12,139	-60.0		26	34.7
175	[illegible]	12,966	-63.4		26	34.2
150	[illegible]	13,909	-65.7		26	33.4
125	[illegible]	15,010	-68.1		26	31.0
100	[illegible]	16,339	-70.5		26	22.9
80	[illegible]	17,657	-72.5		26	16.8
70	[illegible]	18,444	-71.1		26	12.9
60	[illegible]	19,362	-68.1		27	9.1
50	22	20,463	-65.7		28	5.4
40	21	21,833	-62.3		28	5.3
30	[illegible]	23,623	-59.2		28	6.4
25	[illegible]	24,774	-56.4		28	9.0
20	[illegible]	26,193	-54.5		28	12.1
15	[illegible]	28,046	-51.7		27	15.7
10	16	30,705	-47.1		26	24.6
7	[illegible]	33,183	-40.2			

JOHN F. KENNEDY INT. AP NY 1021 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	5	4.4	-2.4	30	3.0
1000	30	173	3.5	-3.5	30	4.4
950	30	588	1.5	-4.4	29	7.9
900	30	1,022	.2	-6.5	28	11.2
850	30	1,480	-1.5	-9.0	28	13.1
800	30	1,963	-2.4	-11.7	29	15.4
750	30	2,473	-4.2	-14.8	28	18.4
700	30	3,016	-6.1	-17.7	28	21.2
650	30	3,593	-8.8	-22.1	28	25.1
600	30	4,210	-11.7	-24.5	28	28.5
550	30	4,872	-15.5	-28.7	28	31.6
500	30	5,585	-20.4	-31.8	28	34.6
450	30	6,357	-25.4	-36.0	28	36.6
400	30	7,202	-31.1	-40.7	28	40.9
350	30	8,138	-37.6	-43.8	29	45.5
300	30	9,184	-44.4	-51.4	29	51.3
250	30	10,385	-52.1		29	56.9
200	30	11,807	-58.1		29	56.6
175	30	12,644	-60.3		29	50.7
150	29	13,608	-60.7		29	42.0
125	29	14,739	-61.9		28	38.7
100	28	16,117	-62.9		28	31.8
80	28	17,488	-64.0		29	24.0
70	27	18,308	-63.3		28	20.0
60	27	19,259	-62.2		28	13.0
50	26	20,386	-61.8		28	11.3
40	24	21,775	-61.1		28	10.7
30	23	23,570	-59.4		27	12.6
25	[illegible]	24,715	-57.9		27	15.0
20	20	26,128	-56.5		27	18.6
15	20	27,966	-54.1		27	24.2
10	14	30,609	-47.6			

JOHNSTON IS., PACIFIC AREA 1011 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	3	24.7	20.5	10	6.4
1000	31	99	23.8	19.9	10	6.6
950	31	546	20.2	17.7	10	7.7
900	31	1,012	17.2	13.7	11	7.3
850	31	1,498	14.6	9.3	11	5.8
800	31	2,010	12.4	5.2	12	4.4
750	31	2,549	9.7	-1.8	13	2.8
700	31	3,120	7.3	-10.9	15	1.7
650	31	3,726	4.1	-15.8	19	1.1
600	31	4,372	.5	-20.0	25	2.0
550	31	5,065	-3.6	-22.2	28	3.1
500	31	5,811	-8.4	-25.8	28	4.0
450	31	6,620	-14.2	-27.9	28	6.5
400	31	7,503	-20.2	-33.1	27	8.6
350	31	8,483	-26.6	-40.0	27	11.0
300	31	9,576	-34.2	-46.5	26	16.9
250	31	10,828	-43.4		26	23.2
200	30	12,291	-54.5		26	26.1
175	30	13,134	-60.4		27	25.3
150	30	14,081	-66.7		27	20.5
125	26	15,168	-73.0		28	13.7
100	26	16,455	-78.2		30	8.4
80	23	17,726	-78.1		34	1.9
70	23	18,495	-75.1		03	1.1
60	19	19,402	-69.1		04	1.2
50	19	20,507	-64.0		13	.3
40	19	21,887	-60.4		30	.7
30	18	23,707	-54.7		16	.2
25	16	24,882	-51.8		07	1.5
20	16	26,337	-49.5		07	4.7
15	13	28,233	-47.1		10	6.0
10	10	30,932	-44.6		15	4.8
7	8	33,365	-38.6			

KEY WEST, FLA. 1018 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	3	23.1	20.0	08	4.4
1000	30	160	23.1	19.2	08	5.9
950	30	606	19.8	16.1	10	6.1
900	30	1,071	16.8	12.4	11	5.5
850	30	1,557	14.1	7.1	12	3.9
800	30	2,067	12.7	-1.1	13	3.6
750	30	2,607	10.8	-8.4	13	3.2
700	30	3,179	8.3	-11.2	13	2.6
650	30	3,788	5.3	-14.4	11	1.5
600	30	4,437	1.6	-18.6	11	1.8
550	30	5,132	-2.9	-23.5	29	.9
500	30	5,880	-8.1	-27.5	30	1.7
450	30	6,689	-14.1	-32.9	29	3.4
400	30	7,571	-21.0	-38.0	28	3.9
350	30	8,545	-28.8	-44.6	27	5.6
300	30	9,625	-37.8	-51.6	27	5.8
250	29	10,855	-47.6		27	9.1
200	29	12,298	-57.2		27	14.6
175	27	13,131	-61.5		27	16.0
150	26	14,076	-65.6		27	17.2
125	25	15,177	-69.3		27	14.5
100	25	16,488	-75.6		27	8.0
80	24	17,774	-76.6		29	3.4
70	22	18,545	-74.5		33	2.0
60	22	19,452	-69.6		01	1.7
50	22	20,556	-63.6		35	2.0
40	18	21,937	-58.4		31	2.5
30	18	23,770	-53.2		28	4.4
25	18	24,950	-51.1		27	5.4
20	13	26,416	-47.9			
15	11	28,338	-42.9			
10	8	31,096	-38.9			

KING SALMON, ALASKA 1005 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	15	-7.4	-10.7	16	1.5
1000	31	52			22	.8
950	31	454	-6.3	-9.0	21	5.0
900	31	877	-7.2	-10.2	24	5.7
850	31	1,322	-8.0	-11.9	25	6.8
800	31	1,792	-9.8	-15.0	26	8.7
750	31	2,288	-12.3	-18.5	26	10.3
700	31	2,812	-15.1	-20.8	26	11.8
650	31	3,370	-17.7	-24.0	26	13.1
600	31	3,965	-21.2	-27.7	27	14.4
550	31	4,602	-25.3	-31.4	27	14.8
500	31	5,289	-29.6	-36.3	27	17.4
450	31	6,033	-34.6	-38.0	27	17.8
400	31	6,846	-40.2	-39.7	27	18.7
350	31	7,750	-45.2	-43.7	27	20.7
300	31	8,768	-48.6		27	22.8
250	31	9,960	-50.8		27	25.3
200	31	11,410	-51.8		27	23.5
175	31	12,276	-51.4		27	22.1
150	31	13,276	-52.0		27	19.5
125	31	14,456	-52.6		27	20.1
100	30	15,906	-51.8		27	19.0
80	29	17,352	-52.6		27	17.8
70	28	18,214	-52.7		27	18.2
60	28	19,209	-52.5		27	16.5
50	27	20,390	-52.1		28	17.6
40	27	21,838	-51.4		28	18.5
30	26	23,716	-50.1		28	20.0
25	26	24,908	-50.0		28	22.0
20	25	26,353	-50.3		29	25.4
15	20	28,214	-52.1		29	29.5
10	8	30,978	-51.0			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

Standard pressure surface (mb)	KOROR, CAROLINE IS. 1006 MB						KOTZEBUE, ALASKA 1009 MB						[illegible] 1009 MB						LAKE CHARLES, LA. 1017 MB						LANDER, WYO. 854 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	30	27.8	24.5	08	4.3	30	5	-8.6	-22.0	09	6.6	3	4	26.6	22.6	06	6.5	31	5	14.5	13.4	07	1.4	31	1,697	-8.5	-14.0	17	2.3
1000	31	80	27.3	22.8	08	4.6	30	66			10	8.4	3	75	25.8	21.1	06	7.4	31	152	14.2	12.1	11	2.3	31	766				
950	31	533	24.1	19.8	08	8.4	30	454	-1.4	-18.6	12	8.7	3	525	21.6	19.3	06	9.7	31	586	13.8	10.5	17	4.6	31	575				
900	31	1,005	21.1	16.0	08	9.6	30	864	-1.3	-18.3	14	8.6	3	993	18.3	15.4	07	9.7	31	1,042	13.0	7.5	20	6.2	31	1,002				
850	31	1,489	18.1	11.9	09	9.5	30	1,297	-1.6	-19.0	15	5.6	3	1,482	16.1	10.8	07	8.5	31	1,522	12.1	2.2	23	8.8	31	1,450				
800	31	2,017	16.0	6.5	09	9.6	30	1,756	-16.0	-20.6	16	4.9	3	1,996	14.1	3.7	07	6.8	31	2,030	10.5	-1.4	23	9.9	31	1,924	-4.8	-18.0	24	1.7
750	31	2,564	13.3	1.9	09	9.9	30	2,240	-17.8	-21.8	16	4.3	3	2,540	12.5	-1.1	07	5.4	31	2,565	7.9	-3.9	23	11.0	31	2,431	-5.4	-18.5	26	4.0
700	31	3,141	10.1	-3.3	09	10.5	30	2,754	-20.0	-26.0	17	3.4	3	3,116	9.2	-6.3	08	4.7	31	3,131	5.3	-10.1	24	10.9	31	2,968	-9.1	-20.6	26	8.0
650	31	3,754	6.8	-7.8	09	10.9	30	3,301	-23.0	-30.0	19	2.8	3	3,727	6.1	-12.1	08	5.7	31	3,733	1.7	-13.0	24	11.7	31	3,537	-13.7	-23.3	27	10.9
600	31	4,407	3.1	-12.5	10	11.8	30	3,884	-26.3	-33.6	20	3.7	3	4,378	2.9	-16.6	09	6.5	31	4,373	-2.2	-18.1	24	12.7	31	4,144	-18.2	-26.9	28	13.6
550	31	5,137	-1.0	-16.8	10	12.6	30	4,508	-36.0	-37.7	24	4.1	3	5,075	-1.6	-22.1	07	11.5	31	5,059	-6.3	-22.9	24	13.5	31	4,794	-23.4	-31.2	28	14.6
500	31	5,861	-5.6	-21.2	10	14.2	30	5,181	-34.1	-41.3	25	5.2	3	5,828	-6.3	-28.1	07	11.0	31	5,798	-11.1	-28.5	24	15.4	31	5,493	-29.3	-36.0	27	15.1
450	31	6,680	-13.2	-27.4	10	14.5	30	5,912	-39.0	-41.2	25	5.9	3	6,664	-11.1	-29.6	06	10.3	31	6,598	-16.7	-33.1	24	17.6	31	6,250	-36.6	-40.7	27	17.3
400	31	7,578	-15.9	-32.6	10	12.6	30	6,711	-44.2	-41.9	26	8.0	3	7,539	-16.6	-33.9	06	7.3	31	7,471	-23.2	-38.6	25	20.0	31	7,076	-36.5	-42.8	27	19.3
350	31	8,574	-22.4	-39.1	09	9.0	30	7,598	-49.5		26	9.0	3	8,529	-23.5	-40.0	04	3.8	31	8,438	-30.3	-44.8	25	21.3	31	7,992	-42.5	-46.8	27	22.0
300	31	9,685	-30.8	-46.5	09	7.7	30	8,594	-54.2		25	10.4	3	9,637	-32.2	-46.6	29	2.5	31	9,513	-39.0	-50.9	25	23.3	31	9,019	-47.7		27	26.8
250	3	10,951	-41.2		10	7.7	30	9,758	-55.6		25	13.3	3	10,897	-42.2	-55.3	27	6.0	31	10,737	-49.0		25	24.3	31	10,209	-52.5		27	27.7
200	30	12,428	-53.4		10	8.3	30	11,186	-53.9		26	17.1	3	12,367	-54.4	-65.4	26	7.2	31	12,168	-58.9		25	28.9	31	11,641	-55.7		27	23.6
175	30	13,274	-60.4		11	9.6	30	12,044	-54.0		26	18.4	3	13,208	-61.3		26	7.1	31	12,997	-63.5		25	29.1	31	12,491	-55.9		27	23.5
150	30	14,217	-68.3		11	11.2	30	13,034	-53.7		26	20.0	3	14,148	-68.6		27	5.6	29	13,938	-65.9		25	29.1	31	13,471	-56.6		27	20.7
125	27	15,290	-76.5		10	13.5	29	14,200	-54.2		26	22.2	3	15,217	-77.3		32	3.6	29	15,039	-68.1		25	26.0	31	14,624	-58.3		26	17.6
100	27	16,549	-83.1		10	15.9	29	15,630	-54.7		26	25.8	3	16,469	-84.9		05	6.4	29	16,375	-71.6		25	19.2	31	16,025	-59.3		26	16.4
80	27	17,798	-77.9		09	7.2	29	17,055	-55.0		26	28.9	3	17,701	-82.5		08	7.2	29	17,689	-72.8		26	12.4	31	17,423	-59.4		27	10.8
70	27	18,575	-71.8		32	1.1	29	17,908	-55.1		26	30.2	3	18,460	-75.8		28	.7	29	18,476	-72.2		26	8.6	31	18,259	-59.6		28	8.8
60	27	19,495	-67.0		28	5.8	29	18,910	-53.9		26	31.3	3	19,367	-69.4		28	6.1	29	19,394	-68.3		26	5.8	31	19,223	-59.5		28	9.0
50	27	20,607	-62.8		27	6.7	29	20,085	-54.3		26	36.6	3	20,466	-65.3		28	7.8	29	20,499	-64.5		28	4.9	31	20,366	-59.0		29	7.3
40	26	21,997	-58.9		28	5.8	29	21,531	-53.9		26	40.3	3	21,839	-61.0		27	6.5	29	21,874	-61.8		29	3.0	31	21,768	-58.3		30	5.7
30	25	23,815	-56.0		25	3.3	17	23,372	-53.1		26	44.0	3	23,645	-57.2		27	3.8	29	23,677	-56.2		29	6.7	30	23,588	-57.1		33	7.1
25	25	24,982	-53.2		22	.7	16	24,540	-53.4		26	49.4	3	24,806	-54.4		33	1.4	18	24,848	-53.8		28	8.5	30	24,744	-56.8		35	8.3
20	22	26,431	-49.6		09	4.5	13	26,019	-50.3		27	58.2	3	26,246	-51.5		08	5.3	18	26,288	-52.0		28	10.4	28	26,171	-55.9		34	9.5
15	20	28,325	-47.7		09	13.5	11	27,840	-52.9		27	64.1	3	28,130	-48.3		09	13.1	17	28,165	-48.6		28	13.7	17	28,011	-55.6		32	12.1
10	18	31,034	-41.9		09	19.3	6	30,420	-54.3				3	30,828	-43.9		09	18.9	7	30,794	-43.6									
7	6	33,483	-36.7										19	33,241	-40.7		10	21.0												
5													9	35,580	-37.6															

Standard pressure surface (mb)	LIHUE KAUAI, HAWAII 1013 MB						LITTLE ROCK, ARK. 1009 MB						MCGRATH, ALASKA 996 MB						MAJURO, MARSHALL IS. 1009 MB						MEDFORD, OREG. 970 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	36	22.7	18.5	08	4.1	31	79	8.0	5.9	11	.2	27	103	-18.4	-17.4	11	.5	31	3	28.0	23.5	06	5.0	31	401	1.0	-1.9	18	.7
1000	31	145	21.4	17.1	08	5.0	31	155	7.2	4.5	07	.7	27	68			10	.8	31	78	26.9	19.2	06	5.5	31	153				
950	31	588	18.0	15.6	09	6.9	31	578	7.4	3.1	23	3.2	27	456	-14.6	-16.3	13	2.4	31	530	23.2	17.4	06	7.2	31	567	1.0	-2.7	21	.8
900	31	1,049	14.7	12.5	10	7.0	31	1,025	7.9	-1.6	24	6.6	27	869	-11.0	-13.0	16	3.9	31	1,000	20.2	14.5	07	7.0	31	1,001	.2	-3.8	22	2.4
850	31	1,531	11.4	9.4	10	7.2	31	1,496	7.8	-4.1	24	9.9	27	1,309	-10.2	-13.6	19	3.6	31	1,492	17.3	10.9	08	6.3	31	1,458	-1.6	-6.4	25	4.5
800	31	2,036	8.9	2.7	11	7.1	31	1,996	6.6	-5.7	25	12.4	27	1,776	-11.4	-15.3	22	3.4	31	2,009	15.7	4.5	09	5.1	31	1,939	-3.8	-8.6	26	6.4
750	31	2,570	7.6	-7.9	11	6.9	31	2,524	5.0	-9.5	25	14.1	27	2,269	-13.5	-17.4	24	4.3	31	2,555	13.5	-.1	08	4.4	31	2,447	-6.2	-11.4	27	8.1
700	31	3,136	7.2	-13.6	11	5.5	31	3,084	2.6	-14.7	25	15.4	27	2,791	-16.3	-20.7	24	5.5	31	3,133	10.3	-3.5	09	3.5	31	2,984	-9.6	-15.5	28	9.8
650	31	3,737	1.8	-16.2	11	4.3	31	3,680	-.5	-17.8	25	17.4	27	3,345	-19.6	-24.6	25	6.9	31	3,746	6.9	-8.0	09	4.6	31	3,555	-12.1	-19.8	28	11.7
600	31	4,378	-2.0	-20.8	12	3.4	30	4,316	-4.3	-21.4	25	19.4	27	3,936	-23.2	-28.1	25	7.3	31	4,399	3.2	-12.9	09	5.9	31	4,163	-15.8	-23.5	28	13.1
550	31	5,063	-6.5	-24.1	12	2.0	30	4,996	-8.6	-26.1	25	21.5	27	4,568	-27.3	-31.5	25	7.8	31	5,100	-.5	-17.6	07	8.0	31	4,814	-19.8	-27.3	29	14.5
500	31	5,802	-11.1	-28.3	17	.3	30	5,728	-13.6	-29.6	25	24.3	27	5,248	-32.0	-34.4	25	8.1	31	5,855	-4.7	-22.6	05	8.5	31	5,515	-24.2	-32.6	29	16.4
450	31	6,603	-16.4	-32.8	30	3.0	30	6,521	-18.9	-33.3	26	27.9	27	5,984	-37.0	-35.8	25	8.7	31	6,677	-9.4	-26.8	05	6.5	31	6,276	-29.1	-38.0	29	17.9
400	31	7,478	-22.4	-38.1	29	5.7	30	7,387	-25.3	-38.2	26	31.3	27	6,789	-42.5	-40.9	25	10.7	31	7,578	-15.0	-32.4	04	3.7	31	7,108	-35.0	-42.3	30	19.5
350	31	8,448	-29.5	-43.2	28	8.5	30	8,345	-32.6	-44.5	28	33.3	27	7,684	-47.7		25	12.5	31	8,578	-21.7	-38.7	30	2.3	31	8,031	-41.0	-45.8	30	21.1
300	31	9,527	-37.8	-50.5	28	12.7	30	9,410	-40.9	-52.8	26	35.7	27	8,689	-51.9		26	16.7	31	9,692	-30.0	-45.8	26	6.5	31	9,061	-47.8		30	21.5
250	31	10,759	-47.2		28	18.5	30	10,626	-50.0		26	38.4	27	9,866	-53.0		26	18.5	31	10,964	-40.2	-54.2	26	8.8	31	10,250	-52.8		30	23.2
200	31	12,203	-56.9		28	24.8	27	12,053	-59.7		26	42.1	27	11,307	-52.3		27	19.6	31	12,446	-52.4		25	9.6	31	11,680	-55.4		30	20.0
175	28	13,036	-61.9		29	25.0	28	12,883	-62.8		26	41.3	27	12,172	-52.0		27	20.7	31	13,297	-59.2		26	8.9	31	12,531	-55.6		30	17.9
150	28	13,981	-65.7		29	20.4	28	13,828	-64.5		26	40.4	27	13,170	-52.1		27	20.9	31	14,245	-67.0		28	6.8	30	13,515	-56.5		30	17.0
125	28	15,075	-70.8		29	17.5	28	14,939	-65.5		26	33.4	26	14,340	-52.2		27	22.4	31	15,325	-75.1		32	4.5	29	14,662	-57.9		29	14.5
100	28	16,386	-73.8		30	11.1	28	16,287	-68.4		26	26.9	26	15,784	-52.5		27	23.3	31	16,593	-82.2		03	5.3	28	16,062	-58.4		29	11.4
80	24	17,686	-74.1		34	5.0	28	17,622	-69.0		26	20.9	26	17,219	-53.0		27	23.6	31	17,844	-78.8		06	4.7	27	17,458	-58.9		29	9.4
70	24	18,469	-71.5		02	3.0	28	18,421	-68.8		27	16.0	25	18,080	-53.5		27	24.9	31	18,619	-71.6		27	2.6	26	18,296	-58.5		30	7.3
60	19	19,385	-68.4		07	3.1	28	19,381	-66.1		27	11.2	24	19,083	-52.3		26	25.0	31	19,543	-86.1		27	8.6	26	19,265	-58.1		31	5.3
50	19	20,491	-64.1		09	1.9	28	20,463	-63.6		27	8.3	22	20,272	-52.0		27	29.1	31	20,661	-62.0		27	9.2	26	20,415	-57.8		32	4.8
40	17	21,875	-59.6		07	2.4	28	21,839	-61.4		29	7.5	19	21,738	-52.0		27	30.7	31	22,052	-58.3		27	8.9	23	21,814	-57.4		34	5.4
30	17	23,693	-54.9		06	3.3	26	23,636	-57.7		29	8.4	16	23,637	-50.0		28	32.6	30	23,881	-54.4		27	4.8	18	23,659	-55.5		02	4.5
25	17	24,864	-53.2		07	2.8	25	24,790	-56.5		29	10.9	13	24,848	-49.1		28	34.5	30	25,057	-51.4		24	.9	15	24,848	-53.6		09	5.3
20	17	26,312	-50.6		07	2.9	24	26,208	-54.2		28	13.4	8	26,334	-47.9				29	26,516	-49.2		09	5.2	14	26,294	-53.2		02	8.3
15	16	28,195	-48.7		07	1.7	22	28,073	-50.7		28	17.9							25	28,420	-45.9		09	15.9	9	28,150	-52.5			
10	15	30,884	-45.4		22	3.8	10	30,762	-46.7										23	31,151	-39.9		09	20.7						
7	14	33,292	-41.0		26	8.7													11	33,621	-34.4									
5	10	35,613	-38.9																6	36,015	-30.3									

Standard pressure surface (mb)	MERIDA, MEXICO 1015 MB						MIAMI, FLA. 1019 MB						MIDLAND, TEXAS 916 MB						MONTERREY, MEXICO 904 MB						MONETT, MO. 966 MB					
	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Direction	Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed	No. of observations	Dynamic height	Temperature	Dew Point	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	11	20.1	19.5	07	1.1	31	4	21.6	17.7	05	2.5	31	874	3.5	.4	23	1.2	23	423	12.2	10.3	36	.9	31	438	3.6	2.2	17	1.5
1000	31	135	22.5	20.6	09	4.8	31	168	22.1	17.4	09	4.3	31	156					23	142					31	154				
950	31	582	21.2	17.1	10	7.2	31	613	18.7	15.6	10	6.1	31	579					23	575	14.1	9.8	04	1.0	31	573	4.2	.5	18	2.3
900	31	1,050	18.6	12.3	10	6.5	31	1,076	15.7	12.0	10	5.7	31	1,021	6.9	.4	23	2.6	23	1,032	13.1	7.5	13	2.8	31	1,015	5.2	-2.0	23	5.2
850	31	1,539	15.9	5.6	10	5.7	31	1,560	13.8	5.6	12	4.6	31	1,493	9.0	-4.5	25	6.0	23	1,513	13.8	1.5	15	3.7	31	1,481	4.7	-6.5	25	6.9
800	31	2,052	13.5	1.8	11	3.9	31	2,069	12.1	-1.0	12	4.3	31	1,994	7.7	-8.1	25	9.2	23	2,025	13.8	-2.9	17	3.6	31	1,974	3.6	-9.7	25	8.9
750	31	2,592	10.6	-1.9	11	3.7	31	2,608	10.4	-6.5	12	2.9	31	2,524	5.9	-12.3	25	11.0	23	2,567	10.9	-6.5	21	3.4	31	2,498	2.2	-11.9	26	12.2
700	31	3,165	8.2	-10.1	11	4.3	31	3,180	7.7	-10.3	14	1.4	31	3,086	3.1	-16.0	24	12.9	23	3,138	7.2	-8.8	23	5.3	31	3,052	-.4	-15.5	26	15.1
650	31	3,773	5.3	-15.9	11	4.4	31	3,787	4.7	-14.8	13	.5	31	3,683	-.5	-19.4	24	15.5	23	3,746	3.2	-12.1	22	6.6	31	3,642	-3.3	-18.2	26	18.5
600	31	4,422	1.9	-21.9	10	4.8	31	4,434	.9	-18.4	31	.8	31	4,317	-4.6	-23.0	24	16.3	22	4,390	-.7	-18.5	23	6.7	31	4,271	-6.6	-22.2	26	20.6
550	31	5,118	-2.4	-24.2	13	4.7	31	5,128	-3.5	-22.7	29	2.2	31	4,996	-9.2	-28.4	24	18.8	22	5,079	-5.3	-24.2	23	7.7	31	4,945	-10.8	-26.9	26	24.1
500	31	5,867	-7.4	-28.5	15	4.8	31	5,873	-8.9	-26.9	29	2.7	31	5,727	-13.9	-30.7	24	21.9	22	5,821	-9.7	-28.5	22	9.6	31	5,671	-15.5	-30.8	26	28.4
450	31	6,678	-13.1	-33.8	17	5.2	31	6,681	-14.4	-31.4	27	3.9	31	6,519	-19.1	-34.4	24	25.8	22	6,625	-15.4	-32.5	22	9.5	31	6,459	-20.6	-34.5	26	29.4
400	31	7,564	-20.0	-39.1	18	4.7	31	7,562	-21.1	-37.1	28	5.8	31	7,385	-25.3	-39.0	24	27.8	22	7,504	-21.6	-38.6	23	11.8	31	7,320	-26.9	-39.4	26	32.9
350	31	8,542	-27.7	-44.2	20	5.4	31	8,536	-28.8	-43.2	28	7.4	31	8,343	-32.5	-44.4	24	29.6	22	8,476	-29.4	-44.4	24	13.7	31	8,273	-33.5	-44.5	26	36.4
300	31	9,627	-36.6	-51.0	22	7.5	31	9,616	-37.8	-50.7	28	8.8	31	9,408	-40.8	-49.4	24	31.9	22	9,553	-38.3	-51.4	23	13.4	31	9,334	-41.5	-50.1	28	40.4
250	31	10,855	-45.8		22	10.3	31	10,847	-47.6		28	10.6	31	10,624	-50.3		24	37.3	22	10,781	-48.3		24	14.0	31	10,547	-50.4		26	43.8
200	31	12,319	-55.5		23	13.4	31	12,286	-57.8		28	15.5	27	12,044	-59.1		25	37.8	22	12,216	-58.7		24	13.5	31	11,974	-58.8		26	45.8
175	31	13,162	-60.0		23	13.5	31	13,120	-61.7		28	17.6	27	12,875	-61.9		25	36.2	21	13,046	-62.8		24	15.3	31	12,807	-61.5		26	42.9
150	31	14,112	-65.0		23	12.3	29	14,066	-65.5		28	16.5	29	13,824	-64.2		25	32.0	21	13,989	-66.2		24	16.6	31	13,758	-63.3		26	40.9
125	30	15,211	-69.3		23	9.6	29	15,166	-69.0		28	14.9	29	14,937	-65.4		25	28.1	21	15,089	-68.6		24	16.2	31	14,877	-63.8		26	33.5
100	30	16,521	-75.6		21	4.6	28	16,478	-74.9		28	11.7	27	16,285	-68.3		25	22.1	21	16,415	-72.2		24	11.5	31	16,237	-66.4		26	28.5
80	30	17,803	-77.5		16	2.8	28	17,768	-76.1		30	5.7	27	17,619	-68.6		25	15.7	14	17,724	-73.4		23	5.1	31	17,591	-66.1		26	21.0
70	30	18,572	-75.3		12	2.9	27	18,539	-74.8		32	3.2	24	18,421	-68.1		26	10.8	18	18,508	-71.9		24	2.7	31	18,401	-65.8		27	16.9
60	30	19,476	-70.3		09	2.2	26	19,445	-70.6		38	2.6	23	19,348	-65.9		26	6.5	18	19,425	-68.8		22	.9	32	19,337	-64.9		27	11.8
50	30	20,578	-63.5		09	1.0	26	20,545	-64.1		34	2.0	22	20,460	-63.6		26	4.4	18	20,531	-63.6		29	.4	29	20,455	-62.7		27	8.5
40	30	21,966	-58.4		35	1.7	24	21,931	-58.6		31	3.3	22	21,841	-60.5		29	2.4	18	21,913	-60.0		31	1.2	28	21,837	-60.6		29	8.0
30	30	23,798	-53.4		01	.7	24	23,760	-53.2		28	5.5	22	23,648	-57.7		32	2.0	18	23,728	-55.7		24	3.1	24	23,632	-58.7		29	8.3
25	29	24,978	-51.4		31	.2	22	24,940	-51.0		28	7.1	21	24,805	-55.7		32	3.7	17	24,900	-53.5		29	4.7	23	24,780	-57.4		29	8.5
20	29	26,437	-48.3		11	1.1	21	26,402	-48.4		27	7.9	20	26,232	-54.3		32	4.7	16	26,356	-51.1				16	26,214	-55.0		32	8.3
15	24	28,353	-44.5		19	1.1	20	28,312	-44.0		26	11.4	19	28,093	-52.3		33	6.1	11	28,284	-47.2				15	28,064	-52.4		29	13.4
10	11	31,090	-40.8				12	31,071	-39.4				9	30,771	-48.3										12	30,708	-50.3			
7							5	33,495	-38.0																					

See reference note at end of table

RAWINSONDE DATA

Average monthly values

DECEMBER 1971

Standard pressure surface (mb)	MONTGOMERY, ALA. 2115 MB						NASHVILLE, TENN. 999 MB						* NOME, ALASKA 1006 MB						NORTH PLATTE, NEBR. 917 MB						OAKLAND, CALIF. 1019 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	57	11.4	9.4	09	.9	31	180	7.2	4.7	16	1.2	29	5	-13.3	-17.0	09	3.5	31	847	-6.7	-9.3	33	1.0	31	6	6.1	2.9	15	1.2
1000	31	179	12.2	9.4	14	1.6	31	17[illegible]			11	.5	29	45			09	3.6	31	160					31	161	7.2	2.0	15	.9
950	31	610	12.3	7.8	19	5.2	31	594	7.6	2.7	20	5.7	29	438	-12.1	-15.4	12	3.6	31	566					31	582	5.5	-1.6	27	.8
900	31	1,054	11.8	4.2	22	7.1	31	1,040	6.8	.3	22	8.5	29	851	-12.7	-16.8	15	2.4	31	991	-3.5	-10.6	30	3.4	31	1,023	3.6	-4.9	28	1.7
850	31	1,554	10.8	.7	23	8.4	31	1,509	6.1	-3.3	23	11.9	29	1,287	-13.2	-18.0	20	1.8	31	1,445	-.8	-9.8	30	6.3	31	1,485	1.6	-7.8	27	3.9
800	31	2,046	9.2	-3.3	24	10.2	31	2,005	5.4	-9.0	24	13.8	29	1,749	-13.7	-20.4	22	2.7	31	1,929	-1.5	-13.3	29	7.6	31	1,972	-.7	-11.9	29	4.4
750	31	2,557	7.1	-7.9	28	11.6	31	2,531	3.5	-11.7	24	16.1	29	2,238	-15.7	-22.4	23	4.3	31	2,441	-3.8	-14.8	29	10.0	31	2,485	-3.1	-16.6	30	5.6
700	31	3,143	3.9	-11.9	25	12.8	31	3,088	.6	-14.2	24	17.8	29	2,755	-18.5	-25.3	22	5.5	31	2,989	-6.6	-17.8	28	12.7	31	3,029	-5.8	-19.1	30	7.4
650	31	3,743	.8	-15.1	25	14.9	31	3,680	-2.3	-17.3	25	19.8	29	3,305	-21.4	-27.6	22	5.5	31	3,559	-9.7	-21.1	27	13.8	31	3,606	-8.6	-22.3	30	8.6
600	31	4,381	-2.9	-19.4	26	16.0	31	4,312	-5.2	-23.4	25	22.3	28	3,892	-24.9	-30.5	23	5.3	31	4,172	-13.7	-24.5	27	15.1	31	4,223	-12.0	-26.2	30	9.8
550	31	5,065	-7.0	-23.3	26	18.4	31	4,990	-9.4	-27.[illegible]	26	26.0	28	4,520	-28.9	-34.5	22	5.9	31	4,829	-17.7	-29.0	27	17.6	31	4,884	-16.0	-30.7	30	12.8
500	31	5,801	-12.0	-28.1	25	19.9	31	5,726	-14.3	-31.1	24	28.4	28	5,195	-33.5	-38.0	22	6.8	31	5,535	-22.5	-33.9	27	20.9	31	5,595	-20.7	-34.8	30	14.5
450	31	6,599	-17.6	-32.5	25	22.0	31	6,511	-19.7	-34.1	24	30.4	26	5,927	-38.4	-37.2	22	8.3	31	6,301	-27.6	-37.3	26	25.8	31	6,366	-26.3	-39.2	31	15.9
400	31	7,469	-24.1	-38.[illegible]	26	24.2	31	7,375	-25.9	-37.5	24	33.2	26	6,728	-43.7	-40.0	23	9.5	31	7,139	-33.0	-41.1	26	31.6	31	7,206	-32.6	-45.4	31	16.5
350	31	8,434	-30.8	-44.6	26	26.7	31	8,331	-33.0	-44.3	26	36.0	25	7,617	-49.1		23	11.1	31	8,069	-39.0	-46.2	26	33.9	30	8,142	-39.2	-49.7	31	18.6
300	31	9,506	-39.2	-51.4	26	29.4	31	9,394	-41.3	-49.0	26	37.5	24	8,616	-53.1		23	12.9	31	9,109	-45.7		26	38.0	30	9,180	-46.0		31	21.4
250	31	10,730	-48.9		26	31.1	31	10,607	-50.7		26	41.7	24	9,788	-53.5		24	14.7	31	10,305	-52.1		26	40.8	30	10,375	-52.9		30	22.9
200	31	12,162	-59.3		27	33.3	31	12,031	-60.1		27	44.0	23	11,214	-52.3		24	16.8	31	11,736	-56.1		26	39.1	30	11,796	-57.7		29	20.7
175	31	12,990	-63.3		27	33.4	30	12,858	-63.1		27	43.0	25	12,077	-52.4		24	18.0	31	12,582	-57.4		26	37.4	30	12,639	-57.9		29	20.0
150	31	13,931	-65.8		27	34.0	30	13,802	-64.9		27	40.5	26	13,074	-52.7		24	18.9	31	13,553	-58.5		26	34.2	30	13,610	-58.5		29	18.4
125	31	15,036	-67.7		27	30.7	30	14,912	-66.1		27	34.1	28	14,252	-52.6		25	22.2	31	14,696	-60.0		26	28.7	30	14,753	-59.9		29	15.2
100	31	16,389	-70.6		27	24.6	30	16,258	-68.4		27	27.3	28	15,692	-53.3		25	24.8	31	16,085	-61.1		26	21.2	29	16,140	-61.5		28	11.4
80	31	17,682	-71.9		27	17.6	30	17,594	-68.5		27	22.0	28	17,128	-53.5		25	25.5	30	17,468	-61.9		26	18.4	29	17,524	-60.9		29	7.6
70	27	18,476	-70.9		27	12.6	[illegible]	18,401	-67.2		27	16.9	27	17,992	-53.4		25	27.2	30	18,295	-61.2		27	15.8	28	18,356	-60.7		29	5.0
60	24	19,395	-68.1		28	[illegible]	29	19,338	-65.9		27	12.1	27	18,974	-53.6		25	29.2	27	19,259	-60.7		27	11.6	27	19,318	-60.0		29	3.4
50	23	20,497	-64.8		29	6.8	29	20,447	-64.1		27	8.7	26	20,153	-53.9		25	32.1	25	20,398	-60.2		28	8.5	26	20,458	-58.9		30	2.9
40	21	21,872	-61.6		29	6.4	28	21,823	-61.9		28	7.2	23	21,574	-54.5		26	35.1	23	21,787	-59.8		29	7.7	25	21,858	-57.9		35	1.9
30	28	23,673	-56.7		28	7.9	28	23,615	-59.1		28	7.0	21	23,446	-53.1		26	38.6	21	23,599	-57.7		30	6.8	25	23,683	-55.8		04	3.1
25	27	24,835	-54.4		28	9.6	28	24,761	-57.6		28	9.5	17	24,599	-54.5		26	43.0	20	24,749	-57.6		31	6.9	25	24,846	-54.7		03	3.7
20	24	26,276	-51.7		28	14.0	28	26,178	-55.1		28	11.8	15	26,062	-53.3			52.4	17	26,146	-57.4		30	7.9	25	26,280	-53.2		02	4.7
15	22	28,159	-48.5		27	16.7	28	28,026	-52.5		28	16.0	11	27,883	-55.0				13	27,952	-58.5		29	9.6	25	28,174	-50.9		04	8.6
10	17	30,853	-43.5				17	30,677	-48.3		27	22.8	5	30,143	-65.6				8	30,531	-54.8				10	30,933	-46.7			
7							5	33,020	-45.5																					

Standard pressure surface (mb)	OMAHA, NEBR. 969 MB						+ PAGO PAGO, AMERICAN SAMOA 1008 MB						* PEORIA, ILL. 994 MB						* PITTSBURGH, PA. 977 MB						+ PONAPE, CAROLINE IS. 1003 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	403	-1.1	-5.6	36	4.7	31	5	28.7	23.8	06	2.0	31	200	.2	-2.3	19	1.0	31	359	1.7	-1.4	23	1.4	31	39	28.6	23.5	09	3.8
1000	31	151					31	71	27.6	21.1	05	2.1	31	151					31	172					31	63	27.3	20.5	09	4.2
950	31	557	-3.8	-6.2	35	4.6	31	525	23.9	18.2	04	2.8	31	563	.2	-4.4	23	3.2	31	586	1.7	-2.1	25	4.2	31	516	23.5	17.8	07	9.2
900	31	986	-2.6	-7.5	32	6.3	31	996	20.4	15.2	03	3.1	31	998	1.1	-6.2	25	7.1	31	1,022	.9	-4.7	26	9.1	31	986	19.9	14.3	07	10.7
850	31	1,443	-.3	-11.7	32	8.5	31	1,488	17.1	11.1	04	3.6	31	1,457	.3	-8.8	25	9.3	31	1,481	.0	-7.9	27	11.2	31	1,477	16.8	9.4	07	10.4
800	31	1,928	-1.1	-14.2	31	8.9	31	2,004	14.8	6.7	04	3.2	31	1,943	-.8	-10.9	25	10.9	31	1,966	-1.3	-12.8	27	13.4	31	1,993	15.3	3.3	08	8.7
750	31	2,441	-3.2	-17.0	29	11.2	31	2,548	12.3	1.9	04	3.0	31	2,456	-2.4	-13.8	26	14.2	31	2,479	-3.0	-15.4	27	15.9	31	2,538	13.3	-3.3	08	7.1
700	31	2,984	-6.0	-19.6	27	16.1	31	3,124	9.0	-2.5	02	2.1	31	3,002	-4.8	-16.0	26	16.9	31	3,023	-5.2	-19.1	27	18.4	31	3,116	10.5	-10.0	08	6.6
650	31	3,560	-9.2	-22.4	26	19.8	31	3,735	6.1	-6.3	02	1.8	31	3,582	-7.7	-18.9	26	19.4	31	3,602	-8.2	-21.4	27	21.5	31	3,729	7.0	-13.5	08	8.2
600	31	4,158	-12.8	-25.8	26	22.4	31	4,387	2.7	-10.7	02	1.8	31	4,200	-11.4	-23.2	26	22.9	31	4,220	-11.5	-24.9	27	25.0	31	4,381	3.2	-17.0	08	10.7
550	31	4,834	-16.9	-29.9	26	24.6	31	5,087	-1.1	-15.7	01	1.6	31	4,863	-14.9	-27.4	26	27.3	31	4,882	-15.4	-29.5	27	28.0	31	5,081	-.8	-21.2	08	12.6
500	31	5,543	-21.4	-34.3	26	29.5	30	5,841	-5.4	-20.3	01	1.0	31	5,578	-19.3	-32.1	26	31.2	31	5,596	-19.7	-34.2	27	31.1	31	5,836	-5.0	-24.9	08	13.2
450	31	6,313	-26.1	-39.2	26	34.7	30	6,660	-10.2	-25.4	01	1.1	31	6,354	-24.1	-36.3	26	34.7	31	6,370	-24.5	-36.9	27	35.7	31	6,657	-9.5	-29.7	08	14.0
400	31	7,156	-31.7	-43.8	26	40.6	30	7,558	-16.0	-31.4	32	.4	31	7,203	-30.3	-41.9	26	39.4	31	7,219	-29.9	-40.8	27	40.7	31	7,558	-14.9	-34.4	08	10.7
350	31	8,090	-37.8	-47.0	26	44.7	30	8,554	-22.6	-38.3	25	.7	31	8,143	-36.7	-46.6	26	44.7	31	8,161	-36.3	-44.8	28	45.2	31	8,557	-22.0	-40.6	08	6.2
300	31	9,134	-44.8		26	47.3	30	9,664	-30.9	-46.0	23	2.6	30	9,188	-44.3		26	40.9	31	9,212	-43.4	-48.8	28	49.3	31	9,669	-30.4	-47.8	07	2.1
250	31	10,334	-51.9		26	49.3	30	10,931	-41.1	-53.5	22	4.4	30	10,388	-52.3		26	49.7	31	10,416	-51.9		28	51.6	31	10,939	-40.7	-55.5	34	.3
200	31	11,765	-55.9		26	44.9	30	12,407	-53.4		21	8.2	30	11,808	-58.9		27	47.4	30	11,838	-59.2		28	52.8	31	12,418	-53.0		22	1.7
175	31	12,612	-57.5		26	40.2	30	13,253	-60.4		21	9.4	30	12,643	-60.6		27	47.0	29	12,670	-61.4		28	48.1	31	13,266	-59.8		18	1.5
150	30	13,578	-59.2		26	37.7	30	14,196	-67.7		22	8.0	28	13,595	-60.9		27	40.5	27	13,623	-62.4		28	42.4	31	14,211	-67.8		12	2.0
125	30	14,716	-61.0		26	32.3	30	15,276	-74.2		21	4.4	28	14,726	-62.2		27	34.6	28	14,749	-63.2		27	36.2	31	15,286	-76.0		08	4.9
100	24	16,099	-61.0		26	24.1	30	16,558	-79.0		18	2.6	28	16,101	-63.2		27	28.5	26	16,117	-64.7		28	31.0	30	16,530	-83.4		08	10.8
80	18	17,488	-60.6		26	16.4	30	17,828	-77.0		11	5.0	26	17,474	-63.5		27	20.7	25	17,476	-64.6		28	25.3	30	17,792	-79.9		08	7.2
70	17	18,318	-60.2		27	11.9	30	18,604	-72.5		10	6.5	26	18,295	-63.0		27	16.8	24	18,296	-63.6		28	21.8	30	18,564	-72.7		27	1.5
60	17	19,278	-60.3		28	7.6	30	19,519	-68.6		09	7.3	24	19,252	-62.7		27	13.3	23	19,239	-63.4		28	17.9	30	19,482	-67.7		27	7.0
50	17	20,417	-59.9		30	8.2	30	20,625	-63.9		09	7.9	23	20,383	-61.5		27	10.9	22	20,356	-63.5		28	14.4	30	20,592	-63.4		27	8.9
40	15	21,816	-59.4		32	7.3	29	22,009	-59.3		09	7.8	21	21,781	-60.7		29	6.8	21	21,739	-62.3		28	15.1	30	21,976	-59.5		27	8.3
30	13	23,631	-57.6		34	7.7	28	23,832	-54.5		08	9.1	18	23,580	-58.9		31	8.1	20	23,528	-58.9		28	14.7	30	23,795	-55.2		28	5.2
25	10	24,783	-57.3				25	25,009	-51.5		09	10.3	16	24,718	-58.4		31	7.7	20	24,675	-57.9		28	14.3	30	24,966	-52.8		28	2.6
20	7	26,236	-56.3				24	26,469	-48.3		09	13.0	15	26,125	-57.9		31	9.8	18	26,096	-55.7		28	17.8	30	26,414	-50.4		10	4.6
15	[illegible]	28,086	-56.1				22	28,381	-44.9		09	17.0	14	27,934	-57.3		30	16.5	15	27,925	-55.3		28	17.5	28	28,301	-47.9		10	13.5
10	7	30,697	-54.1				14	31,123	-40.5				11	30,508	-54.1		29	23.1	12	30,512	-51.9				22	31,016	-41.4		09	19.1
7																			7	32,815	-49.0				16	33,436	-37.5			

Standard pressure surface (mb)	PORTLAND, MAINE 1017 MB						* QUILLAYUTE, WASH. 1005 MB						RAPID CITY, S. DAK. 901 MB						ST CLOUD, MINN. 980 MB						* ST PAUL IS., ALASKA 1003 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	20	-4.8	-10.6	32	2.5	31	58	1.8	.5	05	.4	31	966	-7.8	-12.2	33	1.2	31	316	-10.5	-14.5	22	.6	31	10	-.9	-2.7	21	2.0
1000	31	153	-4.2	-10.5	32	3.2	31	100			21	.5	31	145					31	158					31	31			23	2.4
950	31	558	-4.4	-9.9	29	5.1	31	514	.9	-1.3	21	2.2	31	550					31	554	-10.2	-12.7	24	2.1	31	449	-2.7	-5.3	23	5.5
900	31	984	-5.5	-11.0	29	7.9	31	947	-1.4	-4.6	23	3.9	31	973			33	1.7	31	973	-8.1	-12.0	25	4.5	31	867	-4.9	-8.7	23	6.5
850	31	1,431	-6.6	-12.8	29	10.3	31	1,401	-3.6	-8.0	24	5.6	31	1,424	-3.4	-12.3	28	3.9	31	1,418	-7.6	-13.2	27	6.1	31	1,315	-7.0	-12.3	24	8.0
800	31	1,904	-7.3	-16.8	29	13.2	31	1,878	-5.8	-11.1	25	6.6	31	1,903	-4.4	-13.3	28	6.9	31	1,890	-7.2	-16.3	27	8.6	31	1,786	-9.1	-15.3	24	8.1
750	31	2,406	-9.2	-20.8	29	16.1	31	2,381	-8.5	-15.2	26	8.4	31	2,410	-6.3	-16.1	28	9.2	31	2,392	-9.0	-17.7	27	10.1	31	2,284	-11.6	-18.4	24	8.3
700	31	2,938	-10.8	-22.5	28	19.3	31	2,914	-11.3	-18.4	27	9.9	31	2,946	-9.6	-19.6	27	11.4	31	2,924	-11.5	-20.5	27	12.2	31	2,809	-14.8	-21.1	24	9.9
650	31	3,505	-13.2	-27.1	29	20.8	31	3,480	-14.4	-23.[illegible]	28	11.1	31	3,515	-12.9	-23.1	27	13.1	31	3,489	-14.4	-23.3	27	14.5	31	3,367	-18.0	-24.9	24	10.5
600	31	4,111	-16.6	-29.4	28	23.1	31	4,082	-17.9	-26.6	28	12.8	31	4,121	-16.8	-28.6	27	14.6	31	4,091	-18.1	-25.8	27	17.3	31	3,961	-21.5	-28.8	23	11.1
550	31	4,760	-20.5	-32.7	28	25.9	31	4,728	-21.8	-30.4	28	14.4	31	4,768	-21.0	-32.5	27	16.3	31	4,736	-22.4	-30.2	27	19.2	31	4,598	-25.4	-32.5	23	12.4
500	31	5,459	-24.6	-37.9	28	29.1	31	5,423	-26.5	-35.2	28	16.6	31	5,466	-25.7	-36.6	27	17.7	31	5,430	-27.0	-35.5	27	20.5	31	5,283	-29.9	-35.0	23	13.8
450	31	6,219	-29.4	-40.5	29	32.6	31	6,177	-31.4	-37.3	28	18.1	31	6,221	-31.0	-39.7	27	19.6	31	6,182	-31.9	-39.9	27	23.1	31	6,026	-35.1	-39.3	23	15.9
400	31	7,050	-35.1	-43.7	28	36.1	31	7,002	-37.0	-41.6	28	20.1	31	7,047	-36.6	-42.2	26	22.6	31	7,005	-37.7	-43.8	26	26.2	31	6,837	-40.7	-41.9	23	18.0
350	30	7,979	-40.7	-48.0	28	39.8	31	7,917	-42.7	-44.9	29	22.7	31	7,964	-42.2	-46.4	26	26.8	31	7,917	-43.3	-45.5	27	29.7	31	7,739	-45.8	-45.2	23	21.3
300	30	9,012	-47.0		29	44.3	31	8,941	-48.6		30	24.2	31	8,991	-47.9		27	30.1	31	8,941	-48.4		26	35.5	31	8,753	-49.5		23	23.4
250	30	10,203	-52.8		29	46.0	31	10,127	-53.1		30	25.5	31	10,182	-52.0		27	32.1	31	10,127	-52.8		26	37.4	31	9,944	-50.8		24	26.1
200	29	11,628	-56.2		29	41.2	30	11,550	-54.7		31	21.7	31	11,616	-55.2		26	32.2	31	11,562	-54.3		26	35.2	31	11,395	-51.2		23	21.6
175	29	12,475	-57.2		28	39.2	31	12,405	-54.4		30	20.8	31	12,467	-56.0		26	32.5	30	12,419	-55.3		27	33.4	31	12,264	-50.6		23	22.6
150	29	13,450	-57.0		28	33.5	28	13,387	-54.1		30	15.4	31	13,446	-56.8		26	28.7	30	13,399	-56.7		27	28.5	31	13,269	-50.8		24	20.6
125	29	14,600	-58.5		28	30.2	28	14,554	-55.3		29	14.6	31	14,596	-56.9		27	23.9	30	14,552	-57.8		28	26.1	31	14,456	-50.9		23	20.6
100	29	15,999	-59.8		28	26.3	27	15,970	-55.8		30	12.6	29	16,006	-58.0		27	19.1	30	15,954	-59.2		27	22.9	31	15,909	-50.8		24	18.4
80	27	17,384	-61.0		28	20.2	24	17,385	-55.4		30	10.6	28	17,406	-58.8		27	16.1	30	17,352	-59.4		27	19.4	31	17,361	-51.0		24	19.2
70	28	18,212	-61.7		28	19.2	24	18,236	-55.8		30	9.2	28	18,246	-58.7		27	13.4	30	18,187	-60.1		28	16.6	31	18,230	-51.2		24	19.4
60	28	19,168	-61.2		28	[illegible]	22	19,220	-55.4		29	8.7	27	19,216	-58.8		28	10.3	30	19,149	-60.4		28	15.6	31	19,233	-50.9		24	17.7
50	28	20,302	-60.7		28	[illegible]	22	20,382	-55.6		30	8.3	25	20,362	-58.6		28	9.6	30	20,284	-60.6		29	13.5	31	20,420	-51.0		23	17.4
40	28	21,691	-60.5		27	[illegible]	23	21,793	-55.7		30	6.6	23	21,762	-58.3		29	10.6	29	21,684	-60.1		29	13.1	30	21,879	-49.7		23	17.3
30	26	23,486	-59.3		28	[illegible]	25	23,649	-54.4		34	8.4	22	23,590	-57.6		32	8.3	27	23,488	-59.5		30	13.1	28	23,780	-47.7		26	19.1
25	25	24,628	-58.5		27	[illegible]	18	24,832	-53.4		34	8.7	19	24,738	-57.8		32	[illegible]	25	24,647	-59.3		31	13.1	27	24,996	-47.3		26	20.8
20	25	26,033	-58.0		27	[illegible]	9	26,361	-52.4				18	26,154	-57.6		32	11.7	22	26,077	-59.8		32	15.6	23	26,479	-46.4		26	22.0
15	18	27,870	-55.1		26	[illegible]	8	28,222	-52.2				14	27,977	-58.1		33	11.2	17	27,882	-60.2		33	14.8	19	28,447	-44.6		27	23.5
10	16	30,494	-52.6		26	[illegible]	6	30,849	-54.3										5	30,510	-59.2				15	31,161	-47.9		27	25.3
7																									9	33,716	-48.6			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

SALEM, ILL. 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	174	3.5	1.2	19	.8
1000	31	154			10	.4
950	31	571	3.7	-1.3	24	4.0
900	31	1,011	3.9	-5.1	25	7.6
850	31	1,475	2.9	-7.9	25	9.7
800	31	1,966	1.2	-13.3	25	12.4
750	31	2,486	.8	-15.7	26	15.2
700	31	3,037	-1.8	-17.9	26	17.2
650	31	3,624	-4.6	-20.4	26	19.9
600	31	4,250	-8.0	-22.9	26	22.4
550	31	4,921	-12.1	-27.6	26	25.3
500	31	5,644	-16.7	-30.9	26	29.4
450	31	6,427	-21.7	-35.6	26	32.7
400	31	7,285	-27.6	-40.5	26	36.3
350	31	8,234	-34.6	-45.2	26	40.6
300	31	9,291	-42.8	-48.7	26	42.3
250	31	10,497	-51.8		27	46.7
200	31	11,915	-59.9		27	45.3
175	31	12,744	-62.1		28	44.0
150	31	13,694	-63.2		27	37.8
125	31	14,812	-64.5		27	33.8
100	31	16,171	-65.9		27	27.6
80	31	17,525	-65.8		28	21.2
70	31	18,338	-64.8		27	18.5
60	31	19,280	-64.6		27	8.6
50	28	20,395	-63.5		28	12.7
40	26	21,772	-61.7		27	10.2
30	26	23,565	-59.4		30	5.8
25	25	24,709	-58.0		31	7.4
20	25	26,119	-56.3		29	8.1
15	21	27,963	-54.2		29	15.1
10	14	30,590	-49.7			

SALEM, OREG. 1008 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	61	3.3	1.7	19	3.7
1000	31	128			20	4.2
950	31	544	2.4	-1.1	22	6.4
900	31	979	.2	-4.3	23	7.5
850	31	1,435	-2.3	-7.9	24	8.2
800	31	1,915	-4.9	-12.0	25	9.9
750	31	2,420	-7.6	-16.0	26	10.8
700	31	2,954	-10.3	-20.4	27	11.6
650	31	3,521	-13.7	-22.6	27	13.1
600	31	4,126	-17.4	-27.4	28	14.4
550	31	4,773	-21.2	-32.2	28	15.7
500	31	5,470	-25.7	-34.9	29	16.8
450	31	6,226	-30.5	-39.4	29	18.7
400	31	7,054	-36.0	[illegible]	29	20.8
350	31	7,973	-42.0	-48.2	30	21.9
300	31	8,999	-48.0		30	23.3
250	31	10,187	-52.9		30	24.8
200	31	11,618	-55.2		29	20.2
175	31	12,468	-54.5		29	18.7
150	31	13,453	-55.6		29	16.7
125	24	14,615	-57.2		28	15.1
100	28	16,030	-57.9		29	12.1
80	25	17,442	-57.4		30	6.9
70	24	18,286	-56.9		30	7.4
60	23	19,258	-57.2		31	7.2
50	22	20,404	-57.0		31	6.2
40	21	21,826	-56.3		32	7.6
30	21	23,657	-55.6		34	7.5
25	21	24,819	-55.6		34	8.1
20	19	26,223	-55.8		36	10.0
15	15	28,109	-55.0		01	11.4

SALT LAKE CITY, UTAH [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	1,288	-3.6	[illegible]	16	3.6
1000	31	185				
950	31	598				
900	31	1,030				
850	31	1,484	-2.4	-8.2	17	4.7
800	31	1,964	-4.4	-10.4	20	5.5
750	31	2,470	-7.1	-12.8	23	5.5
700	31	3,005	-10.1	-16.3	25	7.1
650	31	3,573	-13.2	-20.6	26	9.1
600	31	4,180	-16.1	-25.0	27	10.7
550	31	4,831	-19.8	[illegible]	27	12.5
500	31	5,531	-24.5	[illegible]	27	13.9
450	31	6,291	-29.5	-38.5	27	16.7
400	31	7,122	-35.2	[illegible]	27	18.6
350	31	8,043	-41.5	[illegible]	27	20.4
300	31	9,073	-47.3		27	24.0
250	31	10,264	-52.3		27	26.3
200	31	11,697	-55.7		26	26.9
175	31	12,545	-56.8		26	23.9
150	31	13,522	-57.0		26	22.2
125	31	14,672	-58.6		26	18.9
100	30	16,069	-59.9		26	15.6
80	30	17,462	-60.5		27	11.2
70	30	18,294	-60.2		27	10.1
60	31	19,257	-59.8		27	[illegible]
50	28	20,396	-59.5		28	6.1
40	28	21,798	-57.8		31	4.5
30	28	23,616	-56.9		32	6.0
25	27	24,777	-56.2		33	6.5
20	25	26,209	-55.0		35	7.8
15	21	28,083	-53.2		34	9.8
10	6	30,721	-54.4			

SAN DIEGO, CALIF. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	124	[illegible]	[illegible]	07	[illegible]
1000	31	[illegible]	[illegible]	[illegible]	10	[illegible]
950	31	574	[illegible]	[illegible]	[illegible]	[illegible]
900	31	1,020	[illegible]	[illegible]	[illegible]	1.7
850	31	1,487	[illegible]	-8.6	[illegible]	3.3
800	31	1,979	2.4	[illegible]	27	[illegible]
750	31	2,498	.1	[illegible]	28	[illegible]
700	31	3,048	-2.2	[illegible]	29	7.8
650	31	3,634	-4.9	[illegible]	28	[illegible]
600	31	4,259	[illegible]	[illegible]	28	[illegible]
550	31	4,930	[illegible]	[illegible]	28	[illegible]
500	31	5,651	[illegible]	-33.3	27	19.9
450	31	6,432	[illegible]	-38.6	27	[illegible]
400	31	7,286	[illegible]	[illegible]	27	21.4
350	31	8,230	-35.9	-46.9	26	22.4
300	31	[illegible]	-43.6		26	24.7
250	31	10,485	-51.9		26	[illegible]
200	31	11,910	-58.0		26	[illegible]
175	31	12,748	-59.8		26	[illegible]
150	31	13,708	-61.7		25	[illegible]
125	31	14,832	-63.5		26	[illegible]
100	31	16,198	-64.9		26	16.4
80	31	17,561	-64.4		26	10.1
70	31	18,380	-63.3		25	8.3
60	31	19,331	-62.1		26	5.9
50	31	20,459	-61.3		28	2.8
40	[illegible]	21,851	-59.0		31	[illegible]
30	[illegible]	23,668	-56.2		03	2.4
25	[illegible]	24,830	-55.2		02	2.1
20	[illegible]	[illegible]	-53.2		01	3.8
15	[illegible]	28,144	-50.4		36	4.9
10	[illegible]	30,795	-47.6		32	7.4

SAN JUAN, P. R. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	5	23.7	[illegible]	[illegible]	[illegible]
1000	31	139	23.3	18.4	08	[illegible]
950	31	585	19.9	16.3	07	8.4
900	31	1,050	16.4	[illegible]	[illegible]	8.8
850	31	1,534	13.1	8.8	07	[illegible]
800	31	2,043	[illegible]	3.5	07	8.0
750	31	2,580	[illegible]	-4.2	07	7.4
700	31	[illegible]	7.2	-11.5	07	6.3
650	31	[illegible]	4.3	-16.9	06	6.8
600	31	4,402	.5	[illegible]	[illegible]	6.7
550	31	[illegible]	-3.8	[illegible]	05	6.4
500	31	5,840	-8.5	[illegible]	04	[illegible]
450	31	6,648	[illegible]	[illegible]	03	7.4
400	31	7,530	[illegible]	-39.4	02	[illegible]
350	31	8,504	[illegible]	[illegible]	01	8.4
300	31	9,587	[illegible]	[illegible]	34	9.6
250	31	10,824	[illegible]		32	12.8
200	31	12,278	[illegible]		31	[illegible]
175	31	13,118	-60.9		31	[illegible]
150	31	14,065	[illegible]		31	[illegible]
125	31	15,158	-71.0		32	14.9
100	31	16,461	[illegible]		33	[illegible]
80	31	17,738	-77.4		35	7.8
70	31	18,510	-74.4		01	4.5
60	28	19,417	-69.3		02	1.7
50	[illegible]	20,523	-63.2		31	[illegible]
40	[illegible]	21,912	-58.4		04	.9
30	[illegible]	23,748	[illegible]		07	3.4
25	[illegible]	24,931	-51.0		09	5.6
20	[illegible]	26,400	-47.6		09	7.1
15	14	28,322	-43.6		10	9.9
10	[illegible]	31,047	-42.1			

* SAULT STE MARIE, MICH. 990 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	221	-6.3	-8.8	24	.4
1000	31	142				
950	31	545	-6.4	-9.3	26	3.4
900	31	966	-7.9	-9.5	28	5.7
850	31	1,410	-8.7	-14.3	28	8.8
800	31	1,879	-9.6	-17.1	28	10.9
750	31	2,377	-10.8	-19.7	27	13.1
700	31	2,905	-13.1	-21.6	27	15.2
650	31	3,467	-15.8	-24.1	27	17.2
600	31	4,067	-19.1	-26.2	27	19.4
550	31	4,710	-23.0	-30.3	27	21.3
500	31	5,402	-27.5	-35.5	27	25.0
450	31	6,154	-31.9	-39.5	27	28.7
400	31	6,978	-36.8	-43.7	27	34.0
350	31	7,893	-42.7	-44.9	27	37.8
300	31	8,917	-48.4		27	41.7
250	31	10,104	-53.3		27	45.4
200	31	11,533	-55.3		27	44.4
175	31	12,384	-56.2		27	40.9
150	31	13,363	-56.3		27	36.2
125	30	14,523	-57.0		27	32.3
100	30	15,930	-58.5		27	27.5
80	30	17,331	-59.0		27	23.7
70	30	18,167	-59.9		27	21.7
60	29	19,131	-59.8		28	22.2
50	29	20,270	-59.9		28	20.3
40	28	21,674	-59.7		28	18.5
30	29	23,474	-59.8		28	16.9
25	27	24,616	-59.7		28	17.7
20	25	26,022	-59.5		29	19.4
15	25	27,826	-59.1		29	22.3
10	13	30,404	-56.3			
7	7	32,638	-53.7			

* SHEMYA, ALASKA 998 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	38	.6	-4.6	25	5.2
1000	31	22				
950	31	431	-2.6	-7.0	26	5.9
900	31	858	-6.0	-9.4	26	6.8
850	31	1,302	-9.1	-12.8	25	6.9
800	31	1,769	-12.0	-17.8	25	7.2
750	31	2,260	-15.0	-22.6	25	8.1
700	31	2,779	-18.2	-26.2	25	8.9
650	31	3,329	-21.6	-30.1	24	9.5
600	31	3,914	-25.3	-34.3	24	10.9
550	31	4,540	-29.8	-38.3	24	12.4
500	31	5,213	-34.4	-40.9	24	13.7
450	31	5,943	-38.9	-41.5	24	15.3
400	31	6,743	-43.6	-43.4	24	17.2
350	31	7,635	-48.0		23	17.1
300	31	8,642	-50.8		24	19.2
250	31	9,831	-50.5		24	18.9
200	31	11,291	-49.4		23	19.8
175	31	12,166	-49.4		23	19.0
150	30	13,182	-49.2		23	18.2
125	29	14,376	-49.9		23	19.0
100	29	15,835	-49.8		23	18.2
80	26	17,288	-50.2		23	16.4
70	26	18,160	-50.1		23	17.0
60	24	19,167	-50.0		23	15.6
50	23	20,364	-49.6		23	14.2
40	22	21,828	-48.4		24	14.6
30	21	23,739	-47.2		24	14.9
25	21	24,948	-46.4		24	15.2
20	21	26,432	-46.0		25	14.7
15	21	28,343	-46.8		25	15.9
10	15	31,083	-47.2		26	19.1
7	8	33,501	-48.5			

* SHREVEPORT, LA. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	79	9.9	8.7	10	.3
1000	31	153	9.8	7.4	13	1.1
950	31	581	10.5	5.7	21	3.9
900	31	1,032	10.5	2.4	23	6.9
850	31	1,508	10.3	-.9	23	9.2
800	31	2,011	8.6	-2.0	24	10.3
750	31	2,543	6.4	-6.5	24	11.6
700	31	3,106	3.7	-11.3	24	13.0
650	31	3,705	.6	-16.0	24	15.3
600	31	4,342	-3.3	-19.6	25	16.4
550	31	5,025	-7.6	-23.3	25	17.5
500	31	5,760	-12.5	-26.8	25	18.8
450	31	6,557	-17.8	-33.9	25	21.3
400	31	7,426	-24.5	-38.4	25	24.2
350	31	8,388	-31.7	-44.1	25	26.5
300	31	9,456	-40.2	-50.6	25	29.3
250	31	10,675	-49.7		25	32.7
200	31	12,102	-59.7		25	34.2
175	31	12,928	-63.9		25	34.2
150	31	13,867	-66.0		26	34.2
125	30	14,971	-67.7		26	29.1
100	30	16,304	-70.8		26	25.3
80	27	17,622	-71.0		26	14.9
70	25	18,416	-70.6		26	11.4
60	23	19,340	-67.6		27	8.2
50	22	20,443	-65.0		27	5.4
40	21	21,817	-61.7		28	5.4
30	19	23,616	-58.0		28	5.4
25	18	24,767	-55.9		29	7.7
20	17	26,195	-53.6		28	12.1
15	16	28,063	-49.9		27	18.2
10	13	30,767	-44.5		26	21.8
7	7	33,197	-41.0			

SPOKANE, WASH. [illegible] MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	720	-3.5	-5.9	20	2.7
1000	31	117				
950	31	527				
900	31	956	-2.9	-4.5	21	5.1
850	31	1,408	-4.3	-7.9	23	7.8
800	31	1,885	-6.6	-11.5	24	8.7
750	31	2,387	-9.2	-15.0	25	9.3
700	31	2,918	-12.3	-18.1	26	10.2
650	31	3,481	-15.3	-21.0	27	11.2
600	31	4,082	-18.9	-26.4	27	12.7
550	31	4,725	-22.9	-30.6	27	14.9
500	31	5,417	-27.6	-35.2	27	16.5
450	31	6,167	-32.5	-39.9	27	19.3
400	31	6,988	-38.1	-42.6	27	21.9
350	31	7,899	-43.8	-44.7	28	23.7
300	31	8,918	-49.7		29	26.2
250	31	10,100	-53.7		29	27.1
200	31	11,535	-53.2		29	24.8
175	30	12,397	-53.0		28	21.4
150	26	13,403	-52.9		29	18.9
125	26	14,574	-54.6		29	17.2
100	25	15,993	-54.8		29	14.5
80	25	17,417	-55.3		29	11.8
70	25	18,270	-55.4		29	11.0
60	25	19,252	-55.8		30	10.6
50	24	20,415	-55.9		30	9.4
40	23	21,836	-55.4		32	9.3
30	20	23,684	-54.2		33	8.9
25	17	24,858	-55.1		34	10.0
20	17	26,283	-55.1		35	12.5
15	13	28,105	-57.3		35	15.9
10	5	30,913	-53.9			

* SWAN ISLAND, W. I. 1013 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	30	10	25.5	21.7	07	4.7
1000	30	122	25.3	21.4	07	5.7
950	31	572	21.6	19.3	08	8.3
900	31	1,040	18.4	14.7	09	8.7
850	31	1,528	15.2	10.0	09	8.6
800	31	2,041	12.6	5.7	09	7.7
750	31	2,580	10.0	-.7	09	7.7
700	31	3,152	7.7	-7.4	09	7.7
650	30	3,760	5.1	-12.4	09	7.7
600	31	4,409	1.8	-17.7	10	8.4
550	30	5,105	-2.1	-22.7	10	8.7
500	31	5,855	-7.1	-26.9	10	8.0
450	30	6,668	-12.6	-32.1	09	7.2
400	29	7,555	-19.2	-36.2	09	3.9
350	29	8,537	-26.6	-42.9	10	.8
300	29	9,627	-35.4	-49.6	25	5.6
250	29	10,871	-45.2		24	10.9
200	28	12,331	-55.6		24	14.5
175	28	13,172	-60.7		25	13.6
150	27	14,121	-66.3		25	10.4
125	26	15,210	-71.9		25	4.2
100	24	16,505	-77.9		14	1.8
80	24	17,773	-79.3		10	4.4
70	24	18,536	-76.6		09	4.9
60	24	19,437	-70.8		07	3.2
50	23	20,536	-64.1		07	2.0
40	22	21,921	-58.4		09	1.3
30	19	23,747	-53.5		05	2.0
25	18	24,924	-51.7		07	3.2
20	16	26,384	-48.5		08	3.7
15	7	28,284	-43.5			

TAMPA, FLA. 1020 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	8	17.1	15.8	09	2.4
1000	31	175	18.6	15.7	11	4.2
950	31	616	17.1	12.9	13	6.1
900	31	1,076	14.8	9.0	14	4.7
850	31	1,559	13.2	.6	15	3.3
800	31	2,067	11.5	-4.1	18	2.4
750	31	2,604	9.6	-8.5	21	2.2
700	31	3,174	6.7	-13.6	23	2.4
650	31	3,778	3.5	-18.2	25	3.6
600	31	4,423	-.3	-21.1	25	4.9
550	31	5,113	-4.8	-25.7	26	6.3
500	31	5,856	-9.7	-30.1	26	7.6
450	31	6,660	-15.5	-34.6	27	8.6
400	31	7,537	-22.3	-39.1	26	10.6
350	31	8,507	-29.7	-44.4	27	12.1
300	31	9,583	-38.6	-51.9	27	13.8
250	31	10,809	-48.6		28	15.7
200	31	12,243	-58.7		28	19.2
175	31	13,074	-62.4		28	21.3
150	31	14,016	-66.2		27	21.1
125	30	15,116	-68.8		27	20.5
100	29	16,436	-74.0		27	15.5
80	28	17,726	-75.9		28	9.8
70	27	18,502	-74.5		29	5.8
60	27	19,409	-70.4		31	2.6
50	27	20,505	-65.6		32	3.0
40	27	21,876	-61.3		31	4.3
30	27	23,686	-55.5		28	6.2
25	27	24,855	-53.2		28	8.8
20	26	26,303	-50.2		27	10.3
15	24	28,202	-46.1		26	13.6
10	18	30,915	-40.5		26	20.2
7						

TOPEKA, KANS. 986 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	268	.0	-1.7	23	.5
1000	31	153				
950	31	565	.5	-2.7	23	3.2
900	31	1,000	1.5	-3.4	26	4.9
850	31	1,462	1.8	-6.9	26	6.3
800	31	1,951	1.4	-10.2	26	9.3
750	31	2,469	-.8	-13.5	26	12.0
700	31	3,017	-3.6	-15.6	26	15.6
650	31	3,599	-6.5	-18.5	26	17.6
600	31	4,221	-10.0	-22.1	26	20.4
550	31	4,887	-14.1	-26.9	26	23.7
500	31	5,603	-18.7	-31.4	26	27.5
450	31	6,381	-23.7	-36.0	26	31.3
400	31	7,232	-29.3	-41.7	26	35.3
350	31	8,176	-36.0	-45.7	26	37.2
300	31	9,226	-43.9		26	39.1
250	31	10,434	-51.5		27	41.8
200	30	11,859	-58.3		27	43.3
175	30	12,697	-59.9		27	41.1
150	30	13,656	-61.5		27	37.0
125	29	14,779	-62.5		27	31.3
100	29	16,151	-63.7		27	26.9
80	27	17,515	-63.7		27	19.9
70	27	18,336	-63.1		27	16.4
60	26	19,286	-62.9		27	14.2
50	23	20,413	-61.5		28	10.3
40	22	21,802	-60.1		28	7.7
30	19	23,615	-58.4		31	5.1
25	19	24,765	-57.5		32	5.4
20	19	26,180	-55.9		31	6.1
15	14	28,000	-55.0		30	8.1
10	8	30,684	-52.3			

+ TRUK, CAROLINE IS. 1009 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	2	28.2	23.9	06	5.1
1000	31	81	27.8	21.0	06	6.1
950	31	534	24.2	18.7	07	10.3
900	31	1,006	21.1	[illegible]	08	11.1
850	31	1,499	18.0	10.7	08	10.7
800	31	2,017	15.8	6.5	08	9.8
750	31	2,564	13.6	.1	08	10.2
700	31	3,142	10.7	-4.5	08	10.9
650	31	3,756	7.7	-10.7	08	11.6
600	31	4,411	4.0	[illegible]	08	13.6
550	31	5,112	-.4	-19.5	08	15.4
500	31	5,869	-4.5	-23.5	08	16.5
450	31	6,691	-9.0	-27.8	08	16.4
400	31	7,593	-14.9	[illegible]	[illegible]	13.6
350	31	8,592	-21.9	[illegible]	[illegible]	8.5
300	31	9,706	-30.1	-47.2	08	[illegible]
250	31	10,977	-40.2	-54.4	11	1.5
200	31	12,459	-52.6		15	2.5
175	31	13,309	-59.5		15	3.7
150	31	14,255	-67.4		12	3.6
125	31	15,332	-75.8		08	5.9
100	30	16,595	-83.3		09	13.3
80	30	17,840	-79.1		09	8.8
70	30	18,614	-72.6		22	.4
60	29	[illegible]	-67.2		27	5.2
50	29	20,644	-62.7		28	7.7
40	[illegible]	22,032	-59.3		27	6.7
30	[illegible]	23,858	-54.7		27	4.1
25	[illegible]	25,033	-51.8		22	.6
20	[illegible]	[illegible]	-49.7		11	4.8
15	[illegible]	28,379	-48.0		10	12.5
10	[illegible]	31,092	-41.8		19	21.8
7	[illegible]	33,552	-37.2			

* TUCSON, ARIZ. 925 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	31	789	4.4	.9	14	2.6
1000	31	152				
950	31	575				
900	31	1,019	8.1	-.5	16	2.4
850	31	1,489	6.1	-4.3	19	2.8
800	31	1,983	3.4	-7.4	23	5.1
750	31	2,505	1.1	-11.5	24	7.8
700	31	3,057	-1.8	-15.1	25	10.0
650	31	3,644	-4.5	-19.3	25	11.5
600	31	4,270	-8.2	-23.0	25	14.8
550	31	4,940	-12.2	-26.7	25	17.6
500	31	5,662	-17.3	-30.9	25	19.2
450	31	6,444	-22.0	-35.8	25	21.9
400	31	7,301	-27.8	-40.4	25	24.9
350	31	8,250	-34.3	-45.3	25	27.6
300	31	9,311	-42.3	-45.3	25	30.3
250	[illegible]	10,514	-50.7		25	31.9
200	[illegible]	11,942	-58.0		25	31.6
175	[illegible]	12,780	-59.7		25	29.0
150	[illegible]	13,741	-61.0		25	25.6
125	[illegible]	14,864	-63.6		25	23.6
100	[illegible]	16,223	-66.7		25	19.6
80	[illegible]	17,565	-65.5		25	14.9
70	[illegible]	18,378	-64.9		24	11.5
60	[illegible]	19,322	-63.9		25	7.9
50	[illegible]	20,441	-62.7		26	4.4
40	[illegible]	21,822	-60.1		26	2.4
30	[illegible]	23,631	-57.3		29	2.2
25	[illegible]	24,793	-55.5		30	[illegible]
20	[illegible]	26,219	-53.1		30	3.5
15	[illegible]	28,057	-51.0		[illegible]	[illegible]
10	[illegible]	30,674	-47.4			

* VANDENBERG AFB, CALIF. 1007 MB

Standard pressure surface (mb)	No. of observations	Dynamic height	Temperature	Dew Point †	Wind Direction	Wind Speed
SURFACE	29	100	6.5	3.9	08	1.2
1000	29	158	7.6	3.3	05	1.2
950	[illegible]	581	7.3	-1.1	35	2.1
900	[illegible]	1,025	5.0	-5.2	33	2.3
850	[illegible]	1,489	2.7	-9.6	32	3.4
800	29	1,978	.8	-12.6	31	4.5
750	[illegible]	2,495	-1.3	-15.1	30	6.2
700	29	3,042	-3.5	-19.3	30	8.8
650	[illegible]	3,625	-6.5	-22.0	30	10.4
600	[illegible]	4,246	-10.0	[illegible]	30	[illegible]
550	[illegible]	4,912	-14.1	[illegible]	30	[illegible]
500	[illegible]	5,628	-19.2	-32.7	29	[illegible]
450	[illegible]	[illegible]	-24.7	-37.5	29	[illegible]
400	[illegible]	7,250	-30.7	-42.1	29	[illegible]
350	[illegible]	[illegible]	-37.6	-45.2	28	22.4
300	[illegible]	9,231	-45.3		28	23.6
250	[illegible]	[illegible]	-53.1		28	25.3
200	[illegible]	[illegible]	-58.9		28	23.5
175	[illegible]	12,680	-60.0		28	21.0
150	[illegible]	[illegible]	-59.7		28	18.0
125	[illegible]	[illegible]	-61.9		26	16.2
100	[illegible]	[illegible]	-64.0		28	13.5
80	[illegible]	[illegible]	-63.7		28	8.1
70	[illegible]	[illegible]	-62.8		28	5.7
60	[illegible]	[illegible]	-61.8		28	4.1
50	[illegible]	[illegible]	-61.2		30	[illegible]
40	[illegible]	[illegible]	-59.1		30	2.3
30	[illegible]	[illegible]	-57.0		[illegible]	[illegible]
25	[illegible]	[illegible]	-55.7		[illegible]	[illegible]
20	[illegible]	[illegible]	-53.5		[illegible]	[illegible]
15	[illegible]	[illegible]	-51.9		[illegible]	[illegible]
10	[illegible]	[illegible]	-49.3			

See reference note at end of table

RAWINSONDE DATA

Average monthly values

DECEMBER 1971

Standard pressure surface (mb)	VICTORIA, TEXAS 1013 MB						* WAKE IS., PACIFIC AREA 1014 MB						* WALLOPS IS., VA. NASA 1022 MB						WAYCROSS, GA. 1016 MB						WASHINGTON DULLES INT. AP 1012 MB					
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	31	33	13.6	11.7	04	1.8	31	5	24.8	19.1	05	9.6	31	4	6.1	2.4	30	1.4	31	44	12.7	11.3	36	.2	31	85	3.3	-.7	29	1.6
1000	31	142	14.8	10.9	06	1.8	31	130	23.6	16.7	06	10.6	31	183	7.4	2.4	29	2.4	31	176	14.5	11.9	15	.7	31	181	4.6	-1.2	27	1.9
950	31	577	14.4	8.3	16	3.0	31	577	19.8	15.4	06	11.7	31	606	6.5	.1	28	6.2	31	611	14.2	10.0	18	4.0	31	599	4.8	-2.6	26	5.2
900	31	1,034	14.0	6.4	20	5.6	31	1,041	16.1	13.1	07	11.5	31	1,049	5.3	-3.9	27	9.1	31	1,067	13.2	6.2	19	4.5	31	1,048	3.4	-5.9	26	8.4
850	31	1,516	12.8	1.4	22	6.4	31	1,525	13.4	8.4	07	10.8	31	1,514	3.3	-6.1	28	11.1	31	1,547	11.3	2.4	21	5.1	31	1,503	1.9	-6.8	27	11.1
800	31	2,024	11.1	-1.9	23	7.7	31	2,034	12.1	-1.8	06	10.2	31	2,005	2.0	-9.5	27	12.4	31	2,052	9.7	-5.8	23	6.2	31	1,991	.9	-10.2	28	13.3
750	31	2,561	9.1	-7.1	23	8.1	31	2,575	11.8	-8.9	06	8.8	31	2,524	.1	-13.0	27	15.1	31	2,585	7.4	-11.5	24	7.0	31	2,508	-.7	-15.4	28	16.6
700	31	3,129	6.0	-10.0	23	9.3	31	3,149	9.4	-11.5	05	7.9	31	3,074	-2.3	-16.4	27	17.4	31	3,151	5.0	-16.8	25	8.5	31	3,057	-3.1	-19.8	28	18.9
650	31	3,733	2.5	-13.5	23	10.7	31	3,761	6.7	-16.1	04	8.1	31	3,660	-5.1	-19.0	27	20.4	31	3,752	1.7	-19.4	26	10.1	31	3,641	-5.6	-23.0	28	21.6
600	31	4,375	-1.3	-17.8	23	12.0	31	4,414	3.4	-18.4	03	8.4	31	4,285	-8.5	-22.0	27	24.0	31	4,392	-2.0	-22.5	26	11.7	31	4,265	-8.9	-25.7	28	24.2
550	31	5,063	-5.6	-22.2	23	12.9	31	5,113	-.9	-22.3	02	7.8	31	4,955	-12.3	-25.0	27	27.0	31	5,078	-6.4	-25.4	26	14.1	31	4,933	-13.2	-29.0	28	27.5
500	31	5,803	-10.9	-25.7	23	14.3	31	5,867	-6.0	-26.6	01	7.4	31	5,677	-16.8	-28.7	27	29.5	31	5,816	-11.3	-30.8	26	16.1	31	5,653	-17.6	-33.5	27	30.6
450	31	6,605	-16.0	-32.9	24	15.9	31	6,682	-11.8	-31.7	36	7.7	31	6,461	-21.9	-32.6	27	33.0	31	6,615	-17.0	-35.1	26	17.6	31	6,434	-22.7	-37.6	27	34.4
400	31	7,481	-22.7	-38.4	24	18.1	31	7,573	-18.4	-37.7	36	9.5	31	7,317	-27.8	-36.4	27	37.6	31	7,488	-23.6	-40.0	27	20.0	31	7,288	-28.6	-40.3	28	37.8
350	31	8,449	-29.9	-44.6	25	19.1	31	8,559	-25.4	-43.5	35	12.0	31	8,266	-34.8	-41.9	27	39.9	31	8,453	-30.9	-46.4	27	22.3	31	8,235	-35.1	-44.2	28	42.4
300	31	9,525	-38.6	-50.8	24	21.6	31	9,657	-33.1	-49.9	35	15.3	31	9,322	-42.6	-45.0	28	39.7	31	9,525	-39.4	-52.8	27	24.7	31	9,289	-42.9	-49.3	28	45.4
250	31	10,751	-48.7		25	23.3	31	10,914	-42.4		34	14.5	31	10,529	-51.7		28	41.6	31	10,747	-49.2		27	25.9	31	10,496	-51.5		28	49.4
200	31	12,183	-58.8		25	26.6	31	12,387	-53.3		32	13.2	31	11,947	-60.1		28	44.3	31	12,176	-59.5		27	28.1	31	11,914	-60.2		28	49.9
175	31	13,013	-63.3		25	27.5	31	13,235	-59.5		32	12.7	30	12,769	-62.7		28	43.5	31	13,003	-63.5		27	29.9	31	12,742	-62.2		28	46.8
150	31	13,952	-66.0		25	27.8	30	14,182	-66.5		32	11.1	29	13,715	-63.7		28	38.7	31	13,943	-66.1		27	30.1	31	13,692	-63.3		28	41.0
125	31	15,053	-68.0		25	25.5	27	15,261	-74.1		32	10.3	27	14,835	-65.4		27	33.7	31	15,045	-68.1		27	29.0	31	14,810	-64.2		28	35.0
100	29	16,377	-71.9		25	19.3	17	16,534	-80.0		34	6.6	25	16,187	-66.6		27	25.9	30	16,375	-72.0		27	22.1	30	16,172	-65.6		28	28.4
80	26	17,687	-73.0		25	11.4	14	17,785	-80.5		03	2.1	20	17,540	-65.9		28	16.9	29	17,681	-73.0		28	15.7	30	17,529	-65.7		28	22.3
70	26	18,471	-72.4		26	8.6	13	18,542	-77.2		08	3.2	17	18,354	-65.3		27	13.4	29	18,460	-72.1		28	10.9	29	18,342	-65.5		28	17.7
60	26	19,385	-68.8		25	6.1	12	19,443	-71.3		10	3.1	15	19,294	-64.8		27	11.0	29	19,381	-68.7		29	7.7	29	19,282	-64.8		28	14.5
50	25	20,486	-64.6		27	3.3	11	20,544	-64.8		12	2.3	15	20,414	-62.4		28	8.0	29	20,483	-65.0		29	5.9	29	20,398	-63.4		28	14.1
40	24	21,860	-62.0		27	3.5	11	21,925	-59.4		05	1.9	15	21,795	-61.2		27	5.8	28	21,857	-60.8		29	5.6	29	21,776	-61.7		28	14.2
30	21	23,659	-56.8		28	6.7	10	23,746	-56.1		06	1.3	15	23,594	-58.2		27	6.0	27	23,665	-56.4		29	7.7	27	23,569	-58.8		28	11.8
25	21	24,818	-55.1		28	9.5	10	24,912	-53.6		04	2.8	14	24,745	-56.5		27	7.0	27	24,829	-53.7		28	10.6	26	24,711	-57.7		28	13.7
20	20	26,251	-53.0		28	11.3	10	26,360	-49.5				14	26,169	-54.0		26	9.2	26	26,270	-51.1		27	13.5	24	26,129	-55.7		28	15.9
15	16	28,126	-48.9		27	12.4	9	28,263	-46.8				13	28,028	-51.3		25	15.7	22	28,156	-47.4		26	16.3	20	27,964	-53.5		27	26.5
10	12	30,838	-44.5				8	30,981	-41.9				13	30,681	-48.1		25	31.4	20	30,870	-43.1		26	23.8	16	30,617	-48.8		26	31.3
7							7	33,404	-41.5				11	33,060	-43.6				11	33,281	-38.5				9	32,977	-45.3			

Standard pressure surface (mb)	WINNEMUCCA, NEV. 869 MB					WINSLOW, ARIZ. 851 MB					YAKUTAT, ALASKA 1005 MB					YUCCA FLAT, NEV. 881 MB					YAP, CAROLINE IS. + 1008 MB				
	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.	No. of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed M.p.s.
SURFACE	30	1,312	-6.8	-9.9	18	1.2	31	1,487	-4.2	-6.6	18	.8	31	12	-4.9	-8.6	10	1.7	31	1,198	-4.6	-9.8	32	1.1	31	14	28.1	24.0	08	4.7
1000	30	201					31	198					31	54			08	2.5	31	191					31	83	27.0	22.1	08	5.9
950	30	609					31	613					31	461	-3.6	-8.2	10	2.4	31	602					31	535	23.6	19.2	08	11.2
900	30	1,036					31	1,045					31	887	-6.2	-10.8	14	1.8	31	1,032					31	1,006	20.5	15.6	08	11.6
850	30	1,486	-3.2	-8.5	20	2.2	31	1,499			16	1.0	31	1,332	-8.7	-13.5	18	1.6	31	1,487	.1	-8.0	36	2.1	31	1,499	17.6	10.6	09	11.3
800	30	1,965	-4.7	-9.9	23	4.6	31	1,983	-1.2	-7.0	23	3.2	31	1,800	-10.9	-15.4	22	2.0	31	1,971	-2.1	-10.2	20	.3	31	2,016	15.6	5.9	08	11.1
750	30	2,471	-7.2	-11.9	25	6.6	31	2,496	-3.4	-9.7	24	6.1	31	2,293	-13.4	-18.9	23	2.8	31	2,482	-4.3	-12.1	22	1.1	31	2,562	13.2	-1.5	09	11.0
700	28	3,009	-9.4	-15.4	27	8.0	31	3,048	-4.9	-14.8	25	8.0	31	2,815	-16.7	-22.8	25	4.0	31	3,024	-6.5	-15.7	25	2.5	31	3,139	10.2	-5.7	09	11.8
650	28	3,580	-11.8	-19.2	27	9.4	31	3,619	-7.9	-19.2	25	10.6	31	3,369	-20.0	-26.2	26	5.5	31	3,600	-9.3	-18.6	28	4.6	31	3,732	6.9	-10.3	09	13.4
600	27	4,186	-15.6	-23.3	27	10.3	31	4,238	-11.1	-23.6	25	12.0	31	3,958	-23.6	-30.1	27	6.8	31	4,215	-12.8	-22.8	28	6.6	31	4,405	3.1	-13.0	09	14.7
550	27	4,838	-19.8	-28.8	28	12.4	31	4,901	-15.1	-27.6	25	15.2	31	4,589	-27.5	-34.1	28	8.3	31	4,874	-17.2	-27.3	28	9.3	31	5,105	-1.1	-18.7	10	14.7
500	27	5,538	-24.7	-33.4	28	13.9	31	5,615	-19.5	-31.7	25	18.4	31	5,268	-32.2	-38.6	29	10.2	31	5,582	-21.9	-32.3	28	10.7	31	5,859	-5.4	-23.3	10	15.1
450	27	6,298	-29.6	-36.7	28	13.5	31	6,390	-24.8	-36.3	25	20.5	31	6,004	-37.1	-40.7	29	12.8	31	6,350	-26.4	-36.5	28	13.4	31	6,678	-10.2	-28.8	10	15.2
400	26	7,125	-35.6	-41.9	28	13.7	31	7,237	-30.7	-40.6	26	23.5	31	6,810	-42.2	-44.8	29	16.4	31	7,192	-32.1	-41.7	27	17.5	31	7,575	-16.1	-32.8	09	12.4
350	26	8,044	-41.7	-45.7	29	13.7	31	8,177	-36.6	-44.3	25	26.9	31	7,708	-46.1		30	20.0	31	8,126	-38.3	-44.1	27	19.2	31	8,571	-22.8	-39.1	09	9.6
300	24	9,063	-48.0		30	16.8	31	9,226	-44.0		25	29.4	31	8,723	-49.3		30	23.4	31	9,168	-45.1		27	20.2	31	9,679	-31.3	-46.9	09	7.7
250	24	10,252	-53.0		28	15.7	31	10,431	-50.9		26	32.9	31	9,915	-50.4		30	25.3	31	10,368	-51.5		27	23.3	31	10,945	-41.3		09	6.4
200	24	11,683	-55.2		28	15.7	31	11,862	-57.3		26	29.1	31	11,366	-51.3		30	23.6	31	11,800	-56.6		27	23.1	31	12,420	-53.6		10	5.9
175	24	12,534	-56.0		28	16.8	30	12,701	-59.0		26	27.1	31	12,234	-51.2		29	22.9	31	12,645	-57.7		27	21.5	31	13,266	-60.3		10	5.8
150	22	13,515	-56.0		28	14.7	30	13,665	-60.1		25	26.0	31	13,237	-51.1		29	22.1	30	13,614	-58.1		27	19.6	31	14,209	-68.1		10	6.2
125	22	14,671	-57.4		27	12.1	26	14,791	-62.0		25	22.6	31	14,422	-51.6		29	19.7	30	14,757	-60.4		27	17.3	31	15,283	-76.2		09	8.5
100	22	16,075	-59.3		28	10.3	25	16,161	-63.9		26	16.8	31	15,865	-52.7		30	19.7	30	16,142	-61.7		27	13.8	31	16,544	-83.6		10	15.1
80	21	17,473	-59.6		28	7.5	24	17,533	-63.0		26	12.3	31	17,305	-53.0		29	19.2	29	17,524	-61.7		26	8.8	31	17,788	-79.9		10	9.8
70	20	18,308	-58.8		29	6.1	24	18,354	-63.2		26	9.5	31	18,166	-53.3		29	20.6	29	18,352	-61.2		28	6.4	31	18,557	-73.7		10	1.7
60	19	19,279	-58.8		30	4.5	24	19,303	-62.6		27	7.5	31	19,158	-53.5		29	21.6	28	19,310	-60.5		27	4.9	31	19,472	-67.6		30	3.1
50	19	20,426	-57.9		31	2.8	23	20,431	-61.6		29	2.7	31	20,331	-53.7		30	21.4	28	20,448	-59.5		32	3.0	31	20,583	-63.3		28	4.2
40	18	21,843	-56.9		03	3.5	20	21,824	-59.2		01	.9	30	21,763	-54.0		30	23.6	23	21,856	-57.7		03	1.4	31	21,968	-59.3		26	3.2
30	16	23,685	-55.2		04	4.1	19	23,639	-56.8		02	2.7	30	23,611	-53.8		30	28.5	20	23,684	-55.9		03	4.0	31	23,788	-55.1		23	1.7
25	14	24,864	-53.6		04	6.4	17	24,784	-55.9		03	3.6	30	24,780	-54.8		30	30.3	20	24,847	-54.9		02	5.0	29	24,957	-52.9		11	1.6
20	13	26,286	-53.7		03	7.2	16	26,217	-54.6		03	4.2	27	26,221	-54.2		30	30.9	17	26,271	-54.6		33	5.1	29	26,408	-50.0		09	6.2
15	11	28,126	-54.0				12	28,061	-53.9				22	28,062	-56.0		30	35.0	14	28,113	-53.6		33	6.6	28	28,295	-48.1		10	12.1
10							6	30,655	-51.1				11	30,662	-56.8									21	33,422	-37.8		09	18.7
7																														

Note: All observations scheduled at 1200, G. c. t. Pressures shown under station names are the average monthly station pressures for the month of record, corrected to the height of the floors of the instrument shelters used for rawinsonde purposes. "Number of observations" refers to those of dynamic height only. Although the number of temperature observations at any given pressure surface is usually the same as for height, it is possible for temperature to be missing for one or more pressure surfaces of some observations. Dew Point averages are limited to those observations with temperatures warmer than -40°C. Observations of wind speed and direction are sometimes lost due to limiting angles, i.e., elevation angles less than 6° above the horizon, or any obstruction above the horizon.

The temperature and wind values are based on 15 or more observations at the surface or 5 observations at a standard pressure level for temperature and 10 for wind. Dew Point data are not published for standard pressure surfaces for which less than 5 observations are available. Dew Point data are computed and expressed on the basis of vapor pressure over water. Unless otherwise indicated, they are obtained from carbon hygristors.

These average values for standard pressure surfaces were obtained by rawinsondes; dynamic height (geopotential) in units of .98 dynamic meter, temperature and dew point in degrees Celsius, and resultant winds in tens of degrees and meters per second.

* Rawinsondes at this station were equipped with hypsometers to permit more accurate evaluations of pressure, and consequently height, at pressures lower than 50 mb. These rawinsondes were carried aloft by special high altitude balloons, in an effort to consistently reach higher altitudes.

\+ Observations for these stations are scheduled at 0000 G. c. t.

† Dew Point temperatures are based on a minimum of 5 observations. Therefore, due to the lesser number of Dew Point observations at the surface and higher levels comparison with dry-bulb temperatures should be made with care. Dew Point temperatures replaced Relative Humidity January 1967.

SOLAR RADIATION INTENSITIES

Tabulated in langleys per minute on a surface normal to the direction of the sun. DECEMBER 1971

ALBUQUERQUE, N. MEX.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.19	3.35	2.51	1.67	*	1.67	2.51	3.35	4.19
Dec.									
5	1.02	1.13	1.24	1.37	(1.38)	1.31	1.19	1.07	1.0[illegible]
6	1.04	1.15	1.23	1.36	1.36	1.35	1.19	1.08	.98
7	----	(1.06)	(1.10)	(1.32)	(1.32)	(1.30)	----	----	----
9	----	----	(1.11)	(1.32)	(1.26)	(1.27)	(1.07)	.96	.86
10	.99	1.09	1.22	1.36	1.38	1.35	1.20	1.10	1.01
11	.96	1.06	1.18	1.31	1.33	1.30	1.15	1.05	.95
12	(.97)	1.15	1.25	1.40	1.40	1.36	1.24	1.13	1.03
15	.96	1.09	1.21	1.35	1.36	1.36	1.22	1.09	1.06
16	(.98)	1.08	1.18	----	1.30	(1.25)	1.20	1.08	.99
17	1.04	1.12	1.24	1.35	1.37	(1.27)	1.19	1.08	.97
19	----	----	----	----	----	----	(1.07)	----	----
20	----	----	----	----	1.30	1.36	1.37	H(1.07)	H(.96) H(.85)
21	----	----	----	----	(1.37)	(1.35)	----	----	----
23	K(.91)	K(.99)	K(1.12)	----	1.28	----	1.25	----	----
25	----	----	----	----	1.28	1.26	1.24	(1.09)	.97
27	.97	1.08	1.18	----	1.35	1.36	1.35	(1.06)	(.86)
28	----	----	----	----	----	----	1.24	1.12	1.03
30	1.06	1.14	1.25	----	1.40	1.40	1.37	1.19	1.06
Averages	1.01	1.11	1.22	----	1.34	1.35	1.33	1.20	1.07

TUCSON, ARIZ.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.[illegible]	3.[illegible]	2.71	1.[illegible]	*	1.83	2.71	3.[illegible]	4.[illegible]
Dec.									
1	0.82	0.96	1.09	1.22	1.31	----	----	----	----
2	.66	.80	.97	1.19	1.31	1.27	1.02	[illegible]	[illegible]
3	.89	.98	1.11	1.27	----	1.28	1.19	----	----
5	----	----	----	----	----	1.25	1.07	[illegible]	[illegible]
6	.94	1.06	1.19	1.36	1.42	1.36	----	----	----
7	.91	1.06	----	----	----	----	----	----	----
9	.78	.92	1.03	1.30	1.39	1.36	1.17	[illegible]	[illegible]
10	.99	1.10	1.23	1.39	1.43	1.38	1.19	[illegible]	[illegible]
11	[illegible]	1.14	1.25	1.39	1.44	1.38	1.21	[illegible]	1.01
12	1.06	1.16	1.29	1.44	1.46	1.39	1.22	1.1[illegible]	1.02
13	.98	----	----	----	----	----	----	----	----
14	----	----	----	----	----	1.33	----	----	[illegible]
15	1.08	1.17	1.30	1.44	1.46	1.40	1.21	1.08	1.[illegible]
16	1.00	1.11	1.22	1.27	1.28	1.37	1.26	1.13	1.03
19	.86	.95	1.09	1.31	1.39	1.33	1.19	1.09	[illegible]
20	.99	1.07	1.20	1.36	1.41	1.33	1.17	1.03	[illegible]
21	----	----	----	1.32	----	----	----	----	----
23	----	----	----	1.28	----	----	----	----	----
25	.93	1.01	1.14	1.28	1.31	----	----	----	----
27	1.01	1.12	1.20	----	----	1.33	----	----	----
29	----	----	1.17	1.37	1.43	1.37	1.22	1.13	[illegible]
30	.90	1.04	1.16	----	----	1.33	1.24	1.09	[illegible]
Averages	0.94	1.04	1.16	1.32	1.39	1.34	1.18	1.06	0.96

OMAHA, NEBR.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.78	3.82	2.87	1.91	*	1.91	2.87	3.82	4.78
Dec.									
9	0.50	HS0.96	HS1.06	----	HS1.16	----	----	----	----
10	----	----	----	----	----	----	----	HS1.08	HS1.02
12	----	----	HS1.12	----	1.26	----	HS1.14	HS .86	HS .78
15	----	----	----	----	----	----	HS1.14	----	----
16	HS .92	HS1.06	HS1.18	----	HS1.24	----	----	----	----
17	----	HS1.10	HS1.12	----	HS1.27	----	HS1.14	HS1.00	HS .86
18	HS .95	HS1.04	HS1.20	----	HS1.25	----	HS1.12	HS .88	HS .72
31	HS1.00	HS1.12	HS1.22	----	HS1.28	----	----	----	----
Averages	0.84	1.06	1.15	----	1.24	----	1.16	0.96	0.85

MADISON, WIS.

Date	Sun's zenith distance: A.M. 78.7°	75.7°	70.7°	60.0°	*	P.M. 60.0°	70.7°	75.7°	78.7°
	Air mass: 4.69	3.75	2.81	1.88	*	1.88	2.81	3.75	4.69
Dec.									
1	M 0.93	S 1.04	S 1.16	----	S 1.25	----	S 1.14	S 1.02	S 0.92
2	I .79	I .83	----	----	----	----	----	----	----
17	----	----	----	----	----	----	S 1.21	S 1.07	S .98
Averages	0.86	0.94	1.16	----	1.25	----	1.18	1.05	0.95

( ) Clouds Present
* Valves corresponding to true solar noon
BD Blowing Dust
BN Blowing Sand
D Dust
DI Intense Dust
DM Moderate Dust
DS Slight Dust
F Fog
GF Ground Fog
H Haze
HI Intense Haze
HM Moderate Haze
HS Slight
I Intense Haze-indeterminable
K Smoke
KI Intense Smoke
KM Moderate Smoke
KS Slight Smoke
M Moderate Haze-indeterminable
N Sand
S Slight Haze-indeterminable

Langley is the unit used to denote one gram calorie per square centimeter. An Explanation of the formula used in computing the air mass values for each station listed above appears in the February 1957 issue, Vol. 8, No. 2, page 63, of this publication.

SOLAR RADIATION TOTALS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
ALBUQUERQUE N.M.	60	142	147	205	301	291	253	79	304	303	---	296	101	148	305	305	312	134	178	284	278	145	266	158	268	185	278	158	162	290	251	220
AMES IOWA	136	86	164	38	96	66	35	25	203	60	105	172	106	41	64	171	228	208	80	50	208	---	---	---	---	---	---	---	---	---	---	---
ANNETTE ALASKA	6	59	81	20	63	26	2	8	39	16	19	74	29	64	8	30	60	8	51	---	---	57	75	68	78	34	41	68	19	31	18	40
APALACHICOLA FLORIDA	303	39	180	136	71	216	90	180	118	276	132	294	202	282	---	239	310	315	196	188	137	286	281	296	316	311	304	250	---	299	168	221
ARGONNE NAT. LAB.	214	194	109	73	25	48	79	60	19	36	184	114	196	25	29	65	126	98	60	52	163	183	94	126	17	35	18	185	74	39	173	94
ASTORIA OREGON	---	---	34	3	8	114	---	3	47	---	16	14	5	39	71	18	45	105	59	7	6	5	11	18	31	131	136	6	83	28	75	41
ATLANTA GEORGIA	99	115	60	56	42	49	270	201	138	51	266	156	262	129	71	139	35	287	223	67	229	264	179	228	232	266	240	155	91	139	237	159
BARROW ALASKA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BETHEL ALASKA	81	51	68	48	14	13	16	30	14	18	19	15	17	12	20	20	9	19	45	13	21	10	8	9	7	10	13	22	19	14	20	22
BISMARCK N.DAK.	158	---	43	110	139	41	82	183	107	198	198	200	88	115	141	194	108	130	94	162	76	52	50	92	159	56	121	195	106	190	165	125
BLUE HILL MASS.	201	207	193	206	202	25	122	17	67	154	168	103	180	116	21	169	99	86	170	25	123	195	174	32	193	57	19	81	138	23	142	120
BOISE IDAHO	190	56	235	96	108	111	221	67	201	128	180	125	159	94	107	128	148	237	133	96	86	115	184	68	31	45	237	91	69	109	104	128
BROOKINGS SOUTH DAKO	70	100	83	98	173	185	80	127	209	174	220	181	113	73	56	141	197	187	89	120	166	69	90	48	54	104	150	218	96	159	174	129
BROWNSVILLE TEXAS	56	68	419	50	64	414	270	262	231	366	350	221	239	369	325	272	48	139	255	329	352	377	332	300	345	275	277	237	323	323	329	265
BURLINGTON VERMONT	125	205	66	184	149	14	49	64	30	83	137	88	105	88	2	73	148	90	158	57	26	177	122	1	201	7	88	47	53	10	149	90
CAPE HATTERAS N.C.	300	304	27	126	286	188	119	70	269	182	76	133	257	211	173	245	17	230	212	16	144	241	221	226	273	246	271	238	259	186	211	192
CARIBOU MAINE	140	158	106	162	170	64	---	113	32	57	27	101	72	122	92	38	101	119	166	64	86	129	129	33	146	54	159	120	76	113	153	103
CHARLESTON S.C.	128	182	28	108	92	144	147	269	155	184	118	195	230	130	215	---	199	272	244	22	83	272	220	259	255	285	280	248	215	253	87	184
CLEVELAND OHIO	---	---	---	---	---	33	---	33	51	82	215	91	202	15	77	28	111	111	82	45	58	188	93	15	76	20	52	21	177	124	107	84
COLUMBIA MISSOURI	101	229	104	78	47	42	47	84	35	24	268	39	147	17	129	102	255	242	36	47	32	194	170	172	135	52	55	193	44	131	260	113
DAVIS CALIFORNIA	238	160	48	231	248	237	280	241	81	248	158	59	263	89	259	252	251	247	241	153	44	146	214	96	90	158	45	251	121	246	242	182
DODGE CITY KANSAS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	290	305	289	295	---	297	268	242	196	266	96	91	163	37	271	304	---
EL CENTRO CALIF. NPF	303	306	---	---	---	296	177	311	311	300	297	293	180	303	300	311	165	249	282	289	161	97	196	122	141	273	277	298	300	308	272	254
EL PASO TEXAS	327	159	307	94	321	344	280	272	222	348	340	331	340	289	329	270	340	58	289	338	329	272	251	318	327	305	270	102	166	291	106	269
EPPLEY NEWPORT R.I.	---	208	196	210	207	27	78	24	79	133	158	106	190	142	12	---	68	70	150	11	161	199	192	25	196	33	34	73	148	2	116	112
FAIRBANKS ALASKA	10	5	4	14	5	5	1	2	13	12	8	1	1	1	1	2	---	1	3	5	2	9	2	3	2	2	1	12	3	---	3	5
FLAMING GORGE UTAH	52	233	182	242	145	146	153	284	188	234	169	125	213	160	253	254	270	141	242	---	252	159	172	137	126	151	---	163	239	232	227	191
FORT WORTH TEXAS	90	16	54	43	47	31	266	48	24	306	298	298	63	93	276	178	143	287	244	285	278	61	203	255	228	198	180	105	75	---	148	161
FRESNO CALIFORNIA	263	42	79	138	259	104	222	266	189	103	215	41	64	227	146	239	258	213	230	228	135	62	156	93	64	249	131	263	158	73	260	167
GAINESVILLE FLORIDA	395	40	173	164	179	198	167	154	173	204	380	386	395	309	346	278	334	315	374	300	23	154	117	303	371	383	365	374	420	386	309	273
GENEVA NEW YORK	100	180	56	128	152	9	16	23	9	37	168	103	164	39	37	---	40	113	51	43	23	164	98	6	130	13	19	6	147	15	170	75
GENEVA # 2 N Y	103	198	68	146	196	14	17	22	11	42	194	125	184	42	43	130	44	134	59	51	28	190	110	7	137	7	21	8	---	22	193	85
GLASGOW MONTANA	---	106	137	146	64	67	128	153	139	155	160	161	113	122	80	136	70	82	139	126	98	102	78	68	83	74	148	163	134	173	100	117
GLOUCESTER POINT VA	266	260	53	271	208	181	40	39	101	187	236	163	246	160	132	202	44	268	221	37	166	255	190	188	224	216	240	208	210	140	152	178
GRAND JUNCTION COLO.	288	135	216	290	122	79	131	275	282	271	170	151	61	248	142	---	285	180	245	239	233	51	46	71	136	77	227	146	234	262	269	185
GREAT FALLS MONTANA	182	150	61	120	111	76	187	99	167	81	152	100	178	167	71	131	139	94	68	125	152	80	94	74	93	38	174	174	92	166	100	119
GREENSBORO N.C.	230	265	22	157	137	101	83	258	125	76	250	142	252	65	106	123	29	276	214	25	118	256	210	194	252	205	243	131	231	95	228	165
INDIANAPOLIS INDIANA	242	239	132	108	50	33	45	60	32	49	253	115	150	13	142	85	186	186	53	80	92	222	77	58	24	37	59	226	57	111	98	107
ITHACA NEW YORK	95	131	92	156	223	18	40	20	18	78	208	154	213	66	29	103	80	122	71	31	26	216	151	5	150	13	29	27	203	26	134	95
LAKE CHARLES LA.	61	51	125	70	1	86	319	102	219	250	227	192	125	202	90	264	38	307	143	262	294	216	299	137	260	222	211	228	148	219	143	178
LAKELAND FLORIDA	348	163	106	340	234	252	295	316	250	286	334	335	263	281	335	320	255	248	314	316	253	320	264	294	264	296	348	324	330	337	330	289
LANDER WYOMING	250	165	141	221	216	203	151	236	211	183	197	146	220	120	171	211	190	214	210	188	205	148	134	163	158	116	185	184	180	162	160	182
LARAMIE WYOMING	283	201	206	234	182	170	111	237	197	206	218	192	166	231	213	237	230	161	218	238	237	130	140	119	208	152	228	210	225	202	211	200
LAS VEGAS NEVADA	252	184	237	237	262	253	270	269	255	235	260	224	89	250	233	255	231	144	244	237	147	52	90	30	123	226	127	146	247	250	231	203
LEXINGTON KENTUCKY	222	208	84	163	30	13	57	33	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
LITTLE ROCK ARKANSAS	225	45	86	26	26	31	61	33	16	280	283	266	67	51	271	82	175	283	34	156	239	244	114	27	120	205	90	191	53	277	252	139
LOS ANGELES CALIF.	292	135	181	296	291	259	306	283	265	142	293	256	298	271	282	271	204	175	218	264	80	35	93	8	102	210	70	82	275	274	284	210
LOS ANGELES CALIF.U	263	139	180	282	287	251	308	280	260	157	286	222	294	236	189	283	220	185	190	271	92	30	112	19	64	235	79	71	274	279	295	204
MADISON WISCONSIN	232	182	147	91	76	74	51	74	105	39	181	131	86	28	37	197	201	68	89	120	193	176	88	180	28	32	26	207	122	165	206	117
MANHATTAN KANSAS	76	60	62	23	32	154	39	18	64	180	210	248	60	35	238	259	260	236	123	165	72	60	141	199	119	43	122	227	22	253	269	131
MATANUSKA ALASKA	---	33	19	---	9	8	3	6	28	9	23	2	14	7	8	8	2	9	13	21	22	22	7	16	7	17	20	11	13	14	10	13
MIAMI FLORIDA	308	272	203	284	257	272	333	259	302	337	302	269	321	303	316	243	325	246	232	317	308	92	123	299	326	265	262	315	298	356	---	278
MEDFORD OREGON	154	42	85	40	37	103	210	42	120	97	63	102	122	77	150	149	39	16	15	30	38	109	98	54	126	156	191	143	81	105	40	92
MIDLAND TEXAS	25	94	303	52	103	360	344	52	60	348	342	334	301	210	299	171	336	187	306	335	334	326	310	289	325	299	313	209	245	309	199	249
NASHVILLE TENNESSEE	205	139	70	68	18	31	54	96	54	138	254	68	228	72	197	174	150	256	51	169	75	247	69	55	56	111	149	170	105	196	243	128

SOLAR RADIATION TOTALS Continued

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
NEW YORK CENTRAL PRK	235	249	196	213	228	59	38	58	30	100	225	44	226	105	19	192	116	142	116	34	121	240	177	14	207	46	40	79	216	19	224	129
NORTH OMAHA NEBRASKA	150	111	125	77	126	124	55	47	191	165	39	231	69	61	204	219	237	223	99	79	32	32	112	147	44	115	214	204	30	186	244	129
OAK RIDGE TENNESSEE	196	188	56	175	71	30	110	48	48	39	244	41	235	137	31	77	81	258	167	42	126	249	69	121	128	198	129	40	178	36	232	122
OKLAHOMA CITY OKLA.	43	23	85	53	41	53	223	21	17	340	339	156	153	82	304	101	280	267	251	257	208	89	237	240	247	255	101	188	37	281	230	168
PALMER AAES ALASKA	35	25	14	39	10	8	4	5	18	10	26	3	11	5	5	6	3	7	10	13	16	15	4	12	5	11	14	7	9	11	8	12
PHOENIX ARIZONA	196	278	263	146	287	259	78	239	279	283	262	282	45	266	276	279	270	183	248	269	206	66	232	229	202	96	255	238	276	276	167	224
PORTLAND MAINE	194	193	165	191	190	40	149	156	29	140	128	92	157	120	17	89	152	69	167	35	174	186	139	16	179	92	59	138	121	30	140	121
RAPID CITY S.DAK.	---	171	142	126	90	86	122	154	129	---	185	184	169	171	156	161	148	173	122	134	108	53	131	88	166	78	187	178	120	218	115	140
RENO NEVADA	205	126	92	176	137	130	226	154	195	189	192	100	153	199	197	203	210	140	195	209	116	46	144	115	21	63	17	115	133	144	154	146
RICHLAND 25 NW WASH.	70	37	38	39	116	62	185	59	173	120	62	113	106	115	184	113	145	73	85	143	38	54	67	94	84	94	177	41	122	61	121	97
RIVERSIDE CALIFORNIA	367	287	248	346	330	315	345	342	314	178	306	308	298	324	310	329	290	267	285	297	141	69	132	32	108	232	49	77	314	338	339	255
RUSTON LOUISIANA	217	38	28	31	18	43	212	185	99	289	282	244	116	112	269	48	80	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SAINT CLOUD MINN.	129	73	73	58	85	101	59	87	185	88	177	188	101	53	81	136	199	80	84	97	149	55	36	109	53	57	70	195	91	138	141	104
SALT LAKE CITY	222	129	74	158	80	84	176	233	88	197	181	70	234	114	149	166	248	172	226	138	196	33	90	26	139	74	181	82	163	210	194	146
SAN ANTONIO TEXAS	47	86	165	74	99	319	239	70	30	357	338	283	61	191	319	186	61	154	174	338	349	348	191	152	206	107	160	183	173	111	45	181
SANTA MARIA CALIF.	296	87	157	279	287	278	301	292	---	---	283	112	270	281	278	282	272	242	262	262	86	98	124	133	103	230	179	259	261	284	289	226
SAULT STE MARIE MICH	178	173	69	90	22	32	64	22	24	10	161	147	63	39	13	54	62	150	48	103	101	91	79	52	28	67	33	96	79	33	120	74
SEATTLE TACOMA WASH.	93	32	79	16	40	71	100	36	46	22	47	33	21	41	113	44	16	31	26	15	40	62	18	70	30	126	159	37	58	61	52	53
SPOKANE WASHINGTON	148	35	132	49	78	137	172	54	139	98	135	93	82	109	104	50	105	95	63	146	48	57	89	132	116	68	112	79	104	58	105	97
STERLING VIRGINIA	273	278	80	273	168	31	29	24	28	36	253	213	248	84	86	223	54	---	170	76	149	250	217	75	135	88	160	89	176	54	125	138
SWAN ISLAND m.i.	---	---	---	---	---	344	380	352	340	369	246	366	270	382	250	340	229	289	382	344	344	330	320	261*	337*	325*	335*	347	277*	324	233	320
TAMPA FLORIDA	339	180	119	274	232	331	297	329	256	315	326	334	331	322	327	317	309	264	262	318	---	328	293	302	252	328	332	299	333	340	339	298
TUCSON ARIZONA	228	333	310	44	298	332	37	198	335	341	341	347	111	248	338	336	281	155	316	321	237	51	248	275	300	33	269	91	315	---	---	244
UPPER MARLBORO MD.	256	263	83	249	226	91	24	36	32	67	238	134	233	79	80	196	27	215	190	77	82	242	226	67	147	99	160	81	201	53	100	137
WAKE ISLAND PACIFIC	442	450	402	458	470	361	334*	433*	400	399	396	308	424	404	440	370	415	437	318	433	433	405	423	412	261	431	418	404	428	373	321	400

Note.--Langley is the unit used to denote one gram calorie per square centimeter. Values with an asterisk are interpolated.

The solar radiation data in this table form the basis for the analyses in Charts VII, A, and B, of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

1 Indicates Urban sites

NET RADIATION

Net radiation in langleys per day (8 a.m. to 8 a.m.) at Palmer, Alaska. DECEMBER 1971

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys	- 85	- 64	- 78	-111	- 25	- 26	- 48	- 44	-139	- 78	-121	- 28	- 52	- 34	- 23	- 29	- 20	- 19	-150	-163	-149	- 79	- 11	- 12	- 20	- 17	- 82	- 97	- 84	- 76	- 57	-67

He measurement is made with a CSIRO FUNK net exchange radiometer over a plot of sod. The value represents the total incoming minus the total outgoing radiation of all wave lengths.

These data are of an experimental nature and are published as received from the Palmer Exp. Station. The instrument with which they were measured has not been checked by the NOAA, National Weather Service.

SOLAR ULTRA-VIOLET RADIATION DATA

Daily totals and monthly average (< 3900 Å) at Ames, Iowa

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
Langleys								1.11	5.28	2.43	3.75	4.97	3.45	1.72	2.64	4.97	5.79	5.38	2.94	2.03	4.77	3.25	2.23	3.55	1.42	3.04	3.25	5.08	2.13	0.50	0.29	3.67

These data are from an E - V Eppley total ultra violet sensor and Speedmomax H (Leeds Northrup) Recorder. It is at the same location (Agronomy Building, Iowa State University, Ames) as the published total solar radiation instrumentation. This instrument has not been checked by the NOAA, National Weather Service.

TOTAL OZONE DATA

These provisional ozone data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code A S Ω Ω Ω defined in the August 1962 WMO circular entitled "PUBLICATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA."

Units: Milli-atmo-cms.

Station	Day of month																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean O_3
	Data not received in time for publication.																															

The spectrophotometer measures the total amount of ozone in the atmosphere, i e , the amount contained in a vertical column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of ozone in this column (coded Ω Ω Ω) is expressed in terms of a thickness of a layer it would occupy at standard temperature and pressure, e g , 350 milli-atmo-cm ozone implies an ozone layer 0 350 centimeter thick. The code A S designates the type of measurement made

RAWINSONDE DATA

Average monthly values

* VANDENBERG AFB, CALIF. 1008 MB

Standard pressure surface (mb)	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed	No of observations	Dynamic height	Temperature	Dew Point †	Resultant Wind Direction	Resultant Wind Speed
SURFACE	31	100	7.9	4.3	08	1.2																								
1000	31	167	10.3	4.7	05	1.3																								
950	31	595	11.4	-1.5	36	3.0																								
900	31	1,047	10.6	-5.1	34	2.7																								
850	31	1,521	9.0	-8.1	33	4.0																								
800	31	2,021	6.7	-10.0	33	5.1																								
750	31	2,548	4.1	-12.9	32	6.3																								
700	31	3,106	1.3	-16.4	32	7.8																								
650	31	3,699	-2.4	-20.3	32	8.8																								
600	31	4,329	-6.6	-24.2	31	9.8																								
550	31	5,002	-11.3	-27.8	31	11.3																								
500	31	5,726	-16.6	-31.8	31	12.7																								
450	31	6,509	-22.3	-35.9	31	13.7																								
400	31	7,363	-28.8	-39.9	31	13.4																								
350	31	8,307	-36.2	-47.0	31	12.9																								
300	31	9,386	-44.7		31	12.0																								
250	31	10,550	-54.2		31	13.0																								
200	31	11,957	-60.0		30	15.9																								
175	31	12,791	-60.1		29	16.8																								
150	31	13,751	-61.1		29	15.3																								
125	31	14,878	-63.1		30	16.0																								
100	31	16,241	-65.7		29	12.4																								
80	31	17,590	-67.2		29	9.7																								
70	31	18,397	-66.6		30	9.2																								
60	31	19,331	-65.8		30	7.6																								
50	31	20,443	-64.1		32	6.8																								
40	31	21,813	-63.4		32	4.5																								
30	28	23,591	-61.2		34	3.6																								
25	24	24,726	-59.8		33	1.4																								
20	27	26,139	-57.7		02	1.6																								
15	25	27,977	-54.4		30	2.4																								
10	29	30,643	-48.3		29	4.7																								
7	12	33,058	-43.1																											

SOLAR RADIATION TOTALS - LATE REPORTS

Daily totals and monthly averages of solar radiation (direct and diffuse) received on a horizontal surface, tabulated in langleys.

Station	Day of month																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg
MAY 1971																																
INYOKERN CALIFORNIA	662	647	678	674	624	624	486	647	647	502	601	674	599	694	687	720	722	729	677	722	703	708	712	700	698	609	585	649				649
SEATTLE WASH. UNIV.	442	535	552	92	124	416	564	280	571	551	569	203	326	436	331	121	568	477	219	561	561	603	329	311	366	299	557	600	165	380		380
UPPER MARLBORO MD	606	326	339	693	584	247	126	137	671	654	670	200	214	690	354	113	692	699	667	593	230	561	761	389	335	617	409	198	162	77	513	435
JUNE 1971																																
INYOKERN CALIFORNIA	751	535	690	700	725	598	698	692	694	713	702	701	716	716	703	703	715	722	742	738	725	730	735	744	738	733	732	726	723	711		708
PALMER AAFS ALASKA	262	403	535	568	676	702	412	429	308	247	201	159	264	188	346	462	328	484	451	444	241	671	597	671	664	604	356	184	113	248		401
PROSSER WASHINGTON	494	397	229	697	693	668	694	746	612	349	724	476	560	759	766	686	584	622	727	568	647	731	688	478	744	665	483	625	755	690		624
SEATTLE WASH. UNIV.	284	119	59	364	619	381	431	341	548	237	362	465	388	424	373	452	465	466	492	491	600	315	368	179	435	137	434	142	171	474		362
STATE COLLEGE PENN.	625	622	330	563	368	444	449	510	522	691	559	319	269	266	47	135	418	556	509	540	308	545	344	486	567	234	526	420	411	197		417
UPPER MARLBORO MD	713	332	582	625	618	547	546	647	463	623	664	330	392	518	73	315	738	690	591	694	549	537	361	522	621	516	555	430	297	523		516
JULY 1971																																
PROSSER WASHINGTON	706	767	756	697	649	707	684	670	317	568	728	732	---	743	691	688	701	641	604	564	687	682	659	660	757	636	598	625	612	591	596	651
SEATTLE WASH. UNIV.	364	542	635	211	482	413	489	253	354	224	452	499	624	619	609	619	601	586	501	548	561	404	299	470	564	547	591	481	523	491	199	472
STATE COLLEGE PENN.	278	583	676	647	51	524	599	598	316	443	111	661	553	480	619	466	375	622	198	399	611	547	481	264	554	440	538	444	185	118	135	403
TUCSON ARIZONA	747	732	693	742	443	445	688	713	721	736	706	743	737	571	737	584	736	656	737	683	602	688	696	710	730	707	724	741	665	633	648	678
AUGUST 1971																																
INYOKERN CALIFORNIA	597	579	625	537	611	510	625	612	582	612	571	580	591	524	582	563	600	595	554	591	602	595	436	277	568	534	568	431	566	606	579	561
SEATTLE WASH. UNIV.	396	551	487	418	496	505	516	511	514	514	507	521	304	432	506	488	498	493	472	387	224	364	476	503	518	47	464	445	367	218	242	447
STATE COLLEGE PENN.	125	272	197	88	583	562	566	563	521	400	357	603	535	573	254	561	569	547	362	217	187	364	562	574	412	182	39	385	408	447	286	405
TUCSON ARIZONA	705	705	572	708	592	513	664	656	642	594	671	666	657	627	476	618	541	521	623	481	630	571	652	466	447	583	478	340	428	517	479	581
UPPER MARLBORO MD	525	818	538	338	565	661	676	637	594	509	424	671	680	636	546	437	419	350	360	491	440	245	548	635	592	452	44	639	527	511	512	561
SEPTEMBER 1971																																
STATE COLLEGE PENN.	98	138	393	346	245	320	397	362	439	382	117	164	336	260	440	82	149	203	24	95	318	344	112	464	394	33	108	101	251	217		240
TUCSON ARIZONA	482	492	581	632	625	585	385	606	638	583	585	597	609	590	589	589	453	328	567	602	589	477	564	576	578	578	568	547	270	202		515
UPPER MARLBORO MD	114	140	468	467	192	504	455	425	436	425	245	135	424	---	---	---	---	---	---	---	---	---	---	493	440	97	195	384	347	202		---
OCTOBER 1971																																
SEATTLE WASH. UNIV.	207	309	121	290	266	75	274	292	233	192	132	233	160	86	265	306	139	87	172	230	147	67	125	157	81	126	273	268	137	69	89	180
STATE COLLEGE PENN.	18	35	263	41	237	266	249	384	126	38	239	319	260	288	302	117	78	327	331	123	315	82	106	8	2	41	125	218	157	249	18	136
SWAN ISLAND W.I.	218	465	507	464	466	115*	267	374	462	471	346	454*	437	457*	464*	479	411	438	417	493	488*	387*	429	419	433	397	447	449	455	437	431	408
TUCSON ARIZONA	461	499	505	494	453	418	447	485	490	362	370	485	480	481	431	324	137	459	493	488	464	468	373	38	275	446	456	454	428	468	448	414
NOVEMBER 1971																																
LARAMIE WYOMING	335	323	322	337	155	337	337	277	143	308	219	242	163	298	119	64	169	296	247	274	271	145	206	181	238	223	79	179	173	484		227
SWAN ISLAND W.I.	408	364	405	347	439*	376	449	438	373	172	302	177	89	314	301	405*	384	338	63*	485	370	183*	285	335	311	311	---	387	387	---		345

Note. - Langleys is the unit used to denote one gram calorie per [illegible] centimeter.

Values with an asterisk are interpolated.

U Indicates Urban sites.

Tucson is corrected by a factor of 1.2 from July 1971 on.

The solar radiation data in this table form the basis for the analyses in Charts VII, A, and B, of this publication. The analyses include adjustments required to bring station records to approximately the same level of calibration.

TOTAL OZONE DATA — LATE REPORTS

[illegible] data are obtained from measurements made with a Dobson ozone spectrophotometer, and are applicable approximately to local apparent noon. The data are presented in the code [illegible] described in the report entitled TABULATION OF DATA FOR METEOROLOGICAL RESEARCH, WORLD OZONE DATA

[illegible]

Station	Day of month																													Mean Obs
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
FEBRUARY 1971																																
[illegible]	20291	20294	20290	20258	35285	[illegible]	20291	20291	20295	20253	20288	20278	20283	00286	00290	00284	00261	00260	-	-	00278	00271	00278	00292	00272	00269	-	-				281
[illegible]	00267	00272	00282	00272	00279	05273	00270	00272	00263	00282	00275	00272	00265	00264	00260	05266	00273	00266	00242	00266	00265	00272	00269	00265	00261	00267	00260	00267	05262	00267	00273	267
[illegible]	[illegible]	00263	00266	05264	00268	05283	00268	05263	00274	00286	05269	05291	00274	05259	00273	00271	00264	00270	00267	00266	00274	05274	00276	00274	00269	00276	00280	00281				272
[illegible]	[illegible]	271	00270	00275	00278	00277	00277	00268	00266	00268	00264	00268	00265		00264	-	00264	00268	00269	00266	00270	00271	03261	00270	00270	00269	00272	-	03262	00272	00275	270
MAY 1971																																
HUANCAYO, PERU	00251	00263	00261	00267	00263	00262	00256	00259	00266	00254	00252	00251	00248	00248	00248	00251	00247	00254	00256	00258	00259	-	00258	00255	00263	00264	00257	00252	00247	00243	00241	25
JUNE 1971																																
HUANCAYO, PERU	00260	00261	00259	[illegible]	00247	00257	00257	00258	00260	00269	00256	00259	00261	00263	00261	00263	00263	00264	00266	00267	00266	00260	00263	00269	00264	-	-	00263	00264	00266		262

The spectrophotometer measures the total amount of ozone in the atmosphere, i.e., the amount contained in a vertica[illegible] column of air extending from ground level to the top of the atmosphere in the vicinity of the station. The amount of [illegible] standard pressure and temperature. [illegible] ozone implies an ozone layer 0.[illegible] centimeter thick. The code [illegible] designates the type of measurement made.

STORM SUMMARY REPORT - LATE REPORTS

MARCH 1971

NEW JERSEY — WINDSTORMS: Damage to Property - 5

JUNE 1971

MISSISSIPPI — TORNADOES: Number - 2, Days - 2, Damage - 5; HAILSTORMS: Damage to Property - 3, Damage to Crops - 4;
WINDSTORMS: Deaths - 1, Injuries - 2, Damage to Property - 5, Damage to Crops - 3
LIGHTNING: Deaths - 2, Damage to Property - 5

CORRECTIONS

Annual 1969 — General Summary of Tornadoes, Table 2, Page 53, Total deaths should be 19.
Month: August 1969
General Summary of Tornadoes, Table 2, Page 53, Total deaths should be 0.
Month: September 1969

February 1971: Louisiana — Storm Summary: Total number of deaths should be 11.

February 1971: Mississippi — Storm Summary: TORNADOES: Number - 20, Days - 4, Deaths - 117, Injuries - 1,521, Damage - 7; HAILSTORMS: Damage to Property - ?; WINDSTORMS: Injuries - 1, Damage to Property - 5; LIGHTNING: Damage to Property - 4; HEAVY SNOWSTORMS AND BLIZZARDS: Damage to Property - ?; ALL OTHERS: Damage to Property - 5

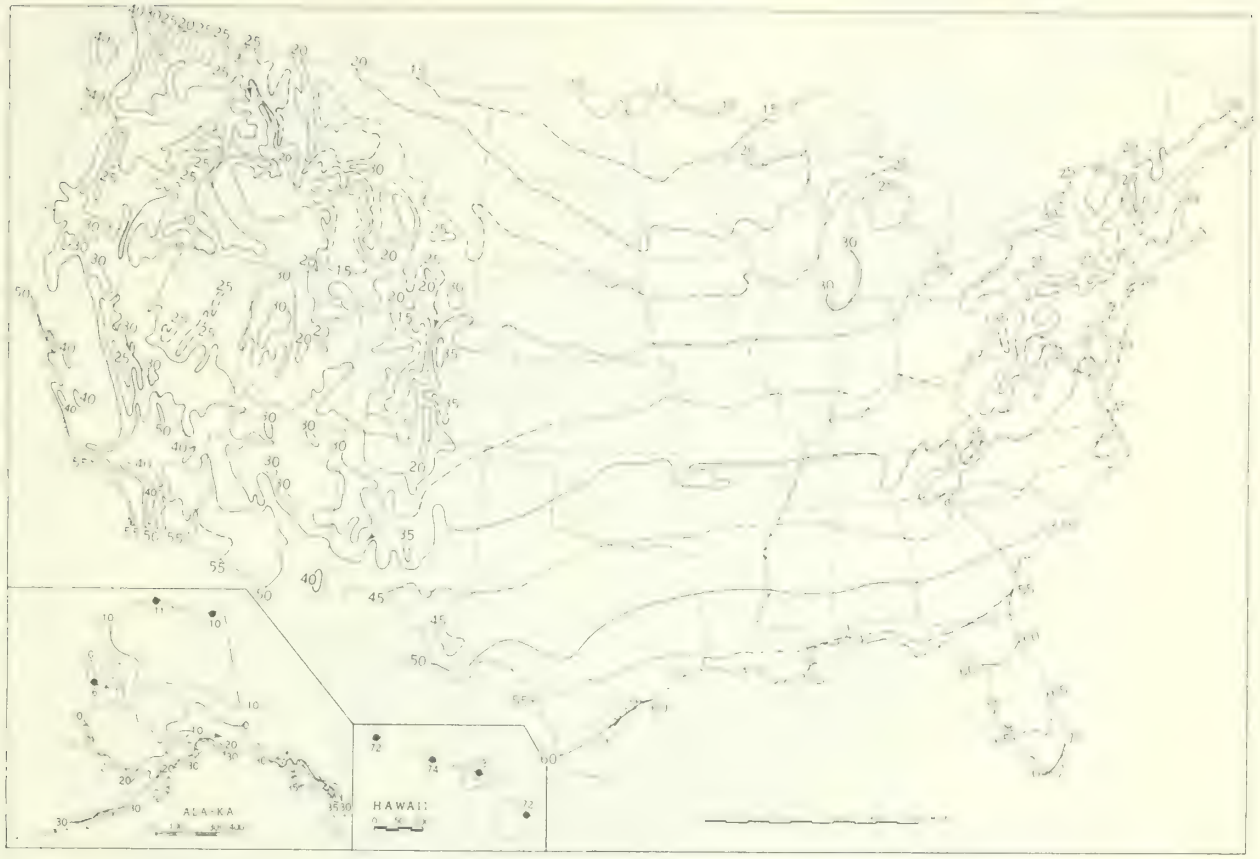
April 1971: Kentucky — Storm Data: Page 45, Number of persons injured on April 27 at 7:20 p.m. in Muhlenberg, Butler, and Warren Counties - 1.
Storm Summary: Tornado injuries total 151.

May 1971: Minnesota — Storm Summary: Number of tornadoes should be 4.

May 1971: Nebraska — Storm Summary: Number of tornadoes should be 18.

June 1971: Minnesota — Storm Summary: Number of tornadoes should be 8.

Chart 1. A. Normal Daily Average Temperature (°F. 1931-60), December



B. Temperature Departure from 30 - Year Mean (°F 1931-60), December 1971.

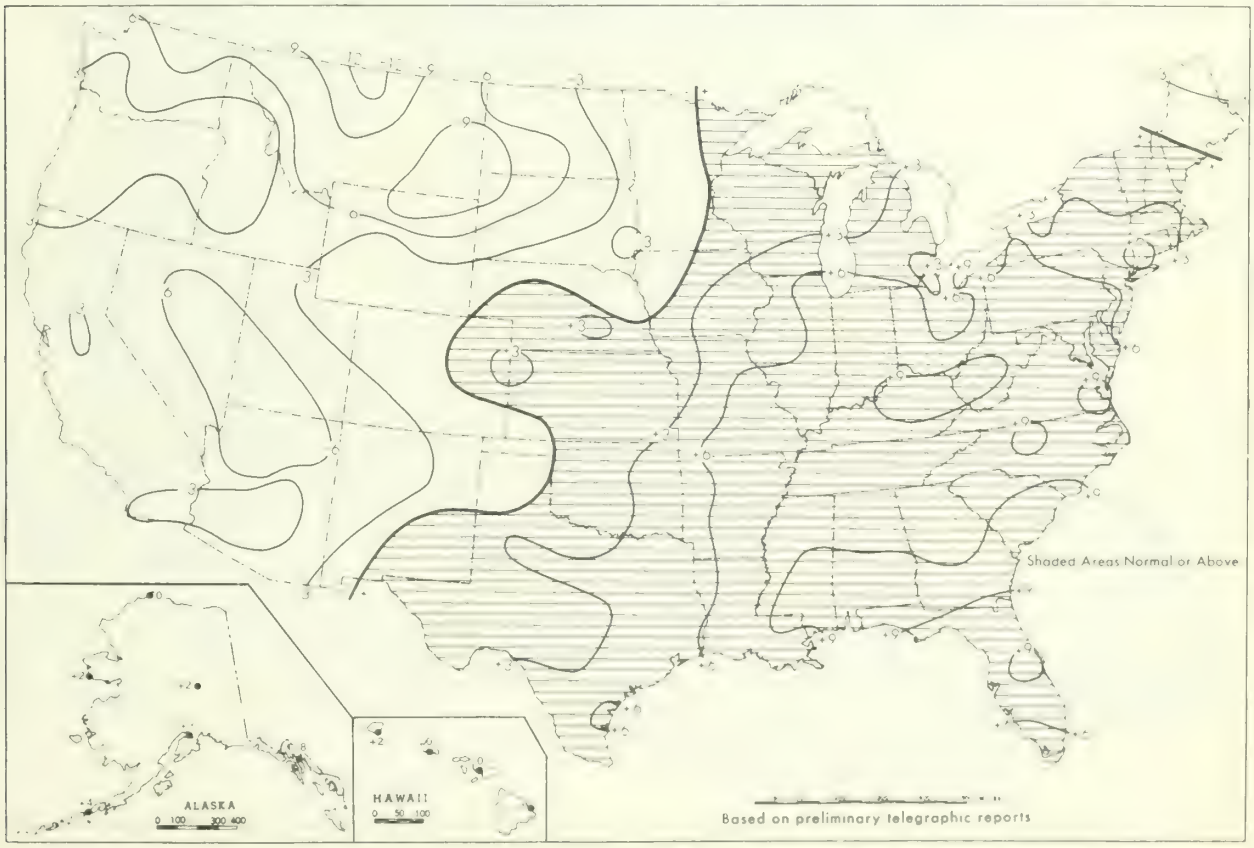


Chart II. Total Precipitation (Inches), December 1971.

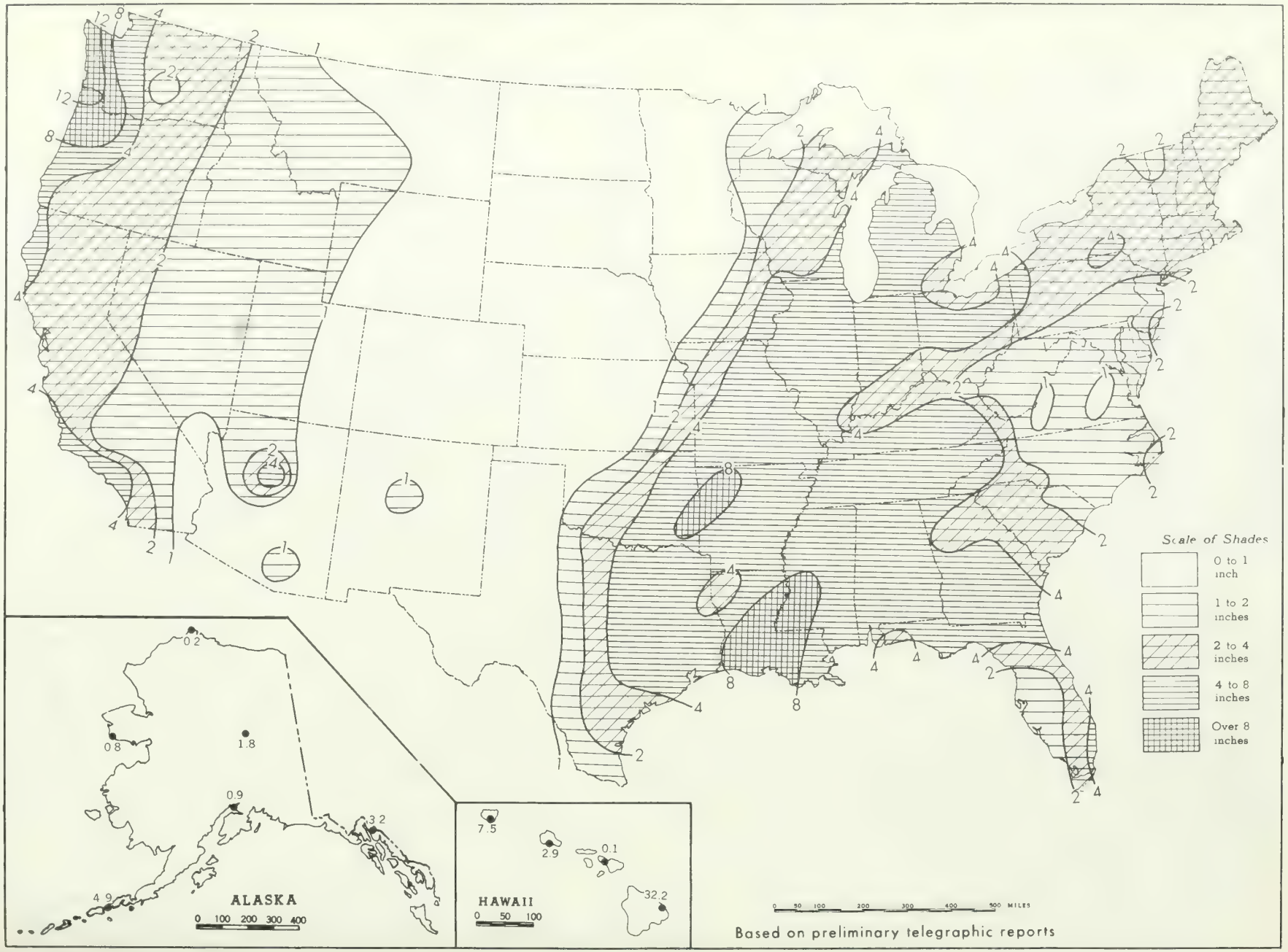


Chart III. Percentage of Normal Precipitation, December 1971.

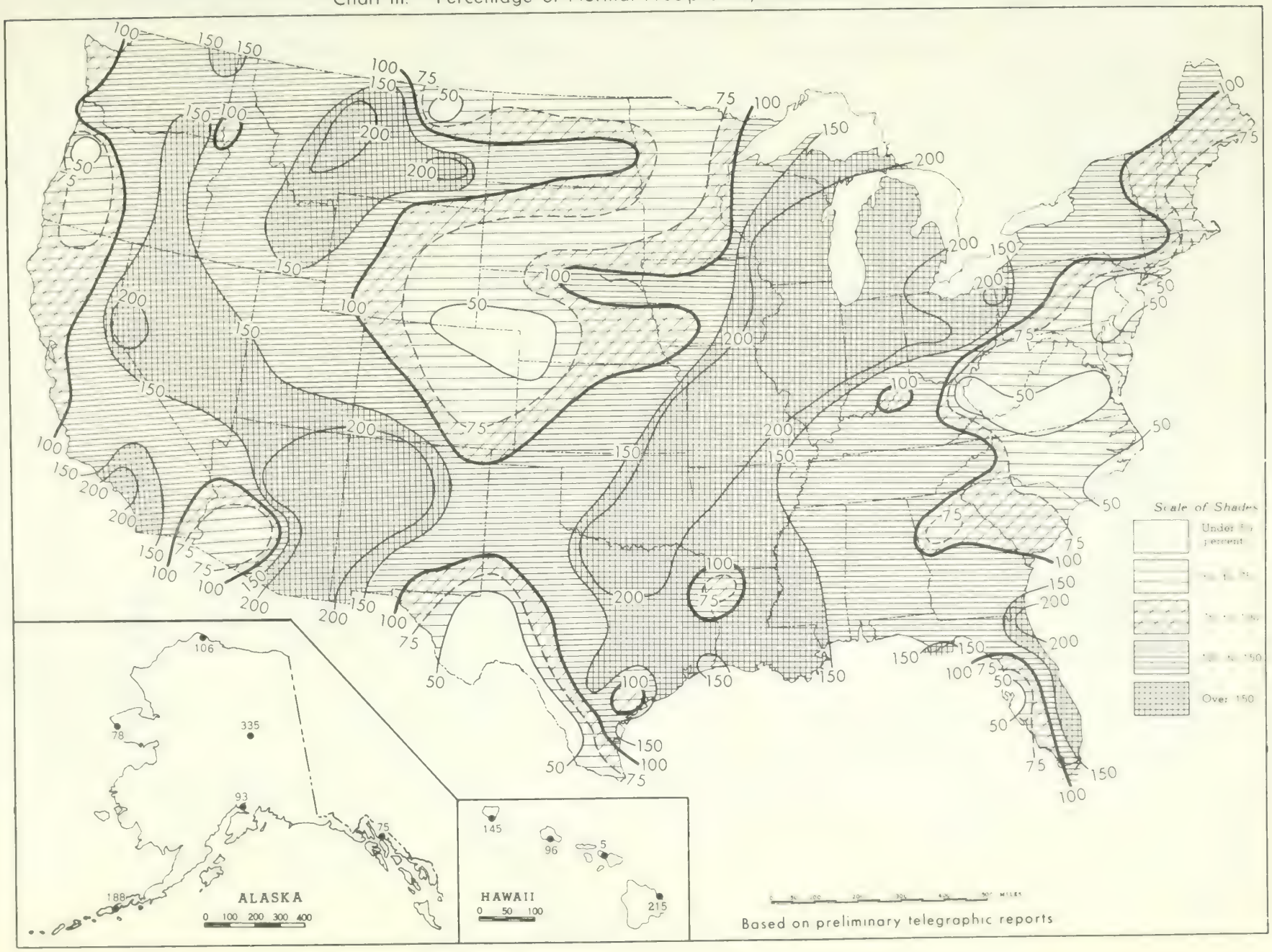
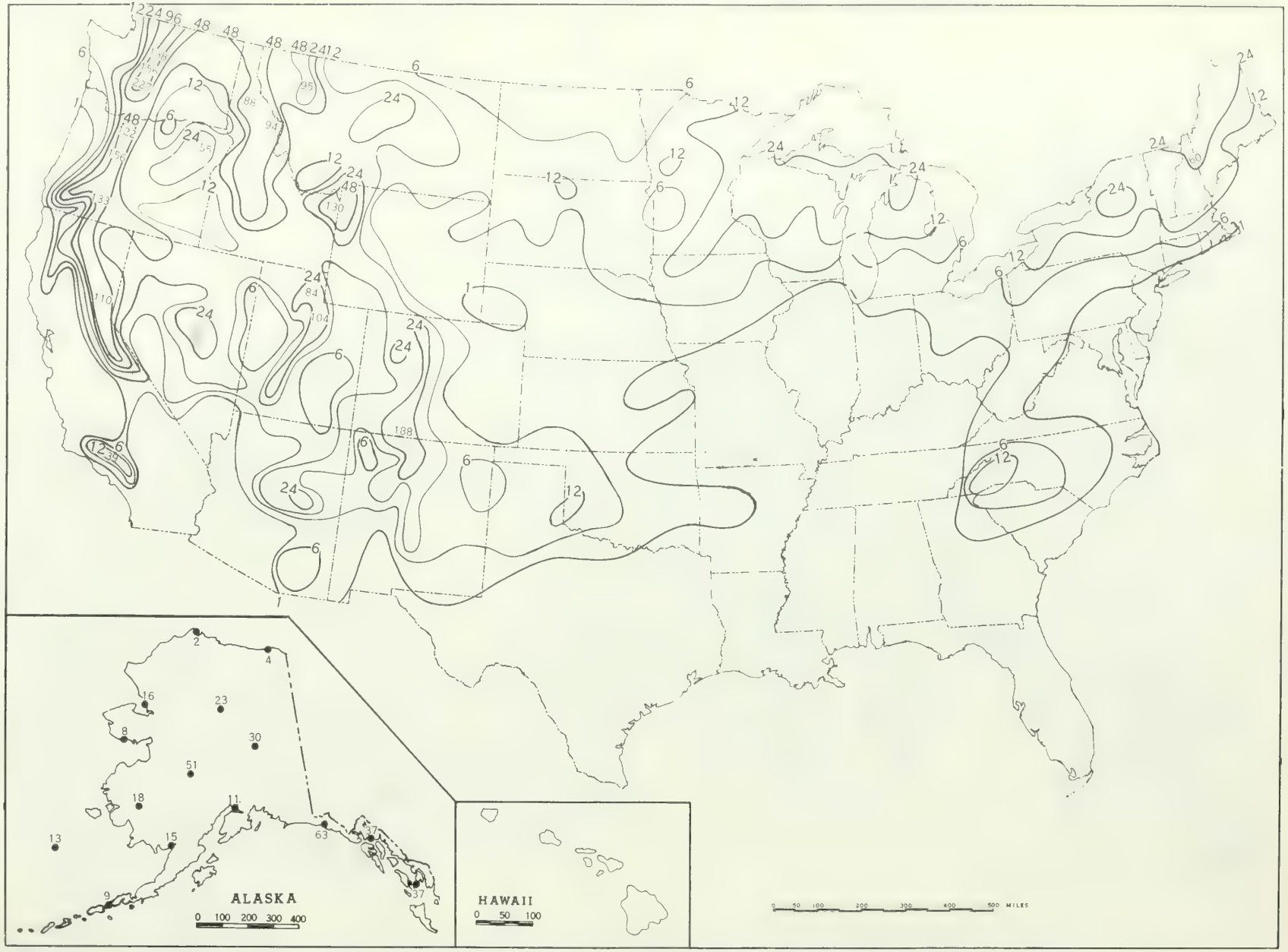
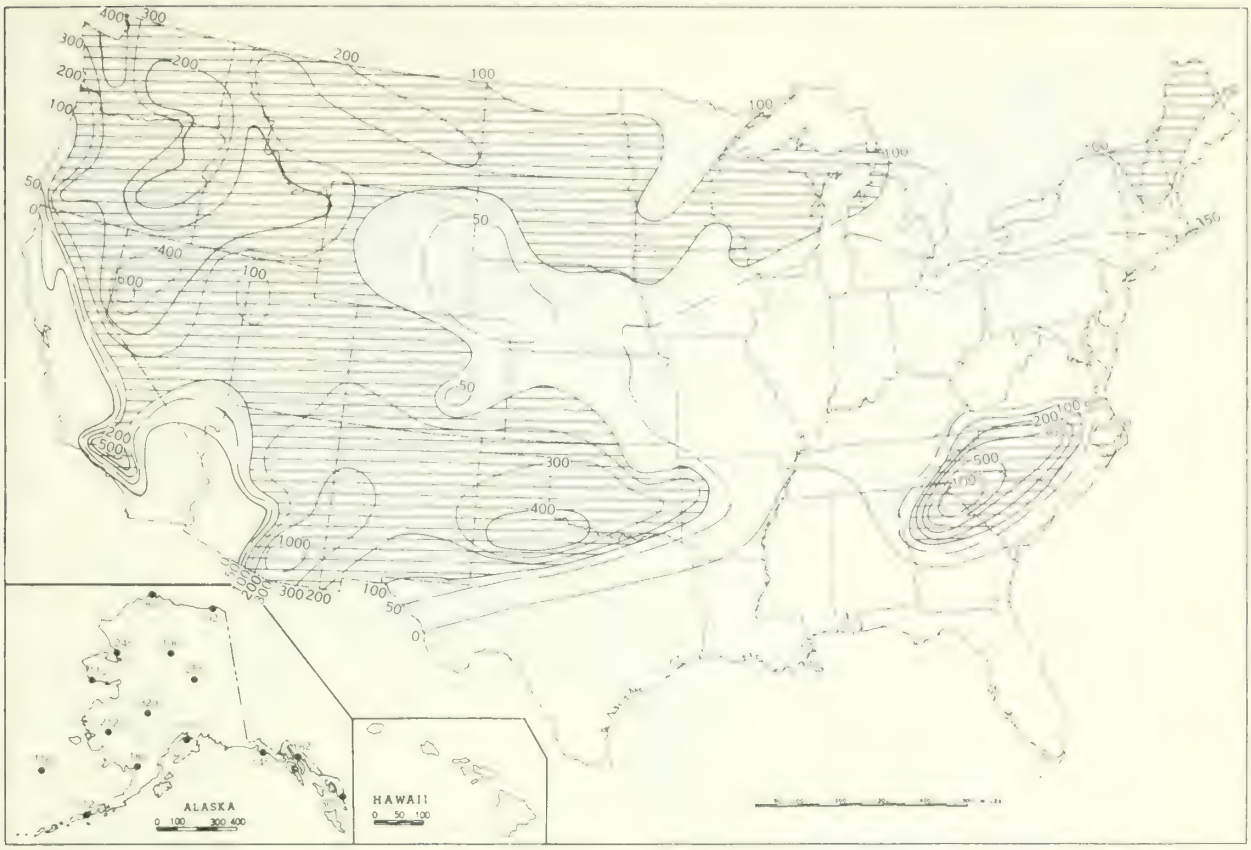


Chart IV Total Snowfall (Inches), December 1971.

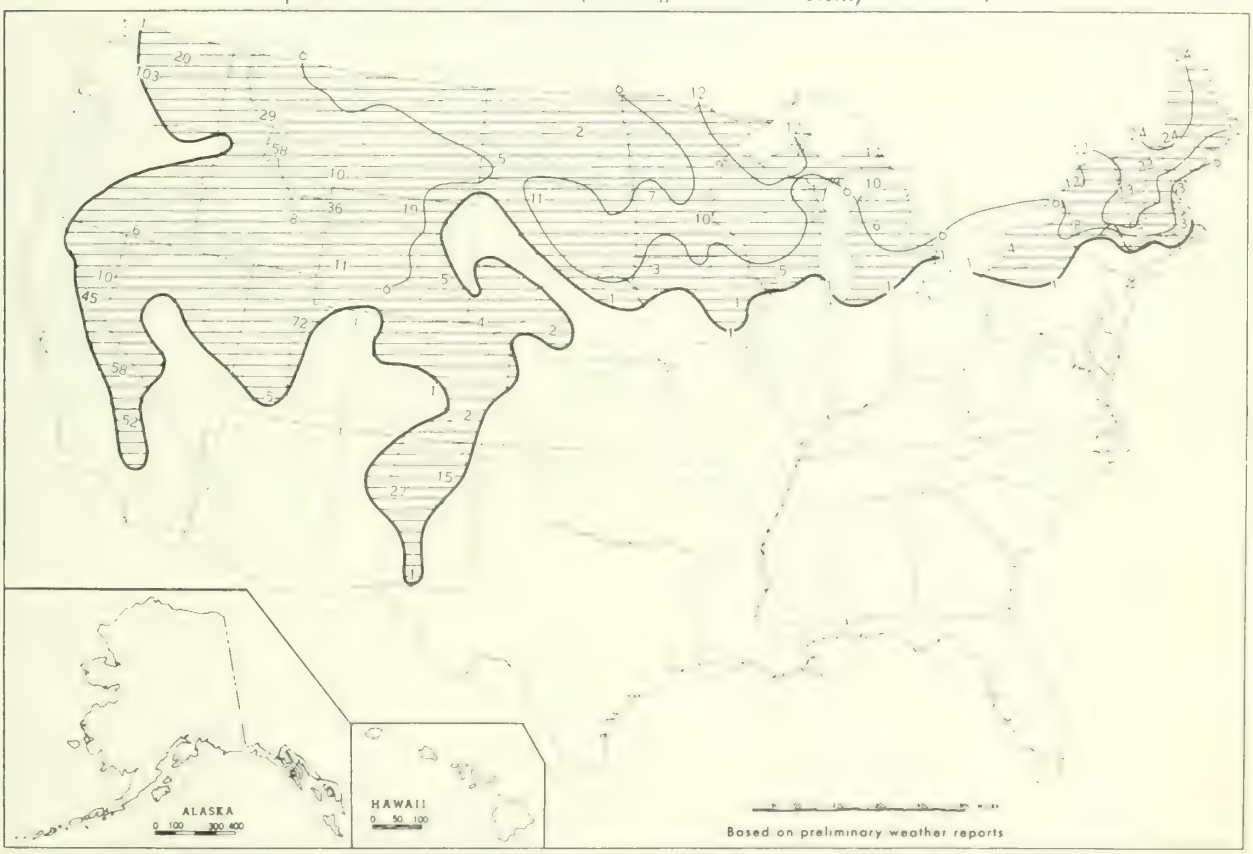


This is the total of unmelted snowfall recorded during the month at **National Weather Service** and selected cooperative stations. This Chart and Chart V are published only for the months of November through April, although of course there is some snow at higher elevations, particularly in the Far West, earlier and later in the year.

Chart V. A. Percentage of Mean Monthly Snowfall, December 1971.

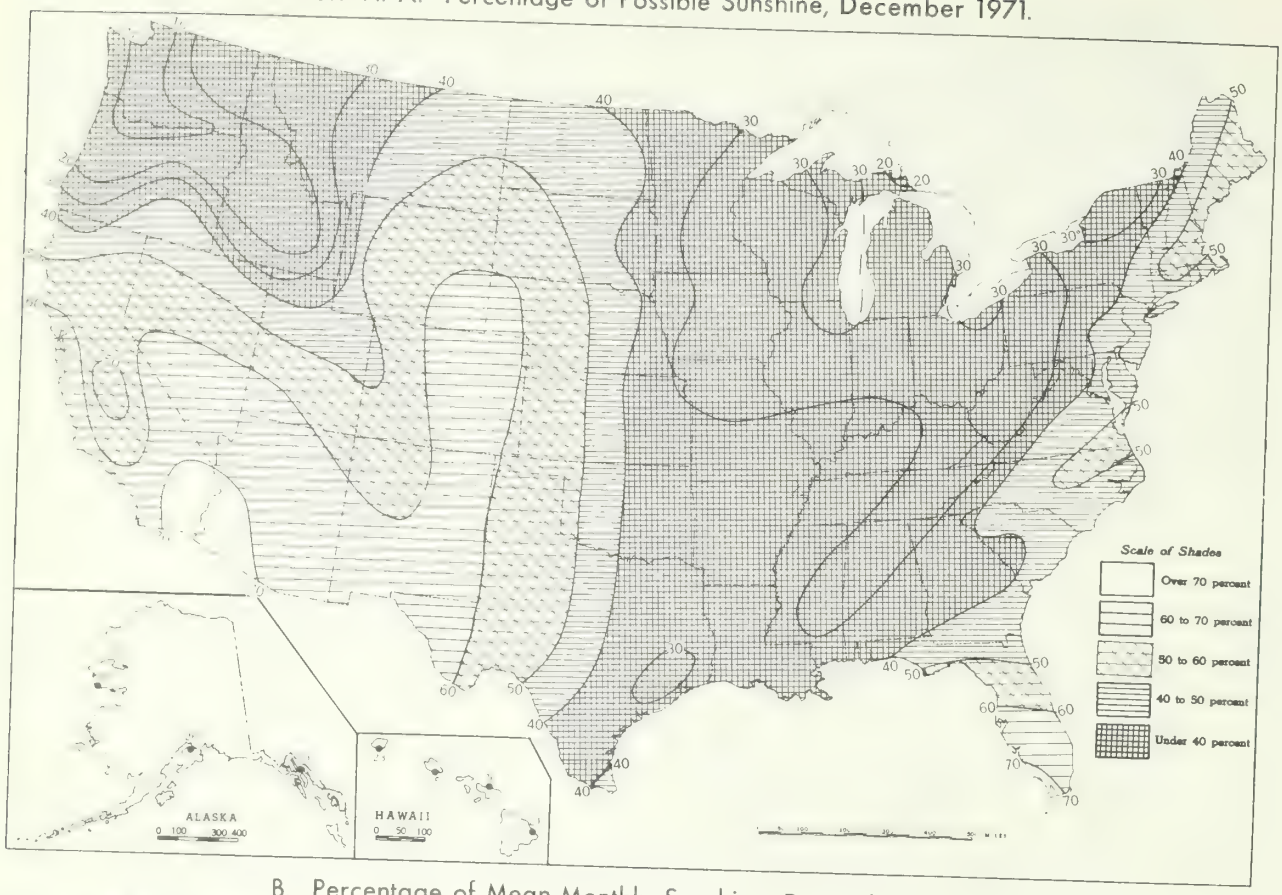


B. Depth of Snow on Ground (Inches), 7:00 a.m. e.s.t., JANUARY 3, 1972

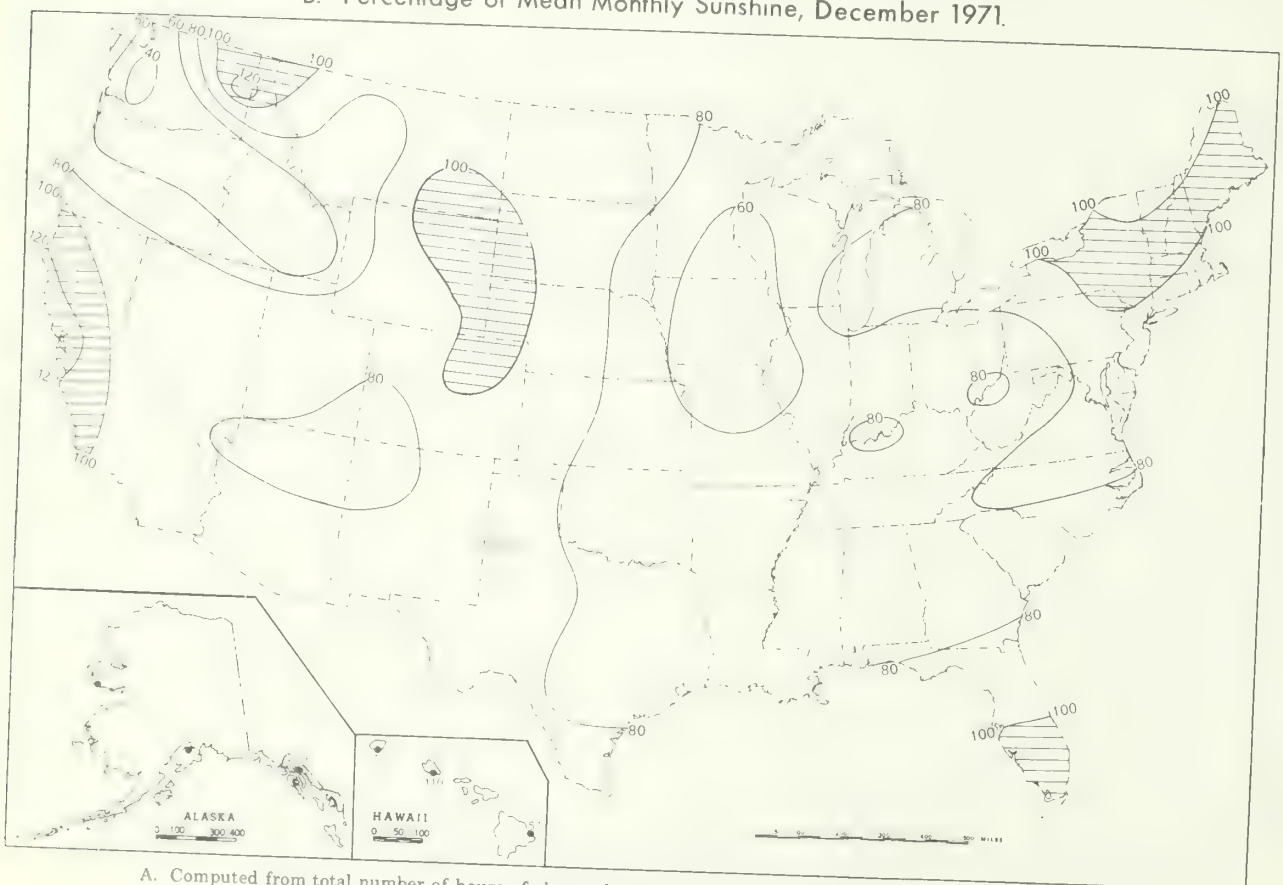


A. Amount of mean monthly snowfall is computed for **National Weather Service** stations having at least 10 years of record.
B. Shows depth currently on ground at 7:00 a.m. e.s.t., of the Monday nearest the end of the month.
It is based on reports from **National Weather Service** and selected cooperative stations.

Chart VI. A. Percentage of Possible Sunshine, December 1971.

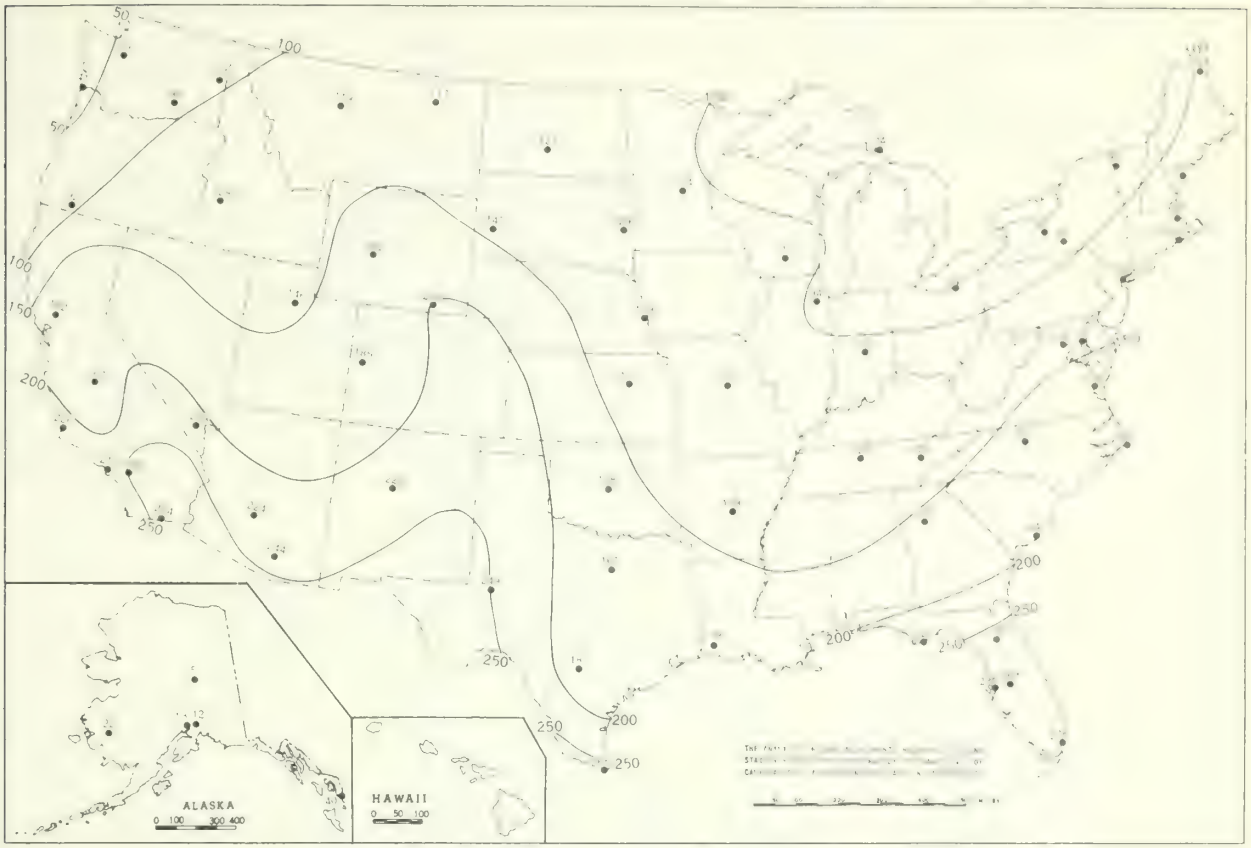


B. Percentage of Mean Monthly Sunshine, December 1971.

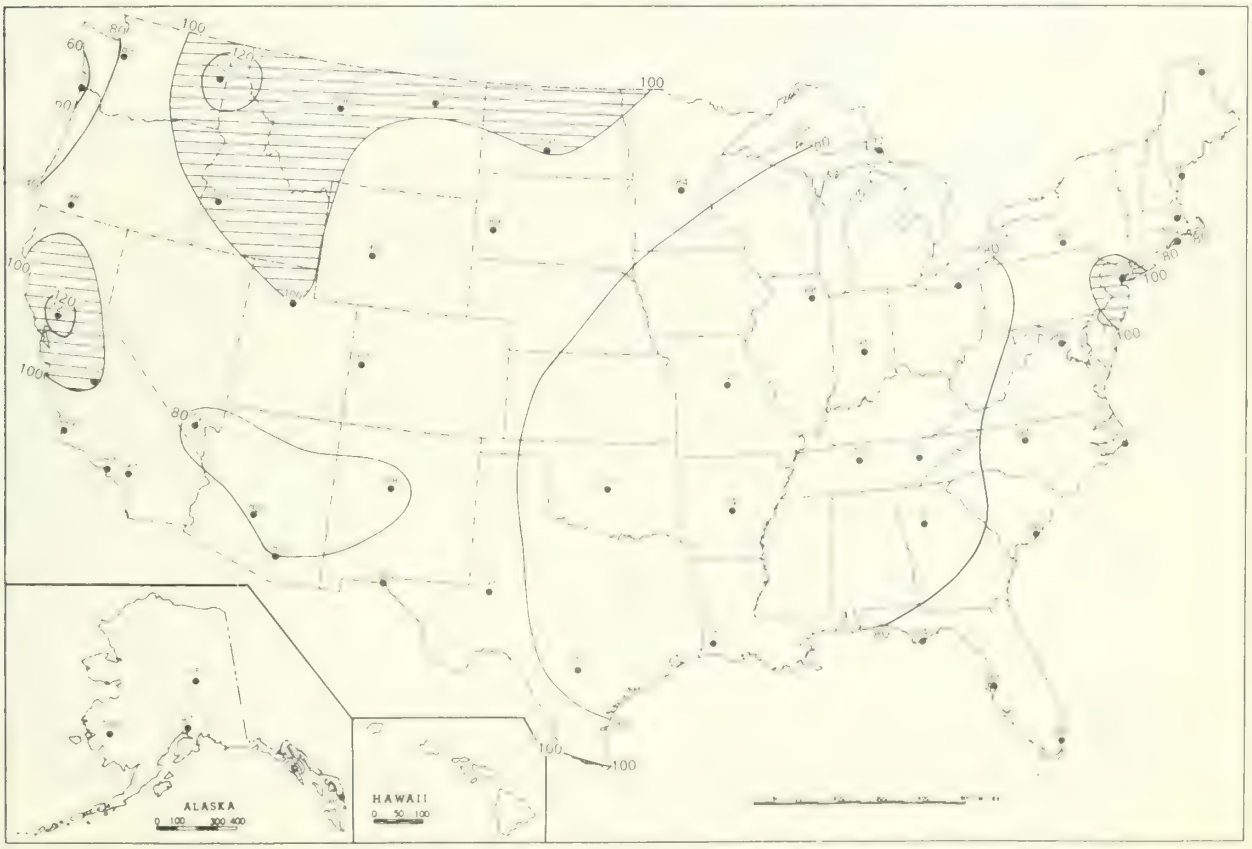


A. Computed from total number of hours of observed sunshine in relation to total number of possible hours of sunshine during month. B. Means are computed for stations having at least 10 years of record.

Chart VII. A. Average Daily Values of Solar Radiation, Langleys, December 1971.

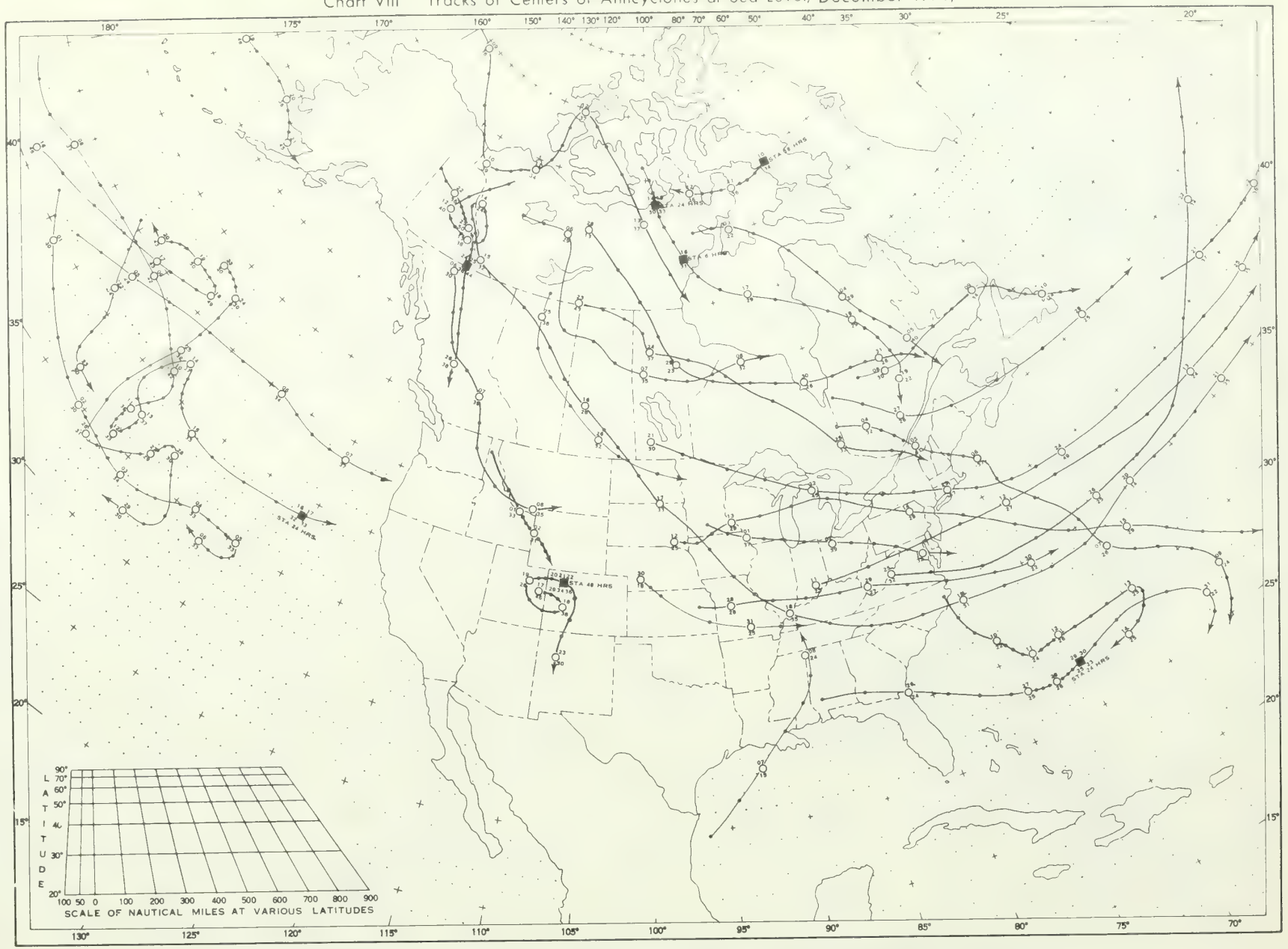


B. Percentage of Mean Daily Solar Radiation, December 1971.



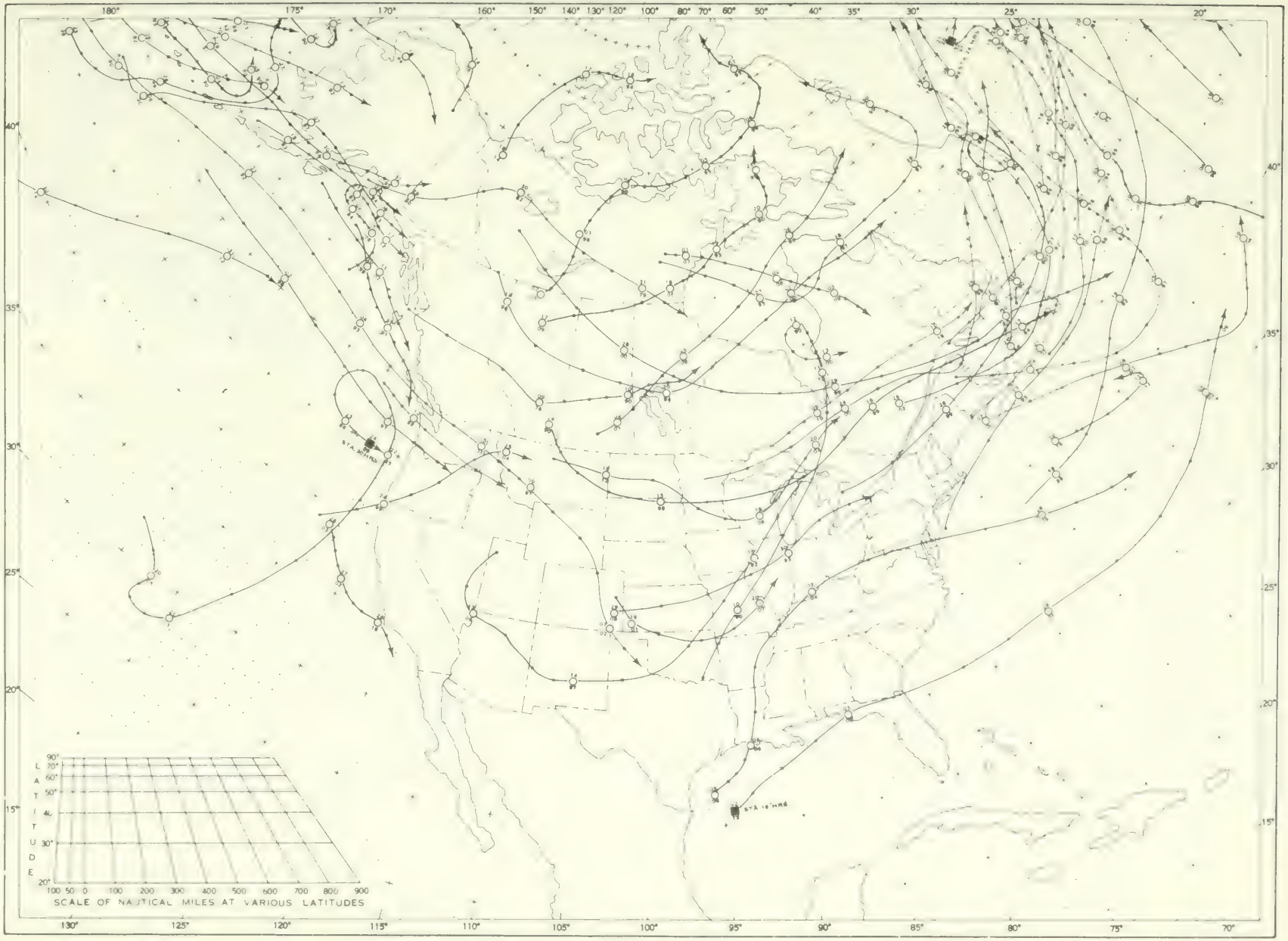
A. Mean daily solar radiation, direct + diffuse, received on a horizontal surface in langleys (1 langley = 1 gm. cal. cm.$^{-2}$) and recorded in International Pyrheliometer Scale of 1956. B. Percentage of the mean based on at least 5 years of record during the period 1950-60, and corrected to the International Pyrheliometer Scale of 1956.

Chart VIII Tracks of Centers of Anticyclones at Sea Level, December 1971.



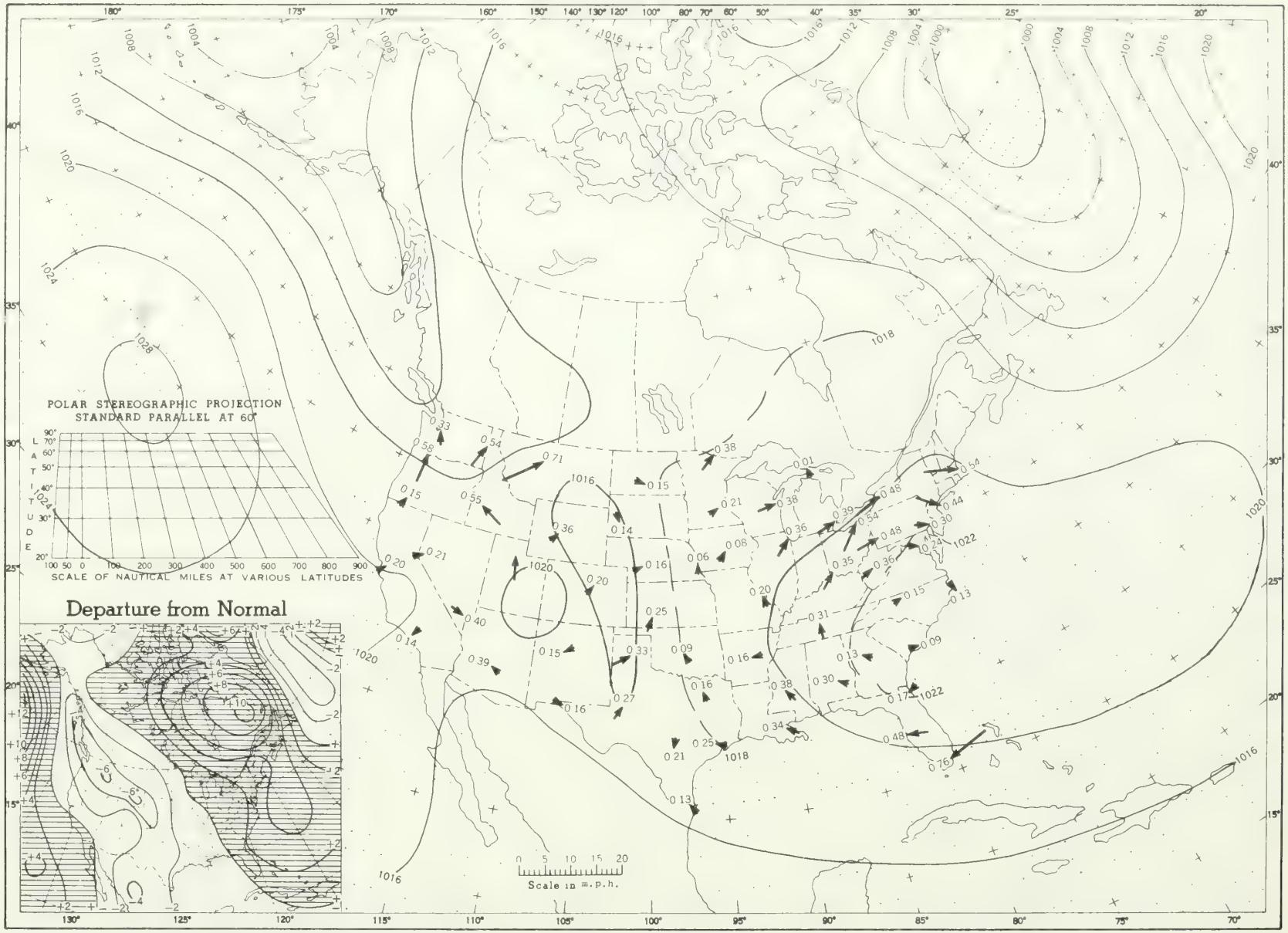
Circle indicates position of center at 7:00 a.m. E.S.T. Figure above circle indicates date, figure below, pressure to nearest millibar. Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown. Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart IX Tracks of Centers of Cyclones at Sea Level, December 1971



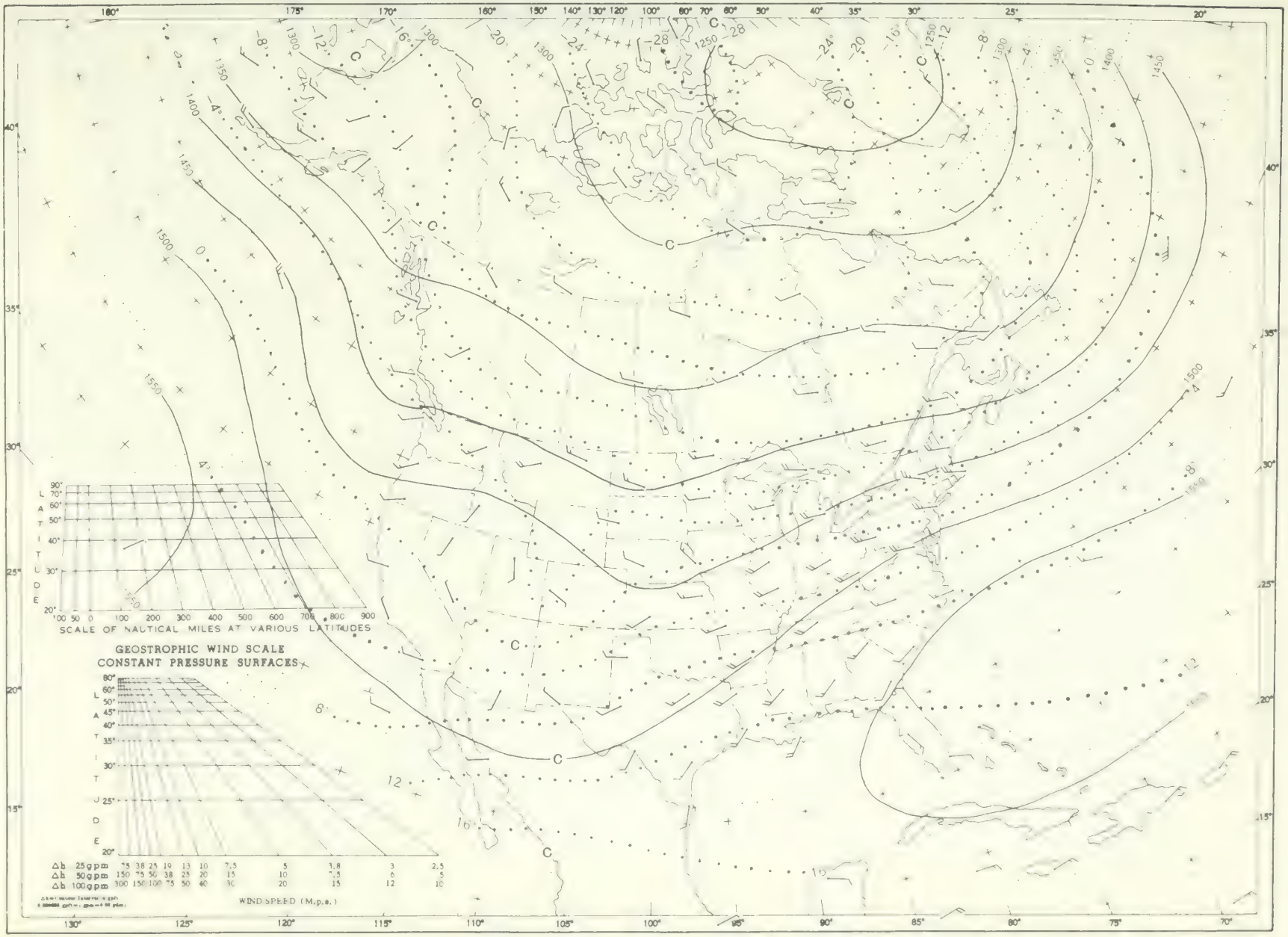
Circle indicates position of center at 7:00 a.m. E.S.T Figure above circle indicates date, figure below, pressure to nearest millibar Dots indicate intervening 6-hourly positions. Squares indicate position of stationary center for period shown Dashed line in track indicates reformation at new position. Only those centers which could be identified for 24 hours or more are included.

Chart X Average Sea Level Pressure (mb) and Resultant Surface Wind, December 1971. Inset Departure of Average Pressure (mb) from Normal, December 1971.



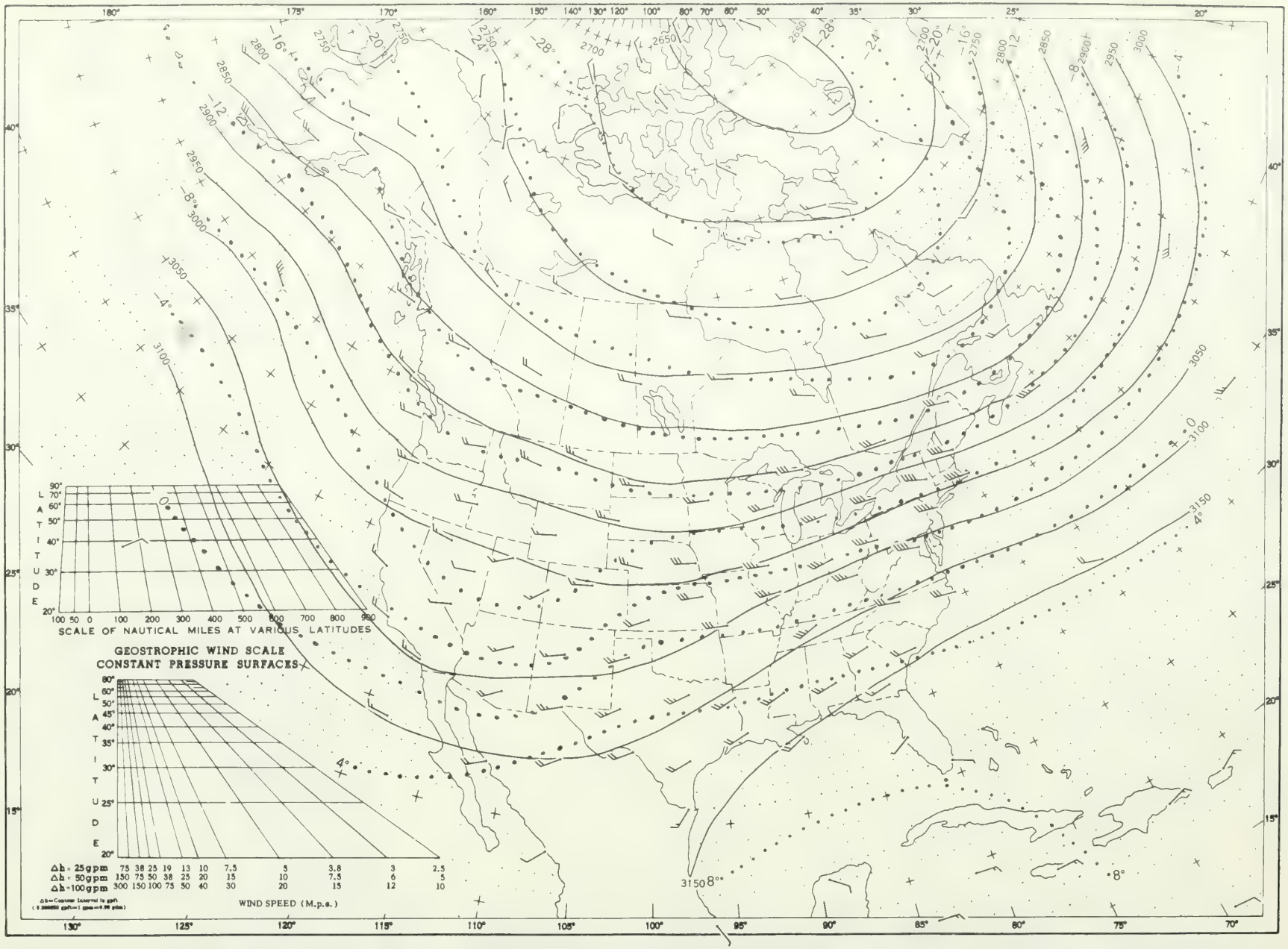
Average sea level pressures are obtained from eight daily 3-hourly observations. Resultant wind directions and speeds are shown by arrows. Constancy ratios (resultant speed÷average speed) are shown to two decimal places. Pressure normals are computed for stations having at least 10 years of record and for 10° intersections in a diamond grid over the oceans.

Chart XI. 850-mb Surface, 1200 G.m.t., December 1971. Average Height and Temperature, and Resultant Winds



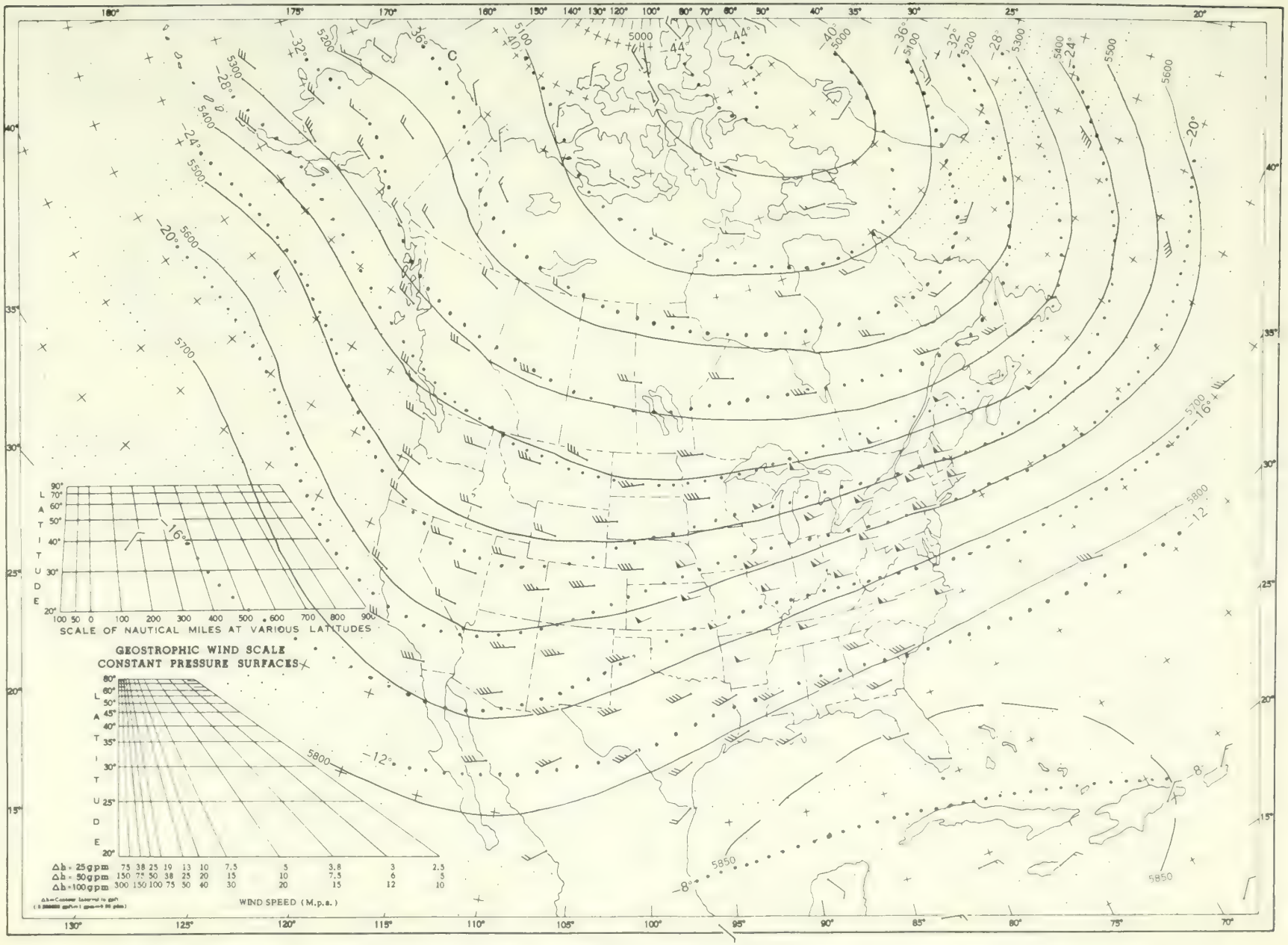
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XII. 700-mb Surface, 1200 G.m.t., December 1971. Average Height and Temperature, and Resultant Winds



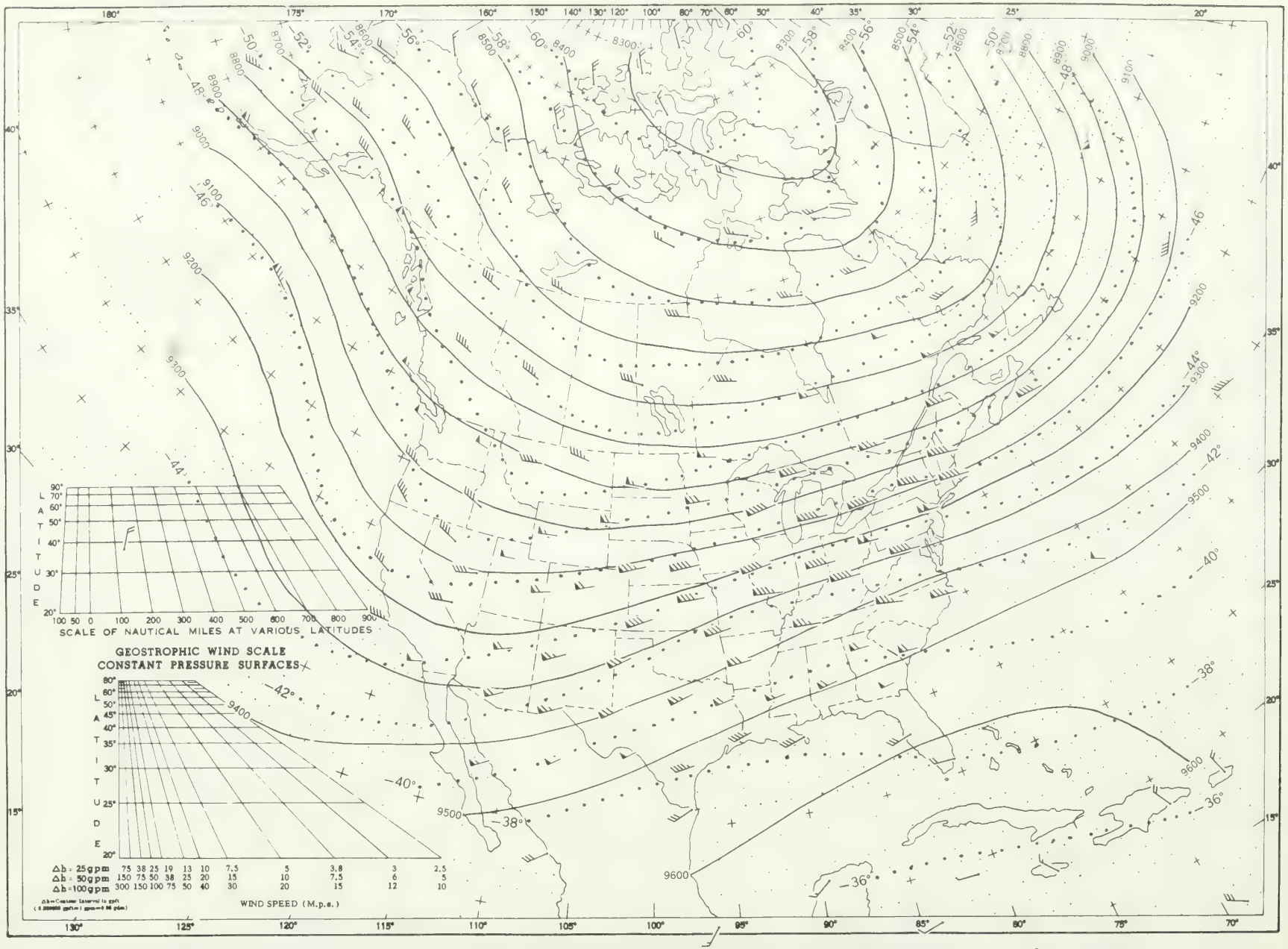
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIII. 500-mb. Surface, 1200 G.m.t., December 1971. Average Height and Temperature, and Resultant Winds.



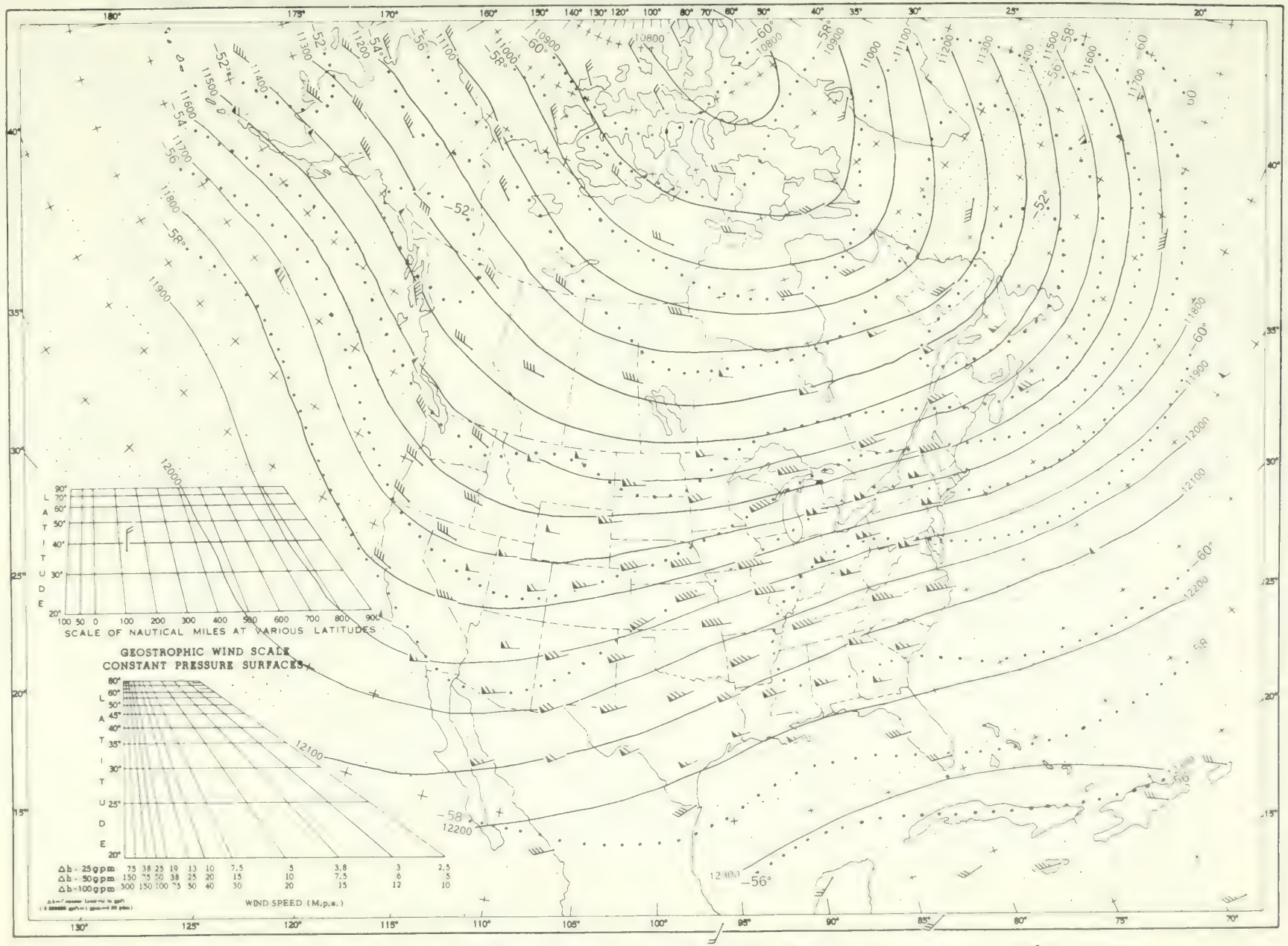
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XIV 300-mb Surface, 1200 G.m.t., December 1971. Average Height and Temperature, and Resultant Winds



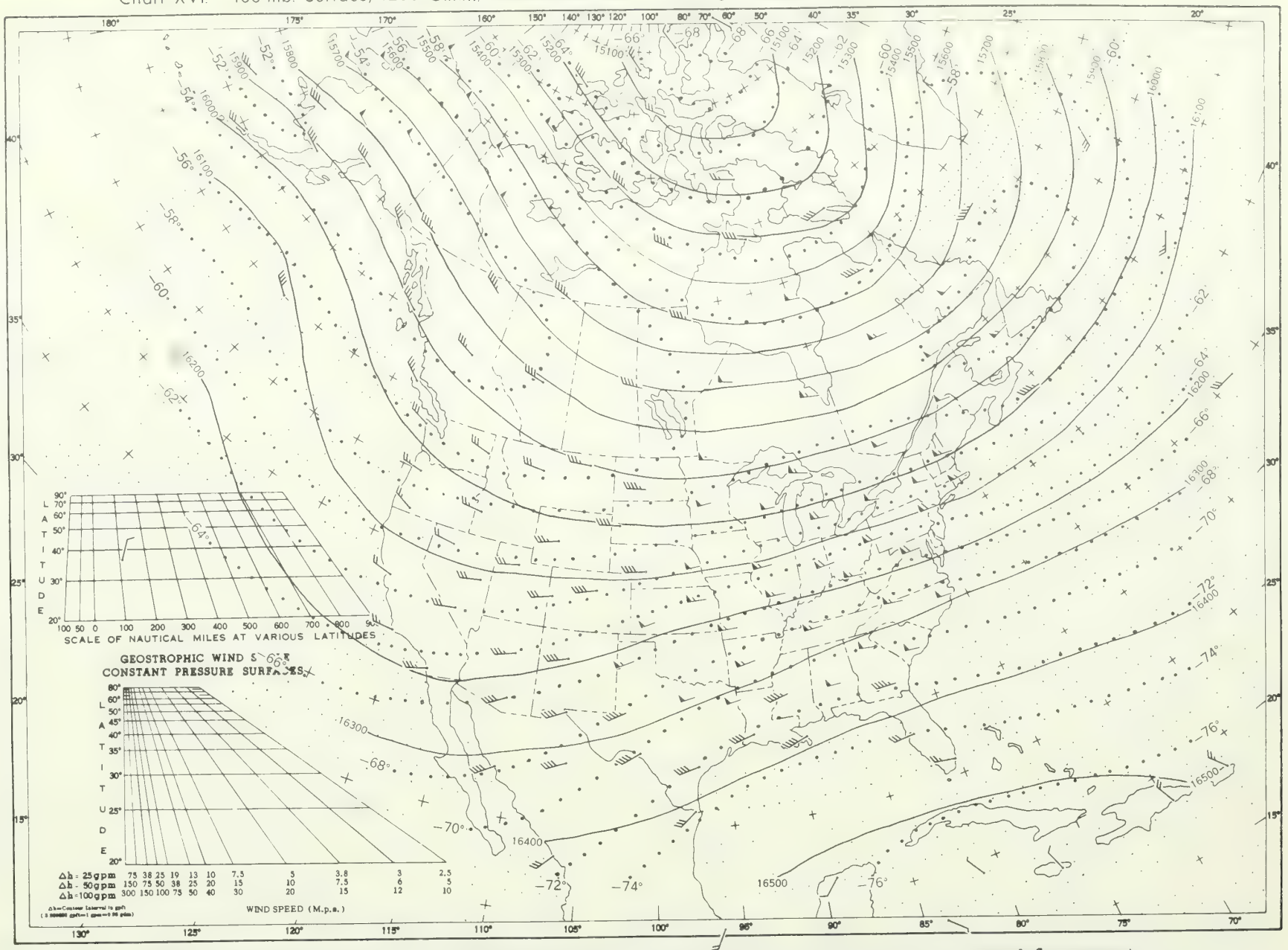
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XV 200-mb. Surface, 1200 G.m.t., December 1971. Average Height and Temperature, and Resultant Winds



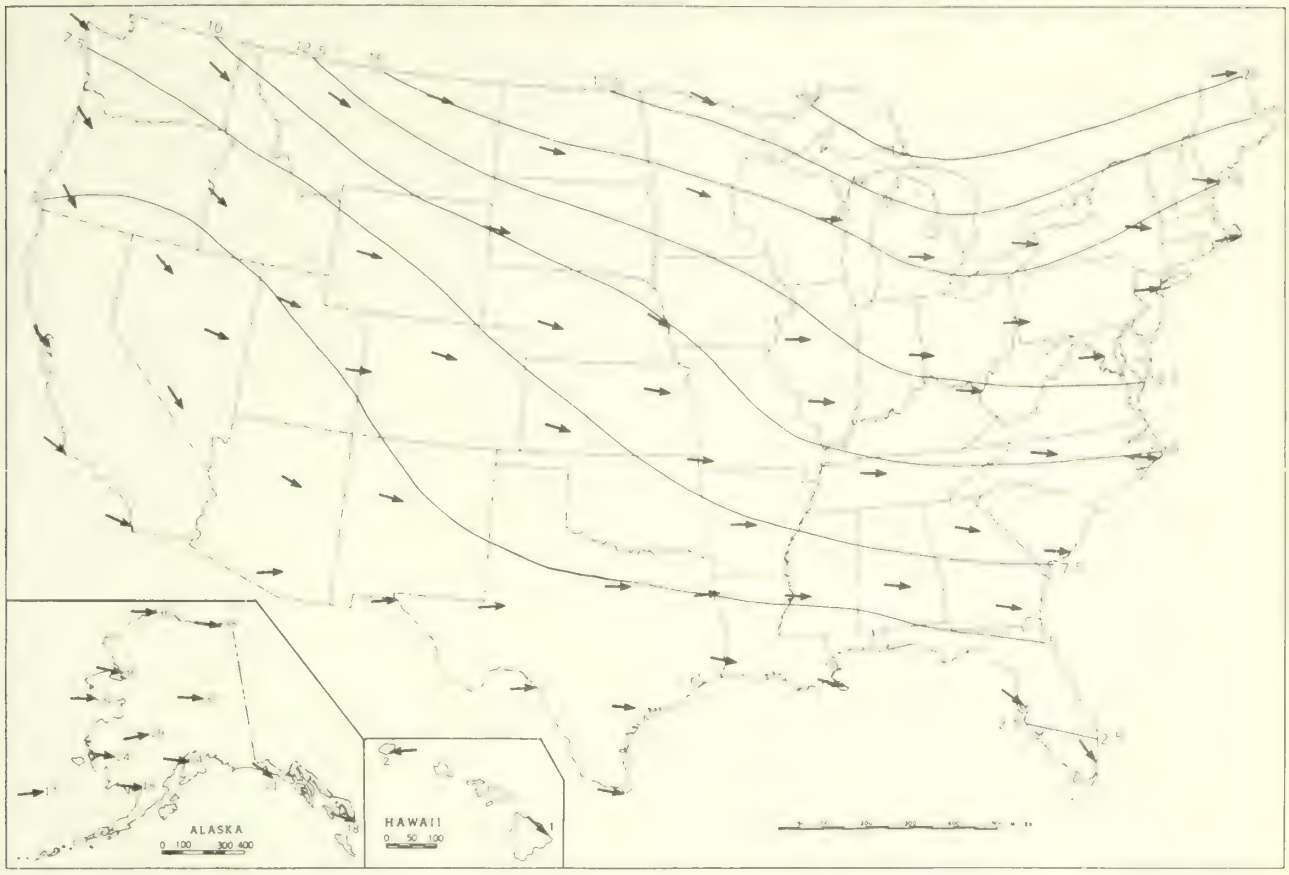
Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVI. 100-mb. Surface, 1200 G.m.t., December 1971. Average Height and Temperature, and Resultant Winds

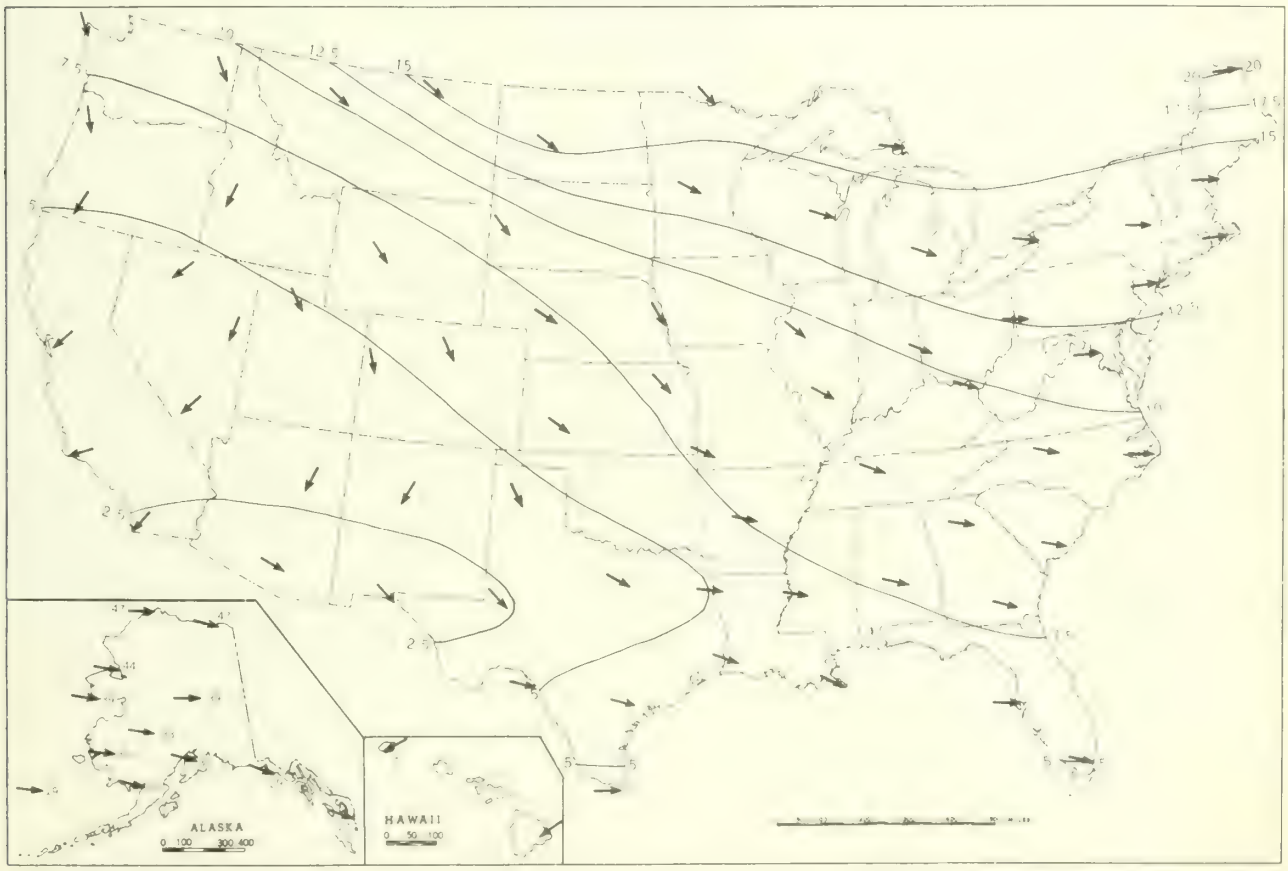


Height in geopotential meters (1 g.p.m. = 0.98 dynamic meters). Temperature in °C. Wind speed in meters per second; flag represents 25 mps, full feather 5 mps, and half feather 2.5 mps. All wind data are based on rawin observations.

Chart XVII. A. 50-mb. Surface, 1200 G.m.t., December 1971. Resultant Winds



B. 30-mb. Surface, 1200 G.m.t., December 1971. Resultant Winds.



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Volume 22
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Asheville, N.C.
1972

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RAWINSONDE DATA (Average Annual Values) - tabulation discontinued. The tabulation RAWINSONDE DATA (Average Monthly Values) is carried in the monthly issue of the publication CLIMATOLOGICAL DATA NATIONAL SUMMARY.

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CLIMATOLOGICAL DATA

NATIONAL SUMMARY

Volume 22 No. 13

Lucius W. Dye, Climatologist
Environmental Data Service
Washington, D. C.

YEAR 1971

GENERAL SUMMARY OF WEATHER CONDITIONS

WEATHER HIGHLIGHTS, 1971:

1. Very favorable weather in Corn Belt
2. A year with few major floods
3. Heavy March snowfall in Northeast
4. Cool July central and eastern areas
5. Drought in Texas and southern Florida
6. Precipitation adequate most of West.

WINTER--Temperatures for the winter of 1970-71 averaged below normal from the central and upper Great Plains to the Atlantic coast and in portions of the eastern Gulf States, but were above normal elsewhere. From the northern Great Plains to New England both December and January were abnormally cold. Precipitation was near to above normal in most northern and eastern areas, but well below from Arkansas and Louisiana through the southern two-thirds of California. In much of Texas, New Mexico, Arizona, and southern California less than half the usual amounts were recorded.

The January temperature anomaly pattern was about the same as that for the winter in the contiguous 48 States--cold in the northeastern half where a flow of cold northern air persisted most of the month, and warm in the southwestern half as a result of frequent inflows of mild Pacific air. Even though temperatures in the West averaged well above normal for the month, the first decade was extremely cold with subzero minima extending deep into Arizona and New Mexico. A new alltime record low of -40° for Arizona was recorded at Hawley Lake on the 7th and the lowest temperature ever recorded in New Mexico during January, -47°, was reported by Eagle Nest on the 6th. This freeze caused some damage to citrus and vegetables in the Southwest.

The rest of January was unusually mild in the West, with temperatures rising to record high levels for the month at many stations. These included Los Angeles, 95° on the 18th; Phoenix, Ariz., 88° on the 19th; Albuquerque, N. Mex., 69° on the 31st; and San Antonio, Tex., 89° on the 30th.

January was extremely cold in New England. Portland, Maine, had its coldest month on record and recorded its lowest temperature for January, -26° on the 19th. Albany, N. Y., recorded its lowest temperature for any month, -28°, on the 18th. Below-freezing temperatures dipped down into the Florida Peninsula on the 20th and 21st and damaged citrus, truck, and other crops as the low temperatures were comparable to those of some other historic freezes.

This January was among the coldest on record in Alaska. Fairbanks observed its coldest month ever with an average temperature of -31.7°, a high for the month of 27° and a low of -60°. On the 25th the highest temperature was -54°, and after the 12th the highest was only -19°. A temperature of -79.8° was recorded at Prospect Creek Camp on the 23d, the lowest ever for Alaska and the United States.

Temperatures for February were quite changeable and averaged within 3° of normal. Most of the western Great Basin, New England, and the Middle Atlantic States were warmer than normal and most of the southeastern quarter of the contiguous 48 States were abnormally cold. The first week, relative to normal, was very cold east of the Rockies and warm in the West, while the reverse was true the second week. The third week was mild from coast to coast, and the last week was mild in the East and cold in the West. Temperatures in the contiguous 48 States ranged from -46° at Van Norman, Mont., on the 7th to 97° at McCook and Mission, Tex., on the 1st.

Precipitation was abnormally heavy during January in the eastern portions of Georgia and the Carolinas, west of the Great Lakes, and in the Central Great Plains. Elsewhere, January totals were below normal, less than half normal from Arkansas and Louisiana westward. February was a stormy month east of the Rockies, with above normal precipitation that was unusually heavy from the Central Great Plains to the Great Lakes, in the lower Ohio Valley, and Middle Atlantic States. Many stations reported near record amounts, and local flooding occurred in a number of areas. In most of Texas and west of the Great Plains, February precipitation was well below normal.

Winter snowfall in the West was above average in many northern areas, decreasing to much below in Arizona, New Mexico, and adjacent areas of adjoining states. Snowfall was unusually heavy in northern areas during December and generally above average during January. Nearly all areas had below average amounts in February. On March 1 the western water supply outlook was good to excellent except poor in New Mexico, Arizona, and southern Colorado.

SPRING--The spring season was mostly dry and cool. Only Maine, the upper Great Plains, central and southern Texas, and the lower east coast of Florida were warmer than normal. Both March and April were abnormally cool in the Pacific Northwest, and all three spring months were cool east of the Mississippi. Precipitation was above normal in Washington, Oregon, Nevada, Wyoming, a small portion of the central Great Plains, and an area including Virginia, the Carolinas and central portions of Georgia, Alabama, and Mississippi. The season was unusually dry in Florida, Oklahoma, Texas, New Mexico, and Arizona. Snowfall was above average in many northern areas and some sections of the Southeast. Drought became severe in Florida, parts of Texas, Oklahoma, Arizona, and New Mexico. Severe local storms took the usual toll of life and property. Damage resulting from spring floods and freezes was mostly limited to local areas and was less than usual. March temperatures averaged below normal in the Pacific Northwest and east of the Mississippi, and above, elsewhere. Monthly averages set no new records, but a number of stations reported new record highs and lows for the month. The first week was very cold. Boise, Idaho, recorded 6° on the 1st, the lowest there for March in 65 years, and 23° on the 5th tied the record March low at Tallahassee, Fla. New record March highs occurred in the Southwest during the closing days of the month, with record March highs of 100° for Waco and San Antonio, Tex., on the 28th. On the 29th 95° equaled the record March high for Phoenix, Ariz. Alaska was unusually cold with many new March lows including -19° for St.

Paul on the 2d, -42° for King Salmon on the 13th (lowest for any month), and -46° for Nome on the 11th.

March precipitation was deficient in most areas and less than half normal in the Southwest, southern Florida, the Ohio Valley, and much of the midcontinent area. In the lower Great Plains and Southwest more than 300 stations reported no precipitation at all. With less than 30 percent of normal precipitation, this was one of the driest Marches in Texas and the fifth consecutive dry month. In southern Florida where Key West recorded only a trace for the third time during any month in the last 100 years, March continued the dry regime of the past several months. Above-normal precipitation was limited mainly to the Pacific Northwest, northern New England, parts of the Great Lakes region, and an area in the Southeast that extended from Mississippi to the Carolinas.

In Washington, Oregon, and much of the northeastern quarter of the Nation, a considerable portion of the monthly precipitation fell in the form of snow. Much above average totals set new March totals, at many stations, including Elkins, W. Va., 33.0 inches; Yakima, Wash., 10.8 inches; Binghamton, N. Y., 33.5 inches; and Alpena, Mich., 35.8 inches, most of it falling during storms on March 6-7 and 18-19.

In addition, March snowfall boosted seasonal totals to new records at a number of stations among which were Portland, Maine, 132.3 inches; Erie, Pa., 117.0 inches. A general snow cover of 40 to 60 inches in Vermont, following a heavy snowstorm on the 7th and 8th, ranged up to 116 inches at Mt. Mansfield, a new State record. After another storm on the 11th and 12th, Guilford and Springfield, Maine, each reported a depth of 76 inches, a new record for that State.

Snowfall in the Southeast during a storm on the 25th and 26th was unusually heavy for so late in the season. In several counties of northwestern South Carolina falls ranged from 7 to 11 inches. Columbia, S. C., measured a record late-season fall of 1.7 inches, and Greensboro, N. C., one of 3.3 inches.

In the West, mountain snowfall was above average in the Cascades and parts of the central Rockies. April was relatively dry, cool, and sunny in most areas. Average monthly temperatures, ranging within 3° of normal, were above normal only in the upper Great Plains, central Texas, and along the lower east coast of Florida. New temperature records were few and scattered and only for a particular day or for so early or late in the season. Considerable fruit was damaged in western Colorado on the 1st when Grand Junction recorded 16°.

Precipitation during April was below normal except above in parts of the West and a few small scattered areas in the East. The wettest area, relative to normal, was centered in Wyoming where monthly totals exceeding 4 inches ranged up to more than 200 percent of normal. In contrast, less than half the normal precipitation fell in a large area extending from the central Great Plains to the central Appalachians, an area in which several stations with records dating back 90 to more than 100 years reported the driest April on record. Other areas with less than half normal included northeast Oregon, southern California and western Arizona, most of Louisiana, parts of Oklahoma, east Texas, and southern Florida. The dry weather permitted rapid progress of agricultural activities which were about 2 weeks ahead of normal in much of the Corn Belt. But the dry weather also created a high fire hazard in the Ohio Valley and intensified the droughts in southern Florida and parts of Texas. Extreme drought developed in central Texas, and even though 1- to 3-inch rains fell about the 15th to 17th benefits were only temporary. By the end of April southern Florida was in the grip of one of its worst droughts. Fires spread over 250,000 acres of the Everglades, Lake Okeechobee fell to near a record low level, and with a below-sea-level water table in the Miami area salt water threatened the city's water supply.

April snowfall was unusually heavy in northern New York, New England, New Jersey, the lower Appalachians, portions of Michigan and the central and upper Mississippi Valley, Wyoming, and Nevada. In Wyoming 45.2 inches at Lander and 24.2 inches at Casper were record amounts for April in 26 and 31 years, respectively. Cairo, Ill., recorded 1.0 inch on the 5th, the most snow there for April in 61 years; and Birmingham, Ala., a trace on the 7th, the first April snowfall in 61 years. At Burlington, Vt., 7.3 inches on the 10th was a record amount for so late in the season. Heavy snows in the Cascades and in the mountains of Wyoming produced one of the heaviest snowpacks on record for those areas. Heavy snowfall in Alaska also left an unusually heavy snowcover.

The May weather regime was persistently cool and wet. Drought conditions were eased in Florida, in parts of Texas, and in southwest Oklahoma. Few major storm systems developed, but many tornadoes and other severe local storms occurred in the unstable air that covered areas east of the Rockies at intervals throughout the month.

Temperatures averaged below normal except slightly above in a few small scattered areas. Relative to normal, the Southeast and southwestern desert were the coolest areas. Nashville, Tenn., had its coolest May in 47 years and its third coolest in 100 years; Montgomery, Ala., had its second coolest in 98 years and a record low of 40° for the month on the 4th. Tallahassee, Fla., had its coolest May and a new May low of 34° on the 4th.

In Arizona, Yuma had its coolest May in 38 years, and Winslow a late-season low of 27° on the 19th. Even San Francisco, Calif., where temperature departures from normal are usually small, this was the coolest May in 40 years. Farther north in the Medford, Oregon, area, frost damaged gardens and unheated orchards on the 17th. On the 13th, during advection of cold air across the Great Lakes region, Detroit, Mich., recorded a late-season low of 30°. One of the few record highs was an early-season high of 92° at Syracuse, N. Y., on the 19th during a day of sunny skies and a southerly flow of warm air in advance of a low pressure system.

Precipitation for May was near normal in most areas. Wettest areas relative to normal, were Virginia and southern portions of Nevada and California where monthly totals ranged up to more than twice the usual amounts. Driest areas of less than half normal included most of Texas, New Mexico, Arizona, and Snake River Valley of southern Idaho, and small areas around Lake Michigan.

Precipitation was well distributed throughout the month. During the first decade 1- to 2-inch rains which fell in central and east Texas were beneficial but much more was needed to completely relieve the drought. During the last week beneficial rains fell in southern Texas but the drought there was still rated severe to extreme at the end of the month. The drought in southern Florida was relieved by 2- to 4-inch rains during the week ending the 16th. Moisture conditions were generally good in central and northern areas of the Nation at the end of May.

Snowfall in the contiguous 48 States was mostly limit-

ed to high mountains or extreme northern areas. St. Cloud, Minn., recorded 3.2 inches on the 19th, the second greatest May snowfall there during a 79-year record.

SUMMER--Temperatures averaged below normal east of the Rocky Mountains and above in the West. Departures from normal as much as 2° included only a few small scattered areas. June was warmer than normal except relatively cool in a few western areas. The reverse was true for July, while August was abnormally warm in New England, the northern Great Plains and Far West, and relatively cool elsewhere. The highest summer temperature, 124°, occurred in the southwest desert during both July and August.

Precipitation for the summer months was above normal in most of the Pacific Northwest, the southern half of the area east of the Rockies, and parts of the middle Atlantic and New England States. Only a few small scattered areas in the west and another near Lake Michigan had less than half normal. Summer totals exceeded 8 inches from the eastern Great Plains to the Atlantic coast ranging up to 20 inches or more in the Southeast.

June temperatures were persistently above normal in the upper Mississippi Valley and most of the Great Lakes region. This was the hottest June in Iowa since 1956 and the hottest in southeast Wisconsin since 1933. In Wisconsin temperatures in the middle and high nineties with high humidity produced very uncomfortable weather. Below normal temperatures persisted in the Pacific Northwest where Olympia, Wash., experienced its coolest June during a 30-year record and Helena, Mont., recorded a late-season low of 33° on the 29th.

Precipitation during June was above normal in the Pacific Northwest; parts of the Great Plains, and much of the Southeast. Less than half the normal amounts fell in the Rocky Mountains and Southwest, east Texas, and large portions of Illinois and Indiana. Most of the month's precipitation was the thundershower type. Many of these thunderstorms were associated with damaging hail, winds, heavy rains, and tornadoes, particularly in the midcontinent area. July temperatures averaged above normal in extreme southern Florida, and parts of Texas through California to Washington, and below normal elsewhere. The main temperature feature of the month was the persistently below normal temperatures in the central and upper midcontinent area. Abnormally cool weather prevailed in the upper Great Plains virtually throughout the month and from the Appalachians to the Rockies the second half. This cool weather regime was climaxed during the last week by advection of cool air over the entire midcontinent area, and weekly averages ranged from 9° to 12° below normal in most of the Great Plains region, the upper Mississippi and lower Ohio Valleys, and the Great Lakes region. This was one of the coolest Julies on record in the north-central United States, and it was the coolest at many individual stations. Among these were Fargo, and Bismarck, N. Dak., coolest in 67 and 56 years, respectively; and Dubuque, Iowa, coolest in 120 years. More remarkable, however, was the great number of stations reporting record lows for July during the last week. In Nebraska at least 45 stations reported new record lows, and frost was observed in many sections of the Sandhills and at some northeastern locations. A reading of 29° at Agate on the 30th was the lowest temperature for July ever recorded in Nebraska, and 36° at Oakland, Iowa, on the same date was among the lowest for July in that State. Fort Smith, Ark., and Oklahoma City, Okla., both recorded 53° on the 31st, new lows for July during records dating back 89 and 81 years, respectively. Farther west, Helena, Mont., reported its third coolest July in 91 years, and in the east, Albany, N. Y., had its second coolest July in 111 years. The first decade was unusually cool in the Pacific Northwest, and on the 7th, Spokane, Wash., recorded a 91-year low of 38°. The month was unusually warm in the Southwest where Winslow, Ariz., had its second warmest July in 83 years. A number of record highs in that area included 105° at Pueblo, Colo., on the 11th and 12th, and 109° at Winslow, Ariz., on the 13th.

Precipitation during July was fairly well distributed east of the Rockies and was generally adequate for most purposes. A notable exception occurred in Texas where rains the first and last weeks were limited in extent and for most of the State severe to extreme drought continued and even intensified in south-central and upper coastal sections.

Heavy downpours caused many damaging flash floods east of the Rockies. A number of these occurred in the central Great Plains early in the month, in Kentucky on the 18th, in central and eastern Kansas on the 22d and 23d, and at Meridian, Miss., on the 30th.

Temperatures for August averaged above normal in New England and west of a line joining western Minnesota and southeast Arizona and below normal elsewhere. This temperature pattern persisted through the first half and last week, but for the week ending the 21st, the northern two-thirds of the country was relatively warm, and the southern one-third cool.

Relative to normal, the southern Great Plains was the coolest area. In Texas, Port Arthur had its coolest August in 55 years, Midland in 41, and Amarillo in 51 years, and Oklahoma City, Okla., reported its coolest August in 21 years. The temperature failed to reach 90° for the first time in 51 years at Nashville, Tenn., and in 76 years at Greensboro, N. C., where the month was the coolest in 42 years. Erie, Pa., had its coolest August in 98 years. Temperatures in the upper Rockies and Pacific states were well above normal, 9° above in north-central Montana. Medford, Oreg., recorded 101° on the 11th, the highest in 29 years. Havre and Great Falls, Mont., had their warmest in 92 and 78 years, respectively. A high of 118° at Red Bluff, Calif., on the 10th was a record high for any month.

Precipitation for August was above normal in parts of nearly all the coastal and southern border states, 200 to 400 percent in much of Texas and over 200 percent in New Jersey and adjacent areas of Pennsylvania, Maryland, and Delaware. Rainfall was heavy in many sections from Texas and the lower Mississippi Valley to New England during the first week, in parts of Texas, Oklahoma, Florida, and Wisconsin the second week, in parts of the extreme Southeast and some other small scattered areas the third week. Heavy rains along the Atlantic Coast the last week occurred during the passage of Tropical Storm Doria, and locally heavy thundershowers occurred elsewhere east of the Rockies and in the Southwest.

Cool, wet weather in Texas eased the severity of the drought in all sections of that State with greatest improvement in the South. Damaging flash floods occurred along several Texas streams as a result of heavy downpours ranging up to as much as 11 inches in 24 hours.

Heavy thundershowers in Arizona were responsible for near record to record totals for August in some localities. Prescott reported 10.51 inches, a new Au-

gust record and the second greatest amount for any month since 1898; and 6.22 inches at Casa Grande was a record for August since 1880.

Although rainfall was near to mostly above normal throughout Florida, one of the worst droughts in 40 years continued along the lower east coast. The State Climatologist for Florida stated that a contributing factor to the critical drought in the area was the lack of daily rainfall amounts great enough to allow moisture to reach sub-surface water tables.

Less than half the normal rainfall was recorded in the central and upper Great Plains and middle Mississippi Valley. In Iowa, precipitation was only 30 percent of normal and the driest August, statewide, in 99 years. Parts of Kansas were the driest of record and five stations in the State reported no precipitation at all. Some stations in Nebraska had their driest August and two stations reported only a trace of rain.

AUTUMN--Temperatures for autumn averaged from 1° to 4° above normal in the eastern half of the contiguous United States and 1° to 4° below in the western half. The temperature patterns and magnitude of departures for both September and October were very much like the seasonal, but November was somewhat cooler in the East and somewhat warmer in the West.

This was a wet autumn in the Great Plains, Rocky Mountain, and middle Atlantic States. Some areas in the Great Plains and Rocky Mountains had 200 percent of normal. Several Tropical Storms brought heavy rains to the Gulf and Atlantic Coasts. Only a few small scattered areas had less than half the normal amounts, and most of these were in Michigan, Montana, and California.

September temperatures averaged above normal in the East, and below in the West except above in western California and extreme southwest Arizona. The warmest area, relative to normal, extended from the upper Mississippi Valley to the Atlantic coast with departures as much as 4°, and the coldest area included the northwest Rockies and the extreme northern Great Basin where departures were 6° or more. The few temperature records set during the month consisted mostly of late-season highs in Kansas and Nebraska on the 7th, and at others in California and Nevada near midmonth. For San Francisco a high of 101° on the 13th equaled the highest of record. In contrast, this was the coldest September in 70 years at Flagstaff, Ariz., and an early-season low of 33° was recorded by Roswell, N. Mex., on the 20th.

Precipitation during September was near normal to much above over most of the contiguous United States. In scattered areas across the country monthly totals ranged from 150 to 200 percent of normal. Frontal systems, thunderstorm activity, and tropical storms all contributed to the generous precipitation.

During the first few days of the month a low pressure system produced heavy precipitation in the Pacific Northwest and a few days later in the northern and central Great Plains. During the period, 11th to the 13th, five Tropical Storms were going at the same time. A weak tropical depression in southeastern Louisiana on the 5th produced 6 to 7 inches of rain in that area and lesser amounts in other Gulf Coastal areas, and then moved back southwestward over the Gulf where it gained hurricane intensity before reaching southern Texas near Freeport on the 10th. In southern Texas, the storm, now Hurricane Fern, produced up to more than 20 inches of rainfall that resulted in destructive floods, and spawned a few tornadoes.

During a frontal passage across the eastern states on the 11th to 13th, heavy rains totaling from 9 to 13 inches in northeastern Maryland and up to 15 inches in northern Delaware caused damaging flash floods.

Hurricane Edith moving northeastward from the western Gulf area and producing 6-foot tides along the Texas coast finally reached land in southwestern Louisiana on the 16th. Heavy rains fell in southern portions of that State and Mississippi, much of Alabana, and central and northern Georgia as the weakening storm pushed northeastward. Several tornadoes occurred in Louisiana and Mississippi.

Tropical Storm Olivia off the west coast of northern Mexico in the closing days of the month brought beneficial showers to Arizona and New Mexico.

Hurricane Ginger crossed the North Carolina coast near Morehead City on September 30, weakened rapidly, and passed into southern Virginia on October 2, and then out over the Atlantic.

Snowfall was observed the first week in the northern Rockies, and unusually heavy snow fell on the western slopes of the Rockies the third week, particularly in the Colorado area. Boulder and Denver recorded up to 14 or 15 inches. Some light snow fell in the northern Plains. Four inches fell at Harrison, Nebr., on the 21st. Near the end of the month snow fell in the Northwest, and 4 inches at Salt Lake City was the second time in September measurable snow fell there in 40 years.

October temperatures averaged 3° to 6° above normal in much of the eastern half of the contiguous United States and a like amount below normal in the western half. This was one of the warmest Octobers on record east of the Mississippi River; the warmest in 101 years in the Nation's Capital; in 22 years in Atlanta, Ga.; tied with 1920 as the third warmest in Boston, Mass., in 142 years; and was the second warmest in Rochester, N. Y., in 101 years. In the East, Indian Summer type weather prevailed during most of the second half.

The month was unusually cold in the West, particularly in southern portions where a number of stations had their coldest October in more than 50 years. More notable, however, was a record-breaking cold spell during the closing days when many stations throughout the West reported their lowest temperatures for October in many years, some stations with records dating back 80 years or more. Among the stations with at least 80 years of record reporting new October lows were: Salt Lake City, Utah, 16° on the 30th; Yuma, Ariz., 35° on the 30th; Bakersfield, Calif., 19° on the 30th; Reno, Nev., 8° on the 29th; and Fremont, Oreg., -9° on the 29th, the lowest temperature ever recorded in Oregon during October.

Precipitation was above normal along the East Coast, in the Great Plains, and in the Rocky Mountain states. This was the wettest October in North Dakota where precipitation ranged from about 200 to 600 percent of normal, some stations measuring over 5 inches for the month. Minnesota, New Jersey, and North Carolina also had their wettest October, and Kansas its second wettest.

October was unusually dry from the Mississippi River to the Appalachians, with precipitation less than 50 percent of normal in much of this area. Fall harvesting operations made good headway in the Corn Belt. Monthly precipitation totals also were well below normal in the Pacific States western portions of Montana and Idaho, and most of central Colorado and eastern Wyoming.

October snowfall was unusually heavy in parts of the West where the month was abnormally cold. Walla Walla, Wash., measured 2.5 inches, most in 99 years; Salt Lake City, Utah, 16.6 inches, most in 87 years; Flagstaff, Ariz., 24.7 inches, most in 73 years; Lander,

Wyo., 39.9 inches, most in 80 years; and Rapid City, S. Dak., 10.2 inches, most in 52 years.

The heaviest snowfall during October occurred during the last week when near-record amounts were measured in northern portions of the Rockies and Great Plains and heavy amounts in most of the higher mountain areas of the West. Six to 10 inches were reported in the mountains of Oregon. As much as 2 feet fell in the Black Hills of South Dakota. In parts of northern Utah snow accumulations exceeded 20 inches. Blizzard conditions occurred in central and southern Wyoming during the heavy snowstorm over the State on the 27th through the 29th.

Temperatures for November averaged near normal in the entire contiguous United States, slightly below in the Appalachian region and much of the Northeast and in a large western area including most of Wyoming, Utah, Nevada, California, and Arizona, and slightly above normal elsewhere. Temperature variations during the month seldom were extreme and few records were set.

In New England below-normal temperatures persisted after the first week, resulting in the coldest November in 67 years at Concord, N. H. During the second week when the weather was dry and sunny in the Great Plains, temperatures rose to unusually high levels and 83° set a new November record at Pueblo, Colorado, on the 11th. Temperatures rose to unusually high levels along the east coast in a southerly flow of air in advance of a cold front at the beginning of the month, and 83° at Wilmington, N. C., equaled the highest for November there in 101 years. These high temperatures in the East were followed by a period of abnormally cold weather, and on the 9th, Albany, N. Y., recorded an early-season low of 11°.

November precipitation, relative to normal, presented a very irregular pattern across the Nation. Areas with above-normal amounts included most of the Pacific Northwest, a broad belt extending from northern New Mexico and southern Colorado through the central and upper Great Plains and upper Mississippi Valley, a portion of south-central Texas, the Appalachian region, and the Atlantic Coastal States from Delaware to Massachusetts. Most other areas had less than normal, and an area extending from Indiana to northern portions of Alabama and Mississippi, a considerable portion of the central and northern Rockies, the southwestern desert and the southern half of California had less than half normal.

A few stations reported unusually heavy amounts. Dodge City, Kansas, measured 3.75 inches, the most for November in 97 years; and Huron, S. Dak., 2.04 inches, the most in 90 years.

Snowfall was unusually heavy for November in many northern areas, particularly during the second half of the month.

In the Cascade Mountains of the Northwest, frequent snowfalls accumulated to several feet in the higher mountains. In the East, some heavy snows fell in the lee of the Lakes, at the end of the first week, portions of the Cleveland, Ohio, area reporting nearly a foot on the ground and some locations in western New York up to 8 inches.

Cold weather which overspread the eastern part of the Nation in the closing days of November persisted with even lower temperatures during the first few days of December, and advection of cold air reduced temperatures to below normal levels in central and western areas. Subzero minima occurred in extreme north-central and northeastern areas and at high elevations in the northern Rockies.

Unusually cold weather persisted in western areas during the next 2 weeks but became unusually mild in the East during that period. Subzero minima reached into the southern Rockies and sometimes maximum temperatures along the north-central border did not rise above zero. In contrast, daily maxima in the eighties were the rule in Florida, and the mild sixties occurred as far north as southern New England.

Light to heavy precipitation fell across the Nation the first few days of November as rain in southern areas and along the Pacific coast and snow in northern interior and mountainous areas. A severe storm in the West on the first day of the month brought nearly a foot of snow to portions of the southwestern Great Plains, and heavy rains in the Gulf states as it moved across that area to the Atlantic. From northern Georgia to southern Virginia freezing rain and snow made highway travel hazardous. Charlotte, N. C., measured an early-season snow cover of 8 inches on the 3d, and depths up to 18 inches were reported in the Carolina mountains.

For the week ending December 12, cold, stormy weather with occasional blizzard conditions in northern interior areas prevailed over the western half of the Nation. Heavy rains ranging from 4 to 8 inches or more from northeast Texas to Tennessee and southern Illinois caused flooding along numerous streams.

Abnormally cold, snowy weather in the West during the week ending the 19th continued to increase the mountain snowcover. Rainfall was again heavy from the Great Lakes to the Gulf. An outbreak of tornadoes in the Midwest on the 15th killed one person in Springfield, Mo., injured several in Poplar Bluff, Mo., and caused widespread damage in northeast Arkansas.

SEVERE STORMS--Severe storms took the usual toll of life and property. Storms took more than 500 lives and were blamed for nearly 5,000 injuries. Property losses were measured in the hundreds of millions.

Tropical storms took only eight lives, but caused property damage estimated at $212.58 million. Four hurricanes entered the United States. The first, Doria, crossed into North Carolina on the afternoon of August 27. The combination of Doria and a front along the coast produced heavy rains and flooding from North Carolina to New England. Greatest damage, $138.5 million, occurred in New Jersey, but New York reported $4.32 million and New England $4.5 million. Total damage from this storm was estimated at $147.35 million.

Hurricane Edith entered Louisiana September 16. Most losses from the storm occurred in this State, amounting to about $25 million. Edith spawned several tornadoes in Louisiana and caused heavy rains in parts of Mississippi, Alabama, and Georgia.

Fern, as a weak LOW, moved up across the Gulf to southern Louisiana where she produced 6- to 7-inch rains before turning back southwestward across the Gulf. She became a Tropical Storm on the 7th and a hurricane on the 8th. Fern crossed the Texas coast near Freeport on the 10th in a southwestward course that took her across southern Texas into Mexico. Heavy rains that ranged from 15 to 26 inches in an area north and west of Corpus Christi resulted in devastating floods. She also spawned five tornadoes. Total damage in Texas was estimated at $30.23 million.

Hurricane Ginger entered North Carolina near Moorehead City on September 30, crossed into southern Virginia on October 2 and then turned out over the Atlantic. Winds and rain caused heavy crop damage in coastal areas.

Tornadoes were more numerous than usual, around 800 by the end of October. One of the earliest outbreaks of these storms occurred in Mississippi on February 21 when 107 persons were killed, 1,514 injured, and damage estimated at $17 million.

A single tornado in May cut a path of destruction through western Tennessee. Three persons were killed, 137 injured, and losses were estimated at $5,750,000.

A windstorm of unusual severity and accompanied by hail swept the southwestern quarter of Tennessee early on April 23, damaging property and crops to the extent of $25 million or more.

One of the many damaging hailstorms of the year occurred on May 5 in San Antonio and west-central Bexar County, Texas, causing damages estimated at $6 million. Another of these storms with hail to golf-ball size caused 50 to 100 percent destruction to 250,000 acres of field crops in southeastern Missouri on July 15. Total losses were expected to exceed $17 million.

Numerous flash floods occurred during the year, each causing heavy losses. On August 1-2 one of these occurred in the Baltimore, Maryland, Metropolitan area, including Harford County. Severe thunderstorms associated with a frontal system produced rainfall totaling 7 to 12 inches in 12 hours. Fourteen deaths and property damage totaling $6.5 million were blamed on the storm.

On September 11-14 during the passage of a cold front across the eastern United States severe thunderstorms in southeastern Pennsylvania produced 8 to 14 inches of rain. Resulting damage was estimated at $17 million, and 16 persons lost their lives.

EXCESSIVE PRECIPITATION

(Excessive Short Duration Rainfall)

YEAR 1971

This table contains statistics of maximum amounts of rainfall during the calendar year 1971. Data presented in this table are generally from stations equipped with recording gages. Stations are at airport locations unless otherwise shown.

Excessive precipitation data for the years 1896-1935 inclusive, generally present the accumulated amounts of precipitation for each 5, 10, or 20 minute intervals during storms in which the rate of fall equaled or exceeded .25 inch in any 5 minute period, or .30 in any 10 minute period, or .35 in any 15 minute period, etc., the tabulation beginning with the 5 minute period where the rate of .05 inch in 5 minutes began and continuing by 10 or 20 minute intervals up to 120 minutes. A detailed explanation of the method used may be found in the publications listed in the last paragraph of this explanation.

The present method, adopted with data for the calendar year 1936, gives the maximum fall of precipitation for the periods 5 to 180 minutes, the maximum amounts being taken for the periods in which the fall is greatest for the given time, and is tabulated to show maximum amounts for 5, 10, 15, 20, 30, 45, 60, 80, 100, 120, 150 and 180 minutes, even if the fall does not equal the excessive rate for some of the periods. (The 15 minute amount was not computed for 1936-43 and the 150 minute amount was not computed for 1944 through 1948).

The following Table A shows limits at which precipitation was considered excessive in this publication:

TABLE A

Duration (minutes)	Depth of precipitation (inches)	Duration (minutes)	Depth of precipitation (inches)
5	.25	60	.80
10	.30	80	1.00
15	.35	100	1.20
20	.40	120	1.40
30	.50	150	1.70
45	.65	180	2.00

This table is made up from the formula, $A = t + 20$ where A is the accumulated depth in hundredths of inches and t is the time in minutes.

For the years 1936 through 1948 stations in North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Arkansas, Louisiana, Texas, Oklahoma, and San Juan, P. R., used the limits shown in the following Table B:

TABLE B

Duration (minutes)	Depth of precipitation (inches)	Duration (minutes)	Depth of precipitation (inches)
5	.40	60	1.50
10	.50	80	1.90
15	.60	100	2.30
20	.70	120	2.70
30	.90	150	3.30
45	1.20	180	3.90

This table is made up from the formula $A = 2t + 30$. Its use, however, was discontinued at the end of 1948 and Table A is used by all sections for 1949 and the following years.

Publication of Data. A summary of maximum precipitation data for the years prior to 1896 is published in the annual report of the Chief of the Weather Bureau for 1895-1896. Excessive precipitation data for the period 1881-1896 are published in the annual report of the Chief of the Weather Bureau 1896-1897. Data for the years 1897 through 1934 have been published in the appropriate annual reports of the Chief of the Weather Bureau. For the years 1935 through 1949 these data are published in the appropriate issue of the United States Meteorological Yearbook. For 1950 and succeeding years, excessive precipitation is presented in the annual issues of the Climatological Data National Summary.

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
ALABAMA												
BIRMINGHAM												
JAN 4	.26	.41	.49	.51	.55	.76	.78	.87	.93	.93	.93	.94
JAN 23	.17	.32	.38	.40	.45	.47	.47	.48	.49	.49	.50	.63
FEB 4	.20	.33	.35	.38	.42	.45	.62	.63	.63	.63	.65	.72
FEB 4	.40	.56	.62	.76	1.07	1.18	1.63	1.80	2.03	2.21	2.40	2.49
FEB 22	.36	.71	.77	.79	.86	.90	.93	.93	.93	.93	.93	.93
FEB 26	.25	.35	.38	.39	.46	.50	.56	.60	.62	.62	.62	.62
MAR 15	.28	.38	.40	.40	.42	.42	.43	.46	.49	.49	.49	.49
APR 1	.17	.33	.36	.47	.54	.60	.68	.76	.79	.82	.83	.84
APR 23	.26	.31	.32	.32	.32	.32	.32	.32	.32	.33	.33	.44
JUN 16	.31	.42	.43	.47	.62	.63	.68	.82	1.04	1.12	1.12	1.16
JUN 17	.25	.32	.44	.50	.82	1.21	1.28	1.50	1.84	1.91	2.03	2.08
JUN 27	.22	.30	.32	.32	.32	.34	.35	.35	.37	.37	.50	.69
JUL 1	.27	.32	.45	.49	.51	.52	.68	.84	.85	.85	.85	.85
JUL 5	.26	.42	.45	.55	.67	.72	.72	.73	.73	.73	.73	.73
JUL 7	.30	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
JUL 16	.45	.55	.62	.71	1.12	1.50	1.88	2.20	2.62	2.65	2.65	2.65
JUL 25	.21	.32	.33	.34	.44	.45	.45	.45	.45	.45	.45	.45
JUL 28	.25	.40	.45	.48	.50	.54	.55	.56	.57	.58	.59	.60
AUG 17	.32	.59	.72	.86	1.08	1.22	1.24	1.26	1.26	1.26	1.26	1.26
AUG 21	.33	.52	.54	.61	.92	.95	.95	.95	.95	.95	.95	.95
AUG 22	.21	.34	.37	.38	.40	.41	.41	.41	.41	.41	.41	.41
DEC 16	.25	.33	.35	.35	.37	.37	.38	.38	.38	.38	.38	.38
HUNTSVILLE												
FEB 4	.25	.30	.35	.50	.54	.55	.58	.62	.65	.72	.76	.85
FEB 22	.76	1.02	1.05	1.07	1.12	1.17	1.22	1.27	1.30	1.31	1.36	1.38
MAR 6	.40	.52	.57	.64	.73	.79	.79	.81	.84	.86	.86	.86
MAY 12	.91	1.06	1.12	1.14	1.17	1.19	1.19	1.19	1.19	1.19	1.19	1.19
MAY 12	.30	.35	.37	.40	.43	.45	.52	.58	.66	.85	1.02	1.14
JUL 15	.22	.31	.31	.31	.31	.32	.32	.37	.44	.47	.47	.47
JUL 15	.27	.44	.46	.50	.55	.68	.68	.68	.68	1.05	1.05	1.05
JUL 16	.23	.32	.33	.33	.33	.47	.62	.64	.65	.67	.69	.69
AUG 6	.25	.47	.52	.63	.72	.73	.74	.74	.78	.78	.78	.78
AUG 11	.35	.61	.63	.68	.73	.73	.73	.73	.73	.73	.73	.99
AUG 22	.19	.31	.50	.52	.55	.56	.56	.56	.56	.60	.64	.65
SEP 1	.47	.92	1.10	1.35	1.43	1.45	1.46	1.46	1.46	1.46	1.46	1.46
SEP 7	.25	.49	.71	.72	.74	.75	.75	.75	.75	.75	.75	.75
SEP 17	.20	.35	.45	.50	.65	.88	1.00	1.17	1.24	1.45	1.52	1.55
SEP 29	.25	.35	.39	.48	.54	.57	.57	.57	.57	.57	.57	.57
NOV 2	.30	.43	.46	.51	.55	.58	.61	.62	.62	.66	.67	.67
MOBILE												
JAN 4	.25	.32	.32	.33	.40	.42	.43	.43	.45	.49	.50	.50
FEB 12	.34	.44	.51	.57	.63	.66	.72	.75	.83	.90	.94	.94
FEB 20	.28	.50	.55	.60	.66	.78	1.04	1.19	1.30	1.34	1.39	1.52
FEB 26	.25	.44	.47	.56	.64	.76	.83	.89	.94	1.01	1.15	1.23
MAR 10	.36	.43	.52	.60	.67	.71	.77	.81	.81	.81	.81	.81
MAR 13	.25	.40	.50	.70	.90	1.30	1.34	1.36	1.39	1.39	1.39	1.39
MAR 19	.34	.62	.69	.77	1.14	1.30	1.40	1.45	1.64	1.71	1.84	1.89
MAY 12	.20	.35	.35	.35	.43	.61	.62	.84	.96	.96	.96	.96
MAY 20	.31	.40	.45	.46	.47	.47	.47	.47	.47	.47	.47	.47
MAY 27	.26	.40	.43	.46	.51	.55	.56	.57	.57	.57	.57	.57
MAY 27	.20	.35	.37	.43	.48	.49	.49	.50	.52	.52	.52	.52
JUN 17	.27	.29	.29	.29	.29	.29	.29	.50	.51	.51	.53	.57
JUN 27	.37	.61	.72	1.02	1.32	1.38	1.39	1.39	1.39	1.39	1.39	1.39
JUL 17	.50	.58	.63	.64	.66	.73	.73	.73	.73	.73	.73	.73
JUL 29	.40	.53	.53	.61	.75	.80	.82	.84	.91	.95	.97	1.03
AUG 1	T	M	M	M	M	M	M	M	M	M	M	M
AUG 2	.25	.49	.55	.67	.88	1.13	1.40	1.68	1.86	1.87	1.87	1.87
AUG 11	.28	.38	.50	.51	.58	.85	.90	.92	.92	.92	.92	.92
AUG 14	.15	.30	.33	.36	.42	.42	.42	.42	.42	.42	.42	.42
AUG 19	.36	.57	.60	.95	1.14	1.17	1.17	1.17	1.17	1.17	1.17	1.17
AUG 23	.37	.55	.56	.56	.56	.56	.56	.56	.56	.57	.57	.57
AUG 24	.45	.79	.81	.83	1.13	1.27	1.31	1.40	1.48	1.48	1.50	1.52
AUG 27	.22	.27	.40	.48	.52	.52	.52	.52	.52	.52	.58	.58
AUG 31	.33	.37	.38	.39	.41	.41	.43	.45	.48	.50	.53	.54
SEP 4	.30	.39	.41	.44	.46	.47	.48	.50	.53	.55	.55	.55
SEP 5	.53	.65	.73	.81	.83	.88	.92	.98	1.31	1.36	1.52	1.67
SEP 16	.27	.49	.54	.79	1.07	1.42	1.72	1.97	2.14	2.26	2.28	2.29
DEC 20	.25	.34	.35	.36	.60	.67	.81	.90	.98	1.08	1.15	1.23
MONTGOMERY												
JAN 4	.22	.36	.45	.50	.56	.63	.67	.71	.75	.83	.87	.87
FEB 7	.22	.33	.39	.41	.44	.48	.54	.63	.67	.72	.89	1.01
FEB 20	.26	.38	.58	.64	.68	.73	.88	.99	1.16	1.42	1.64	1.77
FEB 26	.15	.24	.38	.47	.52	.55	.56	.57	.61	.64	.70	.75
MAR 1	.21	.30	.46	.53	.68	.76	.90	.96	1.01	1.15	1.16	1.17
MAR 3	.20	.38	.42	.44	.64	.77	.85	.91	1.00	1.06	1.09	1.16
MAR 6	.27	.28	.28	.29	.31	.32	.32	.32	.33	.35	.35	.35
MAR 22	.25	.29	.29	.29	.38	.48	.49	.53	.62	.78	.78	.78
APR 2	.20	.33	.41	.45	.46	.47	.49	.53	.57	.61	.64	.67
APR 29	.18	.30	.35	.33	.44	.58	.61	.63	.67	.73	.78	.80
APR 30	.53	.69	.71	.73	.75	.76	.76	.88	.88	.92	1.07	1.12
MAY 8	.27	.47	.64	.73	.93	1.10	1.13	1.13	1.13	1.13	1.13	1.14
JUN 18	.35	.59	.72	.78	.81	.82	.83	.83	.83	.83	.83	.83
JUL 15	.25	.39	.42	.44	.47	.48	.48	.48	.48	.48	.48	.48
JUL 26	.36	.62	.69	.70	.71	.72	.72	.72	.72	.72	.72	.72
JUL 30	.25	.33	.34	.34	.40	.40	.41	.42	.43	.43	.47	.49
AUG 6	.22	.37	.50	.57	.61	.64	.66	.66	.66	.66	.66	.66
AUG 29	.47	.81	1.01	1.31	1.59	1.63	1.63	1.63	1.63	1.63	1.64	1.65
SEP 1	.37	.71	.81	.94	.96	.97	1.11	1.40	1.88	1.97	2.07	2.32
SEP 4	.21	.33	.40	.45	.48	.49	.49	.49	.49	.49	.49	.49
SEP 16	.33	.55	.71	.83	1.18	1.57	1.77	1.82	1.87	1.89	1.92	1.93
NOV 28	.25	.30	.40	.45	.52	.55	.58	.62	.64	.64	.64	.65
ALASKA												
ANCHORAGE						NONE						
ANNETTE						NONE						
COLD BAY						NONE						
FAIRBANKS						NONE						
JUNEAU						NONE						
KING SALMON						NONE						
MC GRATH						NONE						

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
ALASKA												
MC GRATH						NONE						
YAKUTAT						NONE						
ARIZONA												
FLAGSTAFF												
JUL 30	.25	.35	.40	.40	.47	.54	.63	.65	.65	.65	.65	.65
AUG 15	.36	.68	.77	.80	.82	.84	.85	.85	.85	.85	.85	.85
PHOENIX												
SEP 29	.22	.35	.38	.39	.41	.42	.43	.43	.43	.43	.44	.44
TUCSON												
AUG 12	.33	.49	.54	.57	.58	.60	.62	.62	.66	.71	.77	.81
SEP 8	.20	.30	.31	.32	.52	.65	.65	.65	.65	.65	.65	.65
WINSLOW												
AUG 14	.23	.35	.39	.47	.49	.52	.52	.52	.52	.52	.52	.52
YUMA												
ARKANSAS												
FORT SMITH												
FEB 16	.30	.42	.43	.43	.43	.43	.43	.43	.43	.43	.43	.43
MAY 6	.34	.49	.54	.64	.74	.83	.89	.89	.89	.92	.99	.99
MAY 22	.28	.40	.40	.41	.41	.41	.42	.42	.45	.47	.50	.50
MAY 23	.25	.44	.59	.69	1.01	1.01	1.01	1.02	1.24	1.29	1.29	1.29
JUN 18	.15	.30	.35	.40	.51	.57	.60	.63	.65	.65	.65	.65
JUN 30	.15	.30	.40	.45	.70	1.05	1.30	1.40	1.41	1.43	1.52	1.52
AUG 6	.22	.42	.49	.58	.89	1.28	1.62	1.86	1.91	2.28	2.67	2.80
AUG 27	.22	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
OCT 3	.28	.40	.41	.43	.49	.50	.50	.68	.88	1.00	1.02	1.05
NOV 17	.20	.33	.36	.48	.72	.98	1.10	1.14	1.20	1.24	1.28	1.28
DEC 10	.30	.50	.57	.65	.85	1.15	1.48	1.76	1.97	2.19	2.36	2.54
LITTLE ROCK												
JAN 3	.60	.93	.98	1.02	1.04	1.06	1.12	1.16	1.17	1.19	1.19	1.19
FEB 4	.29	.30	.31	.34	.35	.36	.38	.44	.49	.51	.51	.51
APR 23	.45	.47	.49	.50	.62	.63	.70	.84	.85	.86	.86	.86
MAY 6	.27	.38	.38	.41	.41	.41	.41	.41	.41	.41	.41	.41
MAY 10	.30	.39	.45	.55	.60	.60	.61	.64	.65	.70	.70	.70
MAY 23	.35	.41	.45	.50	.55	.70	1.00	1.26	1.27	1.29	1.29	1.29
MAY 24	.33	.43	.56	.65	.83	.89	.96	1.03	1.03	1.03	1.03	1.03
JUN 18	.55	.76	.94	1.25	1.40	1.72	1.88	1.90	1.90	1.91	1.91	1.91
JUN 21	.54	.70	.80	1.00	1.23	1.31	1.36	1.37	1.38	1.41	1.41	1.42
JUN 28	*1.05	*1.53	*1.90	2.15	*2.72	2.85	2.88	2.90	2.90	2.91	2.93	2.93
JUL 4	.35	.50	.65	.80	1.20	1.45	1.49	1.55	1.56	1.56	1.56	1.56
AUG 3	.32	.51	.65	.73	1.16	1.56	1.88	1.91	1.96	2.02	2.06	2.33
AUG 5	.37	.66	.67	.82	1.07	1.37	1.56	1.64	1.64	1.65	1.72	1.72
AUG 6	.40	.65	.75	.85	1.04	1.05	1.05	1.05	1.05	1.05	1.30	1.30
AUG 23	.25	.40	.50	.65	.83	.85	.85	.91	.98	.99	.99	.99
DEC 9	.18	.29	.35	.44	.50	.66	.81	.94	1.21	1.50	1.68	1.80
CALIFORNIA												
BAKERSFIELD												
MAY 11	.23	.32	.34	.36	.38	.40	.40	.41	.41	.42	.43	.46
MAY 26	.23	.35	.43	.54*	.67	.70*	.73	.74	.75	.75	.75	.75
BISHOP						NONE						
BLUE CANYON						NONE						
EUREKA U						NONE						
FRESNO						NONE						
LOS ANGELES												
DEC 27	.39	.48	.51	.57	.64	.75	.81	.88	.95	1.02	1.22	1.37
MT SHASTA R						NONE						
OAKLAND						NONE						
RED BLUFF						NONE						
SACRAMENTO						NONE						
SANDBERG R						NONE						
SAN DIEGO						NONE						
SAN FRANCISCO						NONE						
SAN FRANCISCO U												
MAR 12	.26	.45	.57	.60	.63	.66	.70	.77	.83	.86	.91	.98
SANTA MARIA						NONE						
COLORADO												
ALAMOSA												
JUL 18	* .31	.39	.46	.77*	.81	1.19*	1.39	1.45	1.49*	1.53	1.53*	1.56
DENVER												
JUL 25	.50	.69	.73	.73	.74	.76	.76	.76	.76	.76	.76	.76
AUG 18	.16	.26	.35	.43	.55	.58	.58	.58	.58	.58	.58	.58
GRAND JUNCTION						NONE						
PUEBLO												
JUL 21	.16	.31	.37	.45	.50	.57	.59	.60	.61	.61	.62	.62
AUG 14	.20	.37	.39	.45	.54	.56	.58	.58	.58	.58	.58	.58

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
CONNECTICUT												
BRIDGEPORT												
JUL 1	.38	.53	.68	.80	.90	.92	.94	.99	1.02	1.04	1.06	1.07
JUL 19	.45	.78	.92	1.17	1.62	1.96	2.20	2.85	3.30*3.70	4.40*5.40		
JUL 27	.30	.58	.80	.86	.93	1.01	1.01	1.01	1.01	1.01	1.01	1.01
JUL 30	.25	.50	.72	.78	.82	.90	.96	.98	1.01	1.14	1.46	1.60
AUG 11	.38	.58	.70	.76	1.08	1.14	1.14	1.14	1.14	1.15	1.18	1.20
AUG 28	.12	.24	.34	.44	.53	.60	.80	.88	.90	.95	.95	1.00
SEP 12	.44	.52	.60	.82	1.04	1.46	1.56	1.92	2.02	2.14	2.30	2.30
HARTFORD												
JUL 1	.17	.28	.36	.37	.38	.43	.49	.52	.60	.68	.77	.83
AUG 3	.20	.35	.38	.43	.58	.64	.69	.75	.80	.80	.80	.83
SEP 12	.20	.38	.47	.51	.65	.76	.83	.88	.99	1.01	1.04	1.05
SEP 14	.23	.40	.42	.44	.46	.47	.47	.47	.47	.47	.47	.47
DELAWARE												
WILMINGTON												
JUN 26	.19	.35	.37	.51	.72	.88	1.06	1.09	1.12	1.12	1.12	1.12
JUL 30	.33	.54	.61	.84	.92	1.16	1.45	1.52	1.57	1.57	1.57	1.58
AUG 1	.30	.58	.64	.71	.73	.73	.73	.73	.73	.84	.84	.84
AUG 19	.19	.27	.32	.36	.60	.65	.68	.70	.70	.70	.70	.70
SEP 13	.34	.46	.58	.58	.61	.67	.68	.68	.79	.94	1.13	1.13
SEP 17	.20	.34	.46	.50	.52	.62	.63	.65	.65	.65	.65	.65
NOV 2	.23	.40	.46	.59	.72	1.07	1.12	1.13	1.13	1.13	1.13	1.13
FLORIDA												
APALACHICOLA U												
FEB 7	.28	.49	.59	.63	.65	.78	.89	1.00	1.09	1.25	1.31	1.37
JUL 14	.21	.33	.40	.44	.55	.56	.56	.56	.56	.56	.56	.56
JUL 30	.15	.25	.33	.43	.45	.46	.46	.51	.51	.51	.51	.51
AUG 10	.28	.48	.63	.65	.68	.70	.71	.71	.71	.71	.71	.71
AUG 23	.16	.28	.33	.37	.55	.55	.55	.55	.55	.55	.55	.55
AUG 25	.29	.50	.68	.74	.81	.81	.82	.83	.84	.87	.90	.91
SEP 12	.12	.24	.36	.48	.58	.63	.75	.89	1.06	1.12	1.19	1.22
NOV 29	.42	.70	.93	.99	1.07	1.15	1.22	1.26	1.36	1.43	1.47	1.48
DEC 3	.17	.27	.33	.44	.56	.65	.78	.93	1.29	1.43	1.62	1.70
DAYTONA BEACH												
FEB 7	.16	.32	.37	.45	.67	.73	.76	.84	.92	1.00	1.11	1.25
MAR 26	.29	.45	.50	.53	.59	.64	.68	.70	.74	.74	.80	.80
MAY 13	.20	.30	.38	.40	.45	.58	.63	.65	.67	.67	.67	.67
MAY 15	.25	.30	.31	.31	.31	.39	.40	.42	.52	.63	.75	.75
MAY 29	.15	.30	.30	.30	.30	.30	.30	.30	.30	.30	.39	.39
JUN 27	.25	.45	.58	.68	.85	.91	.94	.94	.94	.94	.94	.94
JUN 28	.50	.90	M 1.40	1.62	1.95	2.11	2.18	2.19	2.20	2.21	2.23	2.25
JUL 18 T	M	M	M	M	M	M	M	M	M	M	M	M
AUG 15	.28	.56	.65	.70	.75	.81	.86	.88	.90	.90	.90	.90
AUG 17	.14	.25	.35	.43	.46	.48	.48	.48	.48	.48	.48	.48
AUG 23	.33	.45	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
AUG 27	.33	.63	.74	.86	1.05	1.07	1.16	1.19	1.19	1.19	1.19	1.19
SEP 3	.25	.35	.55	.68	.86	.90	1.00	1.08	1.16	1.22	1.23	1.24
SEP 4	.27	.39	.47	.52	.56	.57	.57	.57	.57	.57	.57	.57
SEP 8	.50	.85	1.25	1.70	*2.30	2.40	2.45	2.52	2.63	2.67	2.83	2.90
OCT 9	.25	.37	.52	.62	.67	.70	.70	.70	.70	.70	.70	.70
OCT 13	.15	.27	.36	.37	.40	.45	.45	.45	.45	.45	.45	.60
OCT 14	.26	.40	.61	.75	.90	1.28	1.36	1.53	1.91	2.05	2.12	2.31
OCT 19	.40	.70	.75	.80	1.00	1.10	1.15	1.68	1.80	1.90	2.02	2.05
FORT MYERS												
MAY 11	.30	.44	.52	.58	.63	.69	.73	.74	.74	.74	.74	.75
MAY 13	.60	1.05	1.20	1.60	2.03	2.04	2.04	2.04	2.04	2.04	2.04	2.04
JUN 3	.55	.83	.91	.97	1.02	1.06	1.10	1.10	1.10	1.10	1.10	1.10
JUN 4	.60	.82	1.07	1.15	1.26	1.30	1.36	1.40	1.44	1.45	1.48	1.52
JUN 12	.50	.89	.97	1.03	1.07	1.12	1.12	1.12	1.12	1.12	1.12	1.12
JUL 1	.35	.60	.63	.65	.67	.68	.68	.68	.68	.68	.68	.68
JUL 5	.35	.60	.66	.81	.90	.92	.93	.94	.94	.95	.96	.96
JUL 6	.49	.53	.55	.57	.60	.61	.62	.64	.67	.71	.70	.75
JUL 19	.35	.58	.65	.76	.80	.80	.80	.80	.80	.80	.80	.80
JUL 27	.35	.60	.70	.84	1.04	1.17	1.21	1.23	1.23	1.23	1.23	1.23
JUL 28	.70	1.22	1.30	1.40	1.48	1.48	1.49	1.49	1.49	1.49	1.49	1.49
JUL 29	.23	.36	.40	.43	.45	.46	.46	.46	.46	.46	.46	.46
JUL 30	.30	.39	.42	.43	.50	.51	.52	.52	.95	.96	.96	.96
AUG 2	.55	.76	.82	.85	.85	.85	.85	.85	.85	.85	.85	.85
AUG 9	.20	.35	.38	.54	.65	.68	.77	.80	.80	.80	.80	.80
AUG 10	.62	.84	.95	1.10	1.17	1.17	1.20	1.45	1.45	1.45	1.45	1.45
AUG 13	.35	.65	.72	.86	.97	1.06	1.10	1.12	1.19	1.24	1.27	1.28
AUG 14	.17	.32	.37	.42	.45	.45	.45	.45	.47	.48	.70	.71
AUG 25	.35	.52	.65	.72	.78	.80	.80	.80	.80	.80	.80	.80
SEP 2	.37	.58	.63	.66	.66	.66	.66	.66	.66	.66	.66	.69
SEP 6	.22	.42	.47	.60	.75	.94	1.01	1.04	1.07	1.09	1.12	1.13
SEP 10	.51	.89	1.05	1.16	1.23	1.27	1.64	1.83	1.93	1.96	2.00	2.02
SEP 13	.30	.57	.60	.71	.80	.80	.91	.94	.95	.95	.99	1.00
OCT 7	.50	.72	.82	.95	.97	.97	1.02	1.02	1.06	1.13	1.25	1.35
OCT 20	.52	.70	.82	.88	.92	.95	.95	.98	1.37	1.40	1.40	1.40
OCT 23	.28	.31	.32	.35	.49	.55	.58	.58	.58	.58	.58	.58
JACKSONVILLE												
FEB 7	.30	.43	.53	.64	.81	.89	.93	1.02	1.09	1.12	1.20	1.22
MAR 26	.24	.39	.50	.58	.70	.78	.79	.86	1.02	1.10	1.21	1.26
APR 29	.33	.46	.62	.65	.65	.65	.65	.65	.65	.65	.65	.65
APR 30	.24	.36	.45	.68	.78	1.02	1.08	1.09	1.09	1.09	1.11	1.11
MAY 25	.24	.41	.50	.53	.55	.55	.55	.56	.56	.59	.61	.61
JUN 18	.15	.28	.39	.44	.54	.56	.56	.56	.56	.56	.56	.57
JUN 19	.28	.38	.48	.52	.56	.60	.63	.64	.64	.65	.65	.88
JUN 26	.18	.33	.37	.39	.41	.51	.53	.53	.53	.54	.56	.56
JUN 27	.39	.61	.78	.96	1.11	1.17	1.26	1.27	1.28	1.28	1.29	1.29
JUN 30	.25	.49	.68	.78	.85	.89	.99	1.00	1.01	1.02	1.02	1.02
JUL 1	.39	.72	.97	1.02	1.04	1.05	1.06	1.06	1.06	1.06	1.06	1.06
JUL 2	.21	.32	.36	.39	.42	.42	.43	.44	.45	.46	.46	.46
JUL 8	.31	.43	.44	.47	.50	.54	.54	.54	.54	.54	.54	.54
JUL 12	.31	.48	.54	.57	.65	.68	.70	.70	.70	.70	.70	.70
AUG 8	.44	.77	1.11	1.40	1.78	1.94	1.97	2.00	2.00	2.00	2.01	2.01
AUG 9	.30	.58	.77	.85	.94	1.11	1.18	1.22	1.23	1.26	1.26	1.28
AUG 14	.20	.33	.33	.33	.33	.33	.34	.34	.34	.34	.34	.34
AUG 14	.21	.26	.38	.49	.50	.50	.50	.50	.50	.50	.50	.50
AUG 17	.25	.45	.46	.46	.46	.46	.47	.48	.48	.48	.48	.48
AUG 24	.34	.60	.75	.82	.91	.94	.98	1.00	1.02	1.04	1.10	1.12
AUG 25	.44	.63	.76	.88	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.04
AUG 27	.40	.75	1.05	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
SEP 9	.34	.55	.66	.71	.80	.86	.87	.88	1.02	1.37	1.38	1.50
SEP 11	.26	.40	.52	.57	.59	.60	.60	.61	.61	.61	.61	.61
OCT 14	.31	.51	.64	.81	1.00	1.07	1.11	1.15	1.23	1.25	1.27	1.28

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
FLORIDA												
JACKSONVILLE												
OCT 15	.35	.57	.67	.78	.82	1.14	1.55	1.89	1.95	2.08	2.14	2.15
OCT 24	.27	.35	.35	.36	.38	.38	.39	.70	.73	.74	.74	.75
DEC 20	.23	.35	.51	.58	.65	.81	.86	1.18	1.36	1.47	1.63	1.69
KEY WEST												
FEB 6	.18	.30	.40	.52	.64	.88	1.10	1.21	1.24	1.31	1.38	1.40
MAY 18	.39	.75	1.05	1.31	1.53	1.60	1.63	1.65	1.65	1.65	1.65	1.65
MAY 27	.30	.55	.66	.68	.77	.78	.78	.91	1.01	1.32	1.55	1.60
JUN 11	.26	.37	.40	.49	.68	.70	.73	.73	.73	.73	.73	.73
JUN 29	.30	.43	.47	.49	.51	.52	.52	.52	.52	.52	.52	.52
JUL 6	.24	.40	.45	.49	.51	.55	.55	.55	.55	.55	.55	.55
JUL 7	.33	.46	.50	.53	.54	.55	.56	.59	.64	.67	.70	.73
JUL 8	.26	.35	.42	.53	.56	.57	.57	.58	.61	.61	.61	.61
JUL 21	.30	.55	.71	.94	1.18	1.38	1.42	1.43	1.44	1.46	1.48	1.48
JUL 22	.28	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
AUG 1	.30	.52	.68	.84	1.07	1.14	1.23	1.24	1.24	1.26	1.28	1.33
AUG 9	.45	.85	1.02	1.28	1.99	2.37	2.41	2.42	2.42	2.42	2.42	2.42
AUG 13	.29	.35	.39	.39	.42	.47	.47	.47	.47	.47	.52	.52
AUG 24	.18	.28	.41	.50	.60	.60	.60	.75	1.01	1.01	1.01	1.01
AUG 30	.25	.33	.44	.53	.70	.87	.93	.94	.95	.95	.95	.95
SEP 19	.40	.50	.62	.65	.65	.65	.65	.65	.65	.65	.65	.65
SEP 21	.28	.33	.37	.38	.39	.39	.39	.39	.39	.39	.39	.39
SEP 22	.25	.30	.41	.47	.72	.82	.87	1.03	1.14	1.18	1.20	1.30
OCT 12	.23	.35	.45	.60	.84	1.03	1.19	1.38	1.50	1.62	1.74	1.79
OCT 12	.64	*1.17	*1.67	2.05	*2.75	3.82	4.19	4.55	4.68	4.75	4.75	4.80
OCT 12	.23	.37	.39	.41	.44	.46	.50	.68	.79	.85	.87	.97
OCT 22	.41	.54	.69	.83	.90	.95	.95	.95	.95	.95	.95	.97
DEC 22	.21	.35	.48	.68	.94	1.14	1.33	1.40	1.44	1.46	1.49	1.51
MIAMI BEACH												
FEB 8	.20	.30	.46	.47	.47	.47	.47	.47	.50	.55	.58	.68
MAY 2	.35	.57	.62	.69	.73	.76	.78	.79	.79	.80	.80	1.10
MAY 13	.26	.37	.38	.41	.41	.41	.41	.41	.41	.41	.41	.41
JUN 13	.70	1.10	1.25	1.45	1.64	1.69	1.70	1.70	1.70	1.70	1.70	1.70
JUN 28	.25	.30	.30	.31	.35	.37	.38	.39	.39	.40	.40	.40
JUL 8	.24	.34	.35	.45	.57	.59	.61	.62	.62	.63	.73	.79
JUL 30	.29	.29	.29	.29	.29	.29	.29	.29	.29	.29	.29	.29
AUG 1	.25	.27	.28	.29	.29	.29	.29	.29	.30	.30	.30	.32
AUG 4	.45	.75	.95	1.00	1.05	1.14	1.22	1.25	1.39	1.42	1.42	1.42
AUG 5	.15	.30	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
AUG 9	.25	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
AUG 10	.25	.35	.38	.40	.40	.40	.40	.40	.40	.40	.40	.40
SEP 1	.23	.41	.45	.50	.60	.66	.74	.76	.77	.78	.78	.78
SEP 2	.55	.65	.73	.92	1.04	1.07	1.08	1.09	1.13	1.16	1.18	1.19
SEP 6	.35	.60	.80	1.00	1.30	1.50	1.75	1.85	1.86	1.90	2.08	2.10
SEP 10	.37	.55	.60	.67	.92	1.20	1.20	1.22	1.23	1.24	1.24	1.24
SEP 12	.25	.25	.25	.25	.25	.30	.30	.30	.48	.55	.55	.55
SEP 13	.25	.28	.28	.32	.32	.32	.37	.45	.68	.68	.75	.76
OCT 8	.35	.41	.51	.52	.54	.54	.54	.91	1.06	1.06	1.06	1.06
OCT 11	.45	.55	.59	.60	.61	.63	.65	.67	.69	.70	.74	.75
NOV 3	.27	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
NOV 10	.30	.35	.40	.43	.77	.85	.97	1.06	1.12	1.14	1.17	1.18
MIAMI												
MAY 1	.30	.42	.44	.47	.48	.48	.49	.50	.50	.51	.54	.80
MAY 13	.18	.31	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
MAY 15	.25	.50	.52	.55	.65	1.05	1.05	1.05	1.05	1.05	1.05	1.10
MAY 15	.25	.40	.55	.61	.65	.68	.68	.68	.73	.73	.73	.73
JUN 11	.40	.75	.86	1.10	1.61	1.75	2.24	2.34	2.39	2.39	2.39	2.41
JUN 12	.40	.60	.80	.90	1.09	1.13	1.15	1.15	1.15	1.15	1.18	1.24
JUN 25	.60	1.15	1.40	1.80	2.50	3.00	3.05	3.05	3.05	3.06	3.09	3.09
JUL 6	.32	.48	.48	.48	.60	.64	.64	.70	.75	.75	.75	.75
JUL 7	.32	.40	.43	.45	.48	.53	.55	.55	.55	.55	.56	.58
JUL 8	.25	.35	.43	.45	.67	.74	.75	.75	.77	.77	.77	.77
AUG 5	.55	.98	1.08	1.12	1.17	1.18	1.20	1.20	1.21	1.27	1.29	1.33
AUG 9	.15	.30	.35	.41	.43	.44	.44	.46	.47	.47	.48	.49
SEP 1	.25	.28	.29	.29	.31	.32	.43	.52	.53	.56	.56	.56
SEP 2	.25	.37	.40	.41	.43	.50	.52	.53	.54	.54	.54	.54
SEP 5	.60	.75	.80	.85	.92	.94	.97	.98	.99	1.00	1.00	1.00
SEP 5	.25	.45	.60	.62	.80	.87	.87	.96	1.00	1.02	1.03	1.03
SEP 6	.16	.31	.33	.38	.56	.67	.71	.73	.79	.91	.98	1.09
SEP 7	.35	.47	.57	.70	.72	.73	.73	.73	.73	.73	.73	.73
SEP 12	.27	.43	.44	.45	.45	.53	.53	.53	.53	.53	.53	.53
SEP 14	.30	.42	.46	.46	.48	.49	.51	.52	.53	.56	.58	.60
OCT 12	.27	.45	.54	.60	.63	.64	.67	.75	.77	.77	.77	.77
OCT 23	.24	.47	.48	.49	.49	.49	.50	.50	.50	.50	.50	.50
OCT 28	.35	.48	.55	.61	.62	.62	.62	.62	.62	.62	.62	.62
OCT 29	.20	.32	.34	.35	.35	.35	.35	.36	.36	.36	.36	.36
OCT 30	.50	.65	.70	.80	1.10	1.14	1.15	1.15	1.15	1.15	1.15	1.15
DEC 22	.30	.45	.55	.60	.75	.83	.85	.87	.90	1.03	1.09	1.14
DEC 23	.15	.27	.33	.45	.50	.52	.52	.52	.52	.53	.63	.70
MIAMI U												
MAR 30	.30	.41	.47	.54	.63	.63	.63	.63	.63	.63	.63	.63
APR 26	.35	.66	.98	1.31	1.86	2.19	2.28	2.28	2.28	2.28	2.28	2.28
MAY 22	.30	.50	.67	.81	.87	.93	.94	.96	1.05	1.44	1.51	1.59
MAY 28	.27	.35	.36	.36	.37	.38	.39	.39	.39	.39	.39	.39
JUN 3	.24	.47	.59	.63	.64	.64	.64	.64	.64	.64	.64	.64
JUL 7	.30	.44	.51	.61	.64	.66	.66	.66	.66	.66	.66	.66
JUL 8	.26	.42	.48	.51	.57	.58	.58	.59	.60	.60	.61	.61
JUL 23	.26	.33	.39	.45	.57	.59	.59	.59	.59	.59	.59	.59
JUL 30	.23	.40	.40	.41	.42	.45	.44	.56	.57	.59	.59	.59
AUG 5	.38	.66	.80	.98	1.18	1.19	1.20	1.20	1.20	1.20	1.20	1.20
AUG 9	.30	.52	.62	.84	1.13	1.29	1.34	1.39	1.42	1.42	1.43	1.43
AUG 11	.24	.37	.46	.56	.59	.59	.71	.81	.81	.81	.81	.81
AUG 26	.23	.42	.51	.57	.60	.63	.63	.63	.63	.63	.63	.63
AUG 27	.18	.32	.40	.50	.57	.57	.57	.57	.57	.57	.57	.57
SEP 1	.25	.45	.67	.78	.78	.78	.78	.78	.79	.79	.80	.80
SEP 6	.25	.42	.49	.52	.59	.64	.67	.76	.84	.92	1.00	1.06
SEP 9	.32	.60	.69	.71	.71	.71	.75	.78	.81	.83	.88	.89
SEP 13	.27	.39	.45	.59	.65	.65	.65	.89	1.04	1.06	1.25	1.30
SEP 14	.29	.34	.35	.35	.36	.39	.40	.41	.41	.44	.45	.46
OCT 12	.26	.52	.74	.87	.93	1.17	1.34	1.49	1.64	1.68	1.68	1.68
OCT 24	.29	.52	.54	.54	.67	.72	.72	.72	.76	.76	.76	.76
OCT 28	.28	.48	.53	.57	.59	.66	.68	.68	.70	.71	.72	.73
OCT 29	.27	.38	.45	.48	.66	.73	.74	.76	.79	.82	.83	.85
OCT 30	.28	.39	.43	.44	.45	.46	.46	.47	.47	.47	.47	.47
ORLANDO												
APR 5	.17	.28	.31	.35	.52	.69	.75	.81	.87	.91	.92	.92
MAY 14	.21	.30	.35	.40	.51	.66	.84	.85	.91	.94	.99	1.05
MAY 15	.23	.33	.42	.51	.78	.85	.97	1.10	1.21	1.34	1.71	1.84
JUN 4	.31	.61	.70	.88	1.39	1.50	1.67	1.82	1.83	1.84	1.85	1.85
JUN 15	.17	.25	.31	.40	.57	.62	.67	.70	.71	.71	.71	.71
JUL 6	.38	.40	.41	.42	.44	.54	.65	.66	.67	.67	.67	.67

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
FLORIDA												
ORLANDO												
JUL 12	.17	.29	.33	.46	.64	.76	.82	.83	.85	.85	.85	.85
JUL 13	.22	.29	.37	.45	.65	.70	.70	.70	.70	.70	.70	.70
JUL 17	.24	.32	.36	.37	.41	.41	.41	.41	.41	.41	.41	.41
JUL 21	.26	.37	.43	.50	.68	1.00	1.09	1.09	1.09	1.10	1.11	1.14
JUL 22	.17	.31	.35	.37	.46	.52	.56	.57	.57	.57	.57	.59
JUL 23	.16	.25	.33	.37	.52	.60	.60	.60	.60	.60	.60	.60
JUL 25	.25	.31	.33	.35	.35	.36	.38	.40	.40	.40	.40	.40
JUL 25	.27	.37	.41	.46	.58	.60	.60	.60	.60	.60	.60	.60
AUG 4	.22	.31	.33	.36	.36	.36	.36	.36	.36	.36	.36	.36
AUG 9	.27	.32	.36	.40	.41	.43	.43	.43	.43	.43	.43	.43
AUG 15	.30	.34	.35	.36	.37	.37	.44	.44	.45	.47	.52	.55
AUG 17	.40	.66	.71	.79	.86	1.06	1.28	1.36	1.36	1.36	1.36	1.36
AUG 18	.34	.55	.68	.95	1.29	1.50	1.51	1.51	1.51	1.51	1.51	1.51
AUG 28	.36	.46	.50	.51	.52	.52	.52	.52	.52	.52	.52	.52
SEP 7	.23	.33	.36	.41	.42	.44	.44	.44	.44	.50	.61	.66
SEP 10	.29	.46	.53	.66	.78	.86	.88	.88	1.02	1.02	1.02	1.02
SEP 11	.31	.37	.41	.46	.47	.47	.47	.47	.48	.48	.48	.48
NOV 29	.19	.31	.35	.36	.37	.38	.38	.38	.38	.38	.38	.38
DEC 3	.18	.27	.31	.44	.51	.62	.68	.96	1.08	1.13	1.23	1.34
TALLAHASSEE												
FEB 7	.33	.54	.75	.90	1.07	1.45	1.70	1.80	1.98	2.00	2.07	2.11
FEB 8	.62	.70	.71	.75	.75	.80	.82	.82	.82	.82	.83	.88
FEB 12	.25	.38	.40	.45	.55	.63	.66	.72	.77	.80	.80	.80
MAR 3	.20	.30	.34	.35	.37	.38	.38	.38	.38	.38	.38	.38
MAR 13	.25	.35	.43	.48	.60	.63	.67	.68	.73	.73	.73	.73
MAR 26	.25	.29	.33	.36	.41	.63	.73	.87	1.03	1.05	1.05	1.05
APR 22	.21	.35	.42	.60	.65	.73	.73	.73	.73	.73	.73	.73
MAY 20	.67	.90	.98	1.22	1.26	1.30	1.31	1.39	1.39	1.39	1.49	1.49
MAY 27	.28	.35	.35	.40	.42	.47	.56	.62	.62	.62	.62	.62
JUN 10	.35	.40	.45	.51	.53	.58	.59	.60	.60	.60	.60	.60
JUN 15	.32	.64	.88	1.20	1.44	1.77	2.02	2.07	2.07	2.07	2.07	2.07
JUN 18	.33	.52	.60	.63	.72	.90	1.00	1.04	1.04	1.04	1.04	1.04
JUN 23	.25	.32	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUN 26	.50	1.00	1.15	1.50	1.80	1.93	1.94	1.94	1.94	1.94	1.98	2.00
JUL 2	.33	.65	.78	.90	.91	.92	.92	.93	.93	.94	.94	.94
JUL 5	.34	.43	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
JUL 15	.35	.41	.43	.45	.50	.52	.53	.53	.55	.56	.59	.61
JUL 20	.31	.56	.66	.73	.79	.82	.82	.82	.82	.82	.82	1.02
JUL 20	.16	.23	.35	.37	.41	.41	.42	.43	.43	.44	.44	.44
JUL 25	.50	.80	.85	.92	.97	1.01	1.04	1.05	1.05	1.08	1.10	1.10
JUL 26	.42	.55	.56	.56	.56	.56	.56	.56	.56	.57	.58	.61
JUL 28	.55	.93	.95	1.25	1.62	1.91	1.93	2.16	2.19	2.22	2.22	2.22
JUL 28	.32	.53	.61	.72	.78	.86	1.08	1.11	1.13	1.14	1.14	1.14
AUG 1	.36	.57	.62	.73	.92	1.05	1.10	1.10	1.51	1.59	1.63	1.70
AUG 4	.25	.42	.45	.58	.68	.71	.71	.72	.75	.79	.80	.83
AUG 6	.35	.67	.76	1.00	1.50	1.52	1.54	1.54	1.54	1.54	1.54	1.54
AUG 7	.39	.50	.57	.77	.95	.95	.95	.95	.95	.95	.98	1.45
AUG 15	.27	.37	.43	.45	.46	.46	.46	.46	.46	.46	.46	.46
AUG 19	.25	.40	.42	.50	.61	.63	.72	.75	.77	.77	.77	.77
AUG 24	.28	.46	.56	.68	.73	1.12	1.30	1.33	1.40	1.44	1.45	1.45
AUG 29	.30	.50	.60	.75	.80	.80	.80	.80	.80	.80	.80	.80
SEP 7	.23	.35	.37	.40	.42	.42	.42	.42	.42	.42	.42	.42
SEP 8	.20	.34	.37	.41	.53	.65	.68	.68	.68	.68	.68	.68
OCT 24	.33	.50	.52	.73	.78	.79	.81	.81	.81	.81	.81	.81
DEC 31	.28	.42	.43	.45	.45	.45	.45	.45	.45	.45	.45	.45
TAMPA												
FEB 7	.35	.50	.73	.88	1.03	1.13	1.32	1.41	1.43	1.48	1.71	1.95
MAY 14	.28	.40	.40	.45	.45	.45	.45	.50	.50	.52	.52	.52
MAY 15	.35	.69	.77	1.00	1.27	1.53	1.72	1.78	1.80	1.85	1.92	1.94
MAY 15	.40	.55	.65	.80	.87	.95	1.05	1.16	1.20	1.25	1.35	1.35
JUN 4	.25	.35	.35	.35	.37	.37	.37	.71	.71	.72	.73	.77
JUN 23	.25	.31	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32
JUL 6	.30	.57	.59	.61	.61	.61	.62	.63	.63	.63	.63	.63
JUL 10	.25	.45	.60	.70	.86	.96	.96	.98	1.10	1.10	1.10	1.10
JUL 21	.24	.45	.48	.56	.75	.75	.75	.75	.75	.75	.75	.75
JUL 23	.32	.53	.68	.83	.92	1.00	1.05	1.07	1.08	1.12	1.12	1.12
JUL 28	.20	.26	.34	.40	.66	.70	.70	.72	.72	.73	.77	.78
JUL 31	.30	.30	.31	.32	.33	.33	.33	.33	.33	.33	.33	.33
JUL 31	.30	.60	.70	.90	.92	.92	.93	.93	.93	.93	.94	.95
AUG 2	.40	.70	.81	.91	.91	.91	.91	.91	.91	.91	.91	.91
AUG 4	.18	.26	.28	.31	.52	.57	.72	.82	.82	.83	.84	.84
AUG 13	.26	.50	.58	.60	.60	.60	.63	.63	.63	.63	.63	.63
AUG 14	.25	.35	.40	.45	.56	.61	.68	.69	.69	.69	.71	.78
AUG 15	.16	.30	.35	.40	.43	.50	.63	.77	.88	1.04	1.13	1.17
AUG 24	.20	.33	.38	.40	.40	.42	.42	.42	.42	.42	.42	.42
SEP 2	.25	.41	.41	.62	.62	.62	.69	1.03	1.03	1.03	1.04	1.04
SEP 10	.40	.63	.76	.94	1.45	1.82	2.17	2.99	3.11	3.12	3.13	3.13
SEP 12	.30	.42	.54	.57	.58	.62	.74	.98	.98	.98	1.00	1.03
OCT 10	.48	.85	.90	.95	1.04	1.23	1.34	1.48	1.55	1.64	1.64	1.65
OCT 17	.35	.55	.80	1.05	1.50	1.75	1.82	1.84	1.85	1.85	1.85	1.85
WEST PALM BEACH												
APR 26	.25	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
MAY 2	.33	.46	.55	.69	.81	1.05	1.06	1.06	1.06	1.06	1.06	1.06
MAY 15	.25	.36	.42	.49	.53	.65	.89	1.00	1.04	1.09	1.24	1.27
MAY 15	.39	.60	.70	.95	1.21	1.35	1.45	1.53	1.62	1.62	1.62	1.62
JUN 3	.17	.33	.38	.43	.50	.52	.52	.52	.52	.52	.52	.52
JUN 8	.21	.30	.30	.30	.41	.45	.45	.45	.45	.45	.45	.45
JUN 20	.45	.75	.95	1.02	1.13	1.17	1.18	1.19	1.20	1.20	1.23	1.25
JUN 23	.53	.89	.94	1.00	1.05	1.08	1.08	1.08	1.08	1.08	1.08	1.08
JUN 24	.80	1.15	1.46	1.75	1.95	2.15	2.31	2.33	2.33	2.33	2.33	2.33
JUN 27	.20	.26	.30	.45	.55	.84	.89	.96	1.01	1.10	1.17	1.24
JUL 4	.25	.38	.44	.50	.55	.74	.82	.90	1.04	1.24	1.29	1.31
JUL 8	.19	.30	.30	.40	.58	.58	.58	.58	.66	.67	.67	.67
JUL 21	.17	.30	.33	.35	.44	.50	.50	.50	.50	.50	.50	.50
JUL 31	.27	.43	.50	.51	.52	.54	.54	.54	.54	.54	.54	.54
AUG 26	.50	.80	.95	.97	.99	.99	.99	.99	.99	.99	.99	.99
AUG 27	.30	.44	.50	.50	.51	.51	.51	.51	.51	.51	.51	.51
AUG 29	.25	.45	.55	.60	.65	.71	.74	.76	.76	.77	.77	.77
SEP 9	.28	.40	.48	.50	.53	.57	.62	.71	.74	.74	.74	.74
SEP 10	.20	.35	.45	.52	.55	.55	.55	.55	.55	.55	.55	.55
SEP 29	.35	.50	.55	.65	.79	.95	1.12	1.13	1.13	1.13	1.13	1.14
OCT 19	.30	.50	.70	.77	.78	.79	.81	.81	.81	.81	.81	.81
OCT 20	.20	.28	.33	.36	.50	.55	.61	.62	.63	.66	.68	.69
OCT 22	.18	.28	.38	.45	.65	.83	.85	.85	.85	.85	.85	.85
OCT 30	.18	.32	.37	.40	.50	.53	.57	.65	.65	.65	.65	.65
NOV 3	.25	.35	.43	.50	.56	.68	1.00	1.21	1.37	1.55	1.72	1.75
NOV 4	.50	.80	1.25	1.60	1.75	2.05	2.50	3.20	3.65	3.85	4.64	4.74

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
GEORGIA												
ATHENS												
FEB 7	.28	.38	.40	.41	.46	.50	.54	.64	.72	.82	.99	1.09
FEB 22	.21	.41	.54	.58	.73	.77	.85	.86	.88	.94	.96	1.08
APR 23	.19	.35	.36	.38	.42	.48	.73	.89	1.11	1.20	1.29	1.34
MAY 8	.17	.30	.39	.50	.68	.73	.73	.73	.73	.73	.73	.73
JUN 7	.35	.60	.70	.75	1.08	1.21	1.25	1.27	1.27	1.27	1.27	1.27
JUN 13	.30	.35	.37	.38	.46	.55	.55	.56	.57	.58	.58	.58
JUN 20	.26	.51	.60	.77	.80	.83	.84	.84	.85	.85	.85	.87
JUN 21	.20	.27	.36	.48	.52	.52	.52	.52	.52	.52	.52	.52
JUN 26	.25	.37	.38	.47	.57	.71	.72	.72	.73	.73	.73	.73
JUL 8	.18	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
AUG 3	.21	.41	.48	.53	.53	.53	.53	.53	.53	.53	.53	.53
AUG 19	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26
AUG 19	.17	.32	.40	.43	.50	.50	.50	.50	.50	.50	.50	.50
AUG 22	.19	.35	.36	.39	.39	.39	.39	.39	.39	.39	.39	.39
NOV 2	.30	.40	.42	.43	.50	.51	.53	.53	.54	.54	.54	.58
ATLANTA												
MAR 3	.16	.32	.37	.45	.53	.62	.67	.76	.81	.91	1.01	1.24
APR 28	.27	.49	.70	.78	.95	.96	.98	1.07	1.07	1.07	1.07	1.07
MAY 12	.33	.35	.36	.38	.39	.44	.51	.63	.70	.71	.72	.72
JUN 15	.16	.24	.34	.47	.50	.50	.50	.50	.50	.50	.50	.50
JUN 16	.22	.33	.42	.47	.50	.51	.51	.51	.51	.51	.51	.51
JUL 8	.13	.22	.31	.42	.51	.68	.95	1.17	1.23	1.25	1.26	1.27
JUL 14	.22	.31	.37	.42	.55	.63	.67	.71	.71	.71	.71	.71
JUL 26	.28	.28	.28	.30	.45	.46	.46	.46	.46	.59	.60	.60
JUL 29	.23	.37	.39	.40	.43	.44	.44	.45	.45	.45	.47	.48
JUL 31	.17	.31	.42	.48	.53	.57	.70	.78	.81	.89	.96	1.22
AUG 9	.26	.34	.40	.43	.44	.44	.44	.44	.44	.44	.44	.44
SEP 17	.18	.33	.34	.35	.38	.44	.44	.44	.44	.44	.44	.44
SEP 17	.36	.52	.55	.58	.66	.71	.76	.77	.79	.83	.89	.99
AUGUSTA												
JAN 4	.14	.23	.37	.38	.50	.53	.54	.58	.60	.62	.65	.67
FEB 7	.22	.37	.42	.50	.56	.68	.76	.88	.96	1.02	1.07	1.12
FEB 22	.29	.39	.46	.46	.57	.85	.94	1.04	1.30	1.39	1.43	1.50
MAR 3	.36	.39	.46	.59	.84	1.02	1.16	1.26	1.58	1.98	2.09	2.13
APR 23	.26	.42	.53	.56	.58	.59	.60	.66	.76	.86	1.02	1.05
MAY 12	.35	.54	.62	.82	.89	.95	1.01	1.35	1.46	1.52	1.55	1.62
MAY 29	.42	.46	.48	.48	.48	.48	.48	.48	.48	.48	.48	.48
JUN 16	.37	.66	.68	.70	.70	.70	.70	.70	.70	.70	.70	.70
JUN 17	.35	.60	.69	.87	1.10	1.14	1.18	1.25	1.33	1.35	1.35	1.35
JUL 20	.26	.48	.48	.48	.49	.52	.55	.59	.60	.60	.60	.60
JUL 29	.25	.46	.48	.50	.51	.52	.53	.54	.55	.58	.65	.68
JUL 30	.25	.41	.41	.41	.41	.41	.41	.42	.61	.61	.62	.74
AUG 5	.30	.48	.56	.68	.89	.95	.97	.99	.99	1.00	1.01	1.02
AUG 15	.22	.40	.46	.59	.67	.75	.86	.88	.90	.91	.91	.92
AUG 16	.24	.36	.46	.52	.77	.81	.87	1.14	1.22	1.31	1.47	1.53
AUG 31	.15	.26	.34	.43	.66	.78	.91	.93	.94	.94	.94	.94
SEP 18	.24	.37	.42	.43	.44	.45	.52	.64	.72	.75	.82	.90
COLUMBUS												
FEB 22	.17	.31	.46	.58	.80	1.05	1.05	1.06	1.09	1.12	1.13	1.13
FEB 26	.33	.40	.53	.61	.63	.85	1.00	1.07	1.13	1.15	1.17	1.26
MAR 3	.25	.29	.49	.54	.81	.95	1.25	1.60	1.69	1.83	1.93	1.96
MAR 15	.17	.29	.42	.48	.52	.53	.55	.55	.55	.55	.55	.55
APR 23	.23	.34	.39	.51	.63	.63	.63	.63	.64	.64	.65	.92
MAY 8	.15	.28	.38	.47	.62	.85	.91	.95	.96	.97	.97	.97
MAY 12	.38	.50	.60	.70	.73	.81	.85	.89	.97	.99	1.02	1.07
JUN 25	.47	.82	.95	1.07	1.27	1.34	1.38	1.38	1.38	1.38	1.38	1.38
JUN 30	.45	.70	.91	1.07	1.25	1.32	1.32	1.32	1.32	1.32	1.32	1.32
JUL 1	.55	.78	.92	1.03	1.11	1.31	1.32	1.34	1.34	1.34	1.34	1.34
JUL 8	.35	.65	.81	.98	1.12	1.14	1.19	1.19	1.19	1.19	1.19	1.19
JUL 14	.51	.92	1.17	1.35	1.50	1.52	1.53	1.53	1.53	1.54	1.55	1.55
JUL 15	.37	.56	.59	.61	.64	.64	.64	.64	.64	.64	.64	.64
JUL 25	.30	.43	.58	.64	.89	1.01	1.05	1.07	1.08	1.08	1.08	1.08
JUL 27	.40	.75	1.05	1.34	1.37	1.41	1.41	1.44	1.49	1.52	1.52	1.52
JUL 28	.29	.34	.38	.39	.50	.50	.50	.50	.50	.50	.50	.50
JUL 29	.70	1.10	1.42	1.63	1.73	1.82	1.84	1.85	1.85	1.85	1.85	1.85
AUG 1	.22	.38	.40	.41	.44	.48	.50	.56	.56	.56	.56	.56
AUG 3	.26	.37	.48	.58	.77	.82	.82	.82	.82	.82	.82	.98
AUG 18	.26	.43	.62	.72	.90	1.04	1.16	1.62	1.70	1.80	2.01	2.03
SEP 17	.45	.71	.84	1.04	1.39	2.00	2.27	2.59	2.77	2.87	2.94	2.98
MACON												
JAN 4	.39	.55	.60	.66	.83	.93	1.10	1.27	1.40	1.48	1.67	1.81
MAR 3	.22	.35	.40	.49	.60	.70	.72	.87	.94	.98	1.00	1.05
MAR 15	.13	.23	.36	.46	.63	.77	.79	.79	.79	.79	.79	.79
JUN 17	.32	.56	.68	.78	1.01	1.10	1.13	1.14	1.14	1.14	1.14	1.14
JUN 20	.40	.61	.80	.91	1.07	1.14	1.14	1.14	1.14	1.14	1.14	1.14
JUN 27	.35	.70	.82	.88	.99	1.05	1.06	1.06	1.06	1.08	1.08	1.08
JUL 13	.26	.43	.53	.74	.97	1.40	1.51	1.55	1.65	1.69	1.72	1.73
AUG 2	.25	.41	.52	.52	.75	.98	.98	.98	.99	.99	.99	.99
ROME												
APR 23	.36	.50	.52	.52	.54	.77	.82	.91	.91	.93	1.38	1.47
JUL 1	.40	.78	.78	.78	.78	.78	.78	.78	.78	.78	.78	.78
JUL 2	.26	.50	.60	.65	.69	.70	.70	.70	.70	.70	.70	.70
JUL 28	.42	.57	.67	.67	.67	.67	.67	.72	.74	.74	.75	.75
AUG 11	.25	.47	.52	.57	.57	.58	.63	.64	.64	.64	.64	.65
AUG 22	.18	.35	.36	.39	.54	.55	.56	.56	.56	.56	.58	.60
SAVANNAH												
JAN 5	.16	.24	.28	.32	.50	.67	.82	1.08	1.14	1.17	1.19	1.20
JAN 15	.27	.30	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
FEB 8	.27	.36	.45	.48	.52	.57	.59	.60	.60	.60	.60	.60
APR 23	.17	.32	.38	.47	.55	.69	.83	.92	1.07	1.10	1.14	1.33
MAY 13	.43	.55	.67	.70	.73	.77	.77	.78	.78	.78	.78	.78
MAY 15	.26	.49	.56	.61	.64	.70	.70	.71	.72	.72	.74	.74
MAY 20	.39	.45	.47	.47	.47	.47	.47	.47	.55	.63	.63	.63
JUN 16	.32	.55	.71	.89	1.05	1.15	1.25	1.40	1.61	1.62	1.83	2.18
JUN 28	.40	.72	.93	1.16	1.60	1.89	2.29	2.39	2.41	2.41	2.45	2.47
JUL 2	.20	.33	.41	.46	.50	.55	.56	.56	.56	.56	.56	.56
JUL 12	.47	.87	1.24	1.50	2.06	2.38	2.47	2.51	2.52	2.52	2.54	2.54
JUL 21	.34	.56	.70	.81	.93	.96	.97	.97	.97	.97	.99	1.00
JUL 24	.20	.34	.48	.53	.54	.55	.57	.61	.64	.67	.71	.88
JUL 26	.18	.35	.50	.52	.52	.52	.52	.77	.77	.77	.78	.78
JUL 30	.23	.39	.55	.60	.61	.61	.61	.63	.63	.63	.63	.63
AUG 6	.30	.55	.72	.78	.85	.87	.87	.87	.87	.87	.92	.93
AUG 15	.20	.36	.50	.65	.80	.86	1.01	1.02	1.06	1.07	1.07	1.07
AUG 16	.54	1.04	1.50	1.87	2.42	3.17	3.74	4.30	4.76	5.12	5.56	5.70
AUG 23	.30	.44	.45	.49	.53	.56	.96	1.03	1.05	1.09	1.12	1.12
AUG 29	.33	.45	.51	.59	.61	.61	.61	.61	.61	.62	.62	.62
OCT 15	.49	.91	1.23	1.53	2.16	2.63	2.88	3.02	3.03	3.03	3.03	3.03
OCT 31	.19	.37	.48	.51	.55	.59	.60	.62	.68	.70	.72	.90

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
HAWAII												
HILO												
JAN 9	.14	.25	.35	.42	.58	.71	.76	.91	1.11	1.28	1.40	1.58
JAN 9	.12	.21	.30	.36	.53	.74	.95	1.16	1.41	1.54	1.77	2.01
JAN 17	.18	.32	.40	.44	.50	.69	.81	1.15	1.23	1.31	1.39	1.45
JAN 18	.29	.48	.58	.61	.64	.71	.72	.75	.75	.75	.76	.92
JAN 27	.20	.37	.55	.65	.75	.81	1.10	1.20	1.25	1.41	1.49	1.57
FEB 22	.40	.45	.45	.47	.50	.62	.64	.66	.90	1.03	1.17	1.33
APR 1	.17	.31	.44	.53	.74	.92	1.07	1.32	1.45	1.50	1.51	1.53
APR 19	.33	.48	.55	.57	.61	.82	.84	.86	1.07	1.10	1.12	1.14
APR 20	.22	.33	.50	.62	.78	.89	.94	1.01	1.12	1.24	1.49	1.64
APR 23	.19	.28	.35	.47	.62	.82	1.07	1.24	1.43	1.70	1.80	2.00
APR 23	.33	.55	.72	.96	1.31	1.68	1.95	2.35	2.81	3.33	4.03	4.77
MAY 7	.20	.34	.47	.52	.54	.57	.68	.68	.68	.75	.89	.89
SEP 30	.26	.40	.47	.47	.47	.47	.47	.66	.66	.66	.66	.71
NOV 24	.19	.24	.31	.46	.52	.63	.66	.76	.81	.85	.88	.92
DEC 1	.14	.27	.39	.46	.56	.63	.76	.82	.88	.97	1.07	1.18
DEC 13	.16	.27	.36	.47	.60	.70	.70	.71	.86	.92	.96	1.02
DEC 13	.32	.49	.55	.56	.56	.74	.79	.85	1.03	1.10	1.11	1.19
DEC 13	.25	.39	.45	.49	.54	.67	.70	.78	1.01	1.09	1.12	1.36
DEC 14	.22	.35	.40	.45	.46	.58	.66	.67	.68	.72	.83	1.00
DEC 14	.22	.35	.36	.40	.48	.68	.88	1.00	1.32	1.37	1.46	1.76
DEC 18	.18	.32	.45	.51	.62	.80	.90	.96	.96	1.01	1.07	1.09
HONOLULU												
JAN 9	.19	.27	.37	.44	.47	.49	.52	.54	.54	.58	.70	.72
FEB 1	.21	.33	.38	.40	.50	.65	.79	.86	.94	1.04	1.17	1.29
MAR 25	.18	.27	.37	.42	.49	.50	.50	.56	.82	.86	.93	.94
MAR 25	.16	.25	.31	.38	.50	.57	.62	.65	.65	.65	.65	.65
MAR 30	.22	.40	.54	.65	.89	1.03	1.11	1.21	1.29	1.31	1.51	1.64
JUN 15	.16	.32	.42	.46	.50	.57	.62	.69	.78	.87	.98	1.00
KAHULUI												
JAN 6	.23	.39	.55	.58	.59	.64	.66	.66	.80	.83	.87	.89
JAN 15	.17	.28	.37	.38	.38	.39	.52	.66	.82	.94	.94	.95
JAN 27	.19	.35	.44	.47	.54	.65	.67	.67	.70	.72	.72	.72
JAN 28	.28	.48	.59	.66	.83	.96	1.28	1.60	1.88	2.03	2.26	2.48
LIHUE												
JAN 25	.36	.41	.50	.51	.51	.51	.52	.52	.52	.52	.52	.52
JAN 26	.41	.54	.59	.69	.82	1.02	1.14	1.19	1.37	1.37	1.37	1.37
JAN 27	.29	.35	.39	.51	.62	.67	.68	.77	.82	.84	.84	.84
MAR 22	.30	.39	.46	.47	.48	.48	.56	.69	.75	.78	.78	.79
MAR 24	.30	.54	.68	.76	.80	.85	.91	.99	1.02	1.08	1.14	1.19
MAR 25	.22	.25	.27	.30	.50	.60	.74	.81	.86	.91	.98	1.22
APR 3	.34	.53	.77	.86	.92	1.13	1.38	1.42	1.42	1.42	1.42	1.42
APR 20	.23	.33	.38	.40	.40	.40	.40	.40	.41	.41	.42	.42
APR 25	.29	.44	.55	.69	.83	.89	.89	.90	.92	.98	1.02	1.02
JUN 16	.20	.24	.41	.45	.57	.77	.94	1.08	1.18	1.19	1.26	1.46
OCT 18	.38	.59	.70	.76	.82	.85	.86	.86	.86	.86	.86	.86
OCT 26	.29	.31	.32	.32	.35	.38	.39	.41	.42	.42	.42	.42
NOV 16	.33	.42	.42	.42	.45	.45	.45	.45	.45	.45	.45	.45
DEC 17	.27	.44	.56	.62	.80	.97	.98	.99	1.10	1.31	1.32	1.43
DEC 18	.31	.47	.53	.61	.69	.74	.87	.94	1.09	1.16	1.36	1.43
IDAHO												
BOISE	NONE											
LEWISTON	NONE											
POCATELLO	NONE											
ILLINOIS												
CAIRO U												
MAY 7	.22	.33	.46	.57	.66	.73	.74	1.01	1.04	1.08	1.17	1.45
MAY 24	.27	.44	.61	.78	.94	.95	.95	.96	.97	1.02	1.05	1.05
JUN 1	.25	.31	.36	.40	.44	.69	.80	.85	1.04	1.09	1.13	1.34
JUN 8	.20	.34	.49	.60	.84	1.10	1.19	1.20	1.24	1.32	1.44	1.49
JUN 15	.25	.45	.58	.65	.84	.95	.98	.98	1.04	1.22	1.22	1.26
JUL 10	.38	.46	.73	.80	.80	.80	.80	.81	.84	.85	.86	.86
JUL 11	.35	.47	.51	.54	.58	.64	.65	.65	.65	.65	.65	.65
JUL 15	.25	.48	.57	.59	.59	.88	1.06	1.17	1.40	1.45	1.64	1.66
AUG 3	.20	.35	.42	.50	.62	.87	1.07	1.27	1.36	1.42	1.48	1.52
DEC 15	.24	.38	.39	.40	.44	.45	.48	.53	.57	.60	.61	.61
CHICAGO O HARE												
MAY 24	.41	.46	.49	.52	.56	.59	.62	.63	.66	.67	.68	.69
JUN 18	.22	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
JUN 30	.25	.34	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
JUL 8	*.55	*.98	*1.03	1.09	1.16	1.20	1.20	1.21	1.21	1.23	1.26	1.26
AUG 24	*.63	*1.06	*1.56	1.74	*2.06	2.14	*2.17	2.23	2.30	2.30	2.30	2.30
SEP 6	.35	.37	.38	.38	.41	.59	.65	.65	.65	.65	.65	.65
CHICAGO MIDWAY												
FEB 26	.29	.30	.44	.49	.51	.76	.76	.77	.77	.77	.77	.78
MAR 14	.30	.35	.37	.38	.41	.47	.55	.58	.64	.70	.83	.95
MAR 18	.25	.31	.32	.33	.35	.36	.40	.40	.41	.42	.42	.44
JUL 5	.15	.30	.34	.41	.58	.61	.62	.62	.77	.88	1.16	1.24
JUL 8	.49	.81	.95	1.04	1.20	1.24	1.25	1.27	1.28	1.28	1.28	1.28
JUL 23	.36	.69	.74	.87	.99	1.03	1.03	1.03	1.30	1.49	1.53	1.56
AUG 24	.25	.44	.64	.65	.80	.86	.91	.95	1.00	1.00	1.00	1.00
SEP 5	.46	.60	.73	.87	1.46	1.52	1.56	1.58	1.59	1.59	1.61	1.63
MOLINE												
MAR 14	.35	.53	.54	.56	.59	.60	.60	.60	.60	.60	.60	.60
MAY 24	.31	.34	.35	.35	.36	.36	.36	.36	.36	.37	.37	.44
JUN 11	.20	.37	.39	.41	.43	.43	.43	.43	.43	.43	.43	.43
JUN 20	.33	.45	.46	.46	.48	.48	.48	.48	.48	.48	.48	.48
JUN 24	.17	.33	.38	.42	.51	.69	.72	.86	.86	.86	.88	.88
JUL 10	.39	.63	.68	.84	1.35	1.72	2.69	3.15	3.96	4.26	4.91	*5.03
JUL 12	.25	.48	.57	.65	1.13	1.45	1.68	1.78	2.04	2.04	2.04	2.04
JUL 18	.51	.87	.98	1.16	1.82	2.32	2.36	2.40	2.40	2.40	2.40	2.40
JUL 23	.18	.33	.36	.42	.50	.60	.66	.73	.83	.87	.89	.89
SEP 4	.26	.49	.52	.71	.93	1.11	1.19	1.20	1.22	1.22	1.22	1.32
OCT 12	.21	.38	.41	.45	.50	.54	.54	.54	.54	.54	.54	.54
PEORIA												
MAY 24	.26	.48	.50	.51	.66	.73	.74	.74	.74	.74	.74	.74
JUL 9	.39	.60	.89	1.01	1.18	1.40	1.74	1.75	1.77	1.81	1.88	1.91
JUL 23	.46	.70	.78	.79	.83	.89	1.08	1.12	1.14	1.14	1.14	1.14
AUG 10	.25	.38	.39	.41	.42	.43	.43	.43	.43	.43	.43	.43
AUG 14	.40	.72	.96	1.16	1.28	1.32	1.33	1.33	1.33	1.33	1.33	1.33
SEP 6	.19	.31	.42	.44	.45	.48	.49	.52	.52	.52	.52	.52

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
ILLINOIS												
ROCKFORD												
JUN 1	.18	.26	.40	.51	.59	.64	.66	.66	.68	.68	.68	.68
JUL 8	.43	.82	.85	.93	.93	.98	.98	.98	1.00	1.04	1.04	1.04
SEP 4	.15	.24	.36	.41	.45	.50	.75	1.03	1.06	1.07	1.10	1.10
SPRINGFIELD												
MAY 6	.28	.42	.47	.49	.52	.53	.54	.55	.55	.55	.55	.55
MAY 24	.42	.67	.70	.71	.72	.72	.72	.72	.72	.72	.72	.72
JUL 8	.20	.32	.44	.52	.82	.87	.87	.87	.88	.90	.91	1.04
JUL 10	.28	.45	.56	.60	.76	.97	1.05	1.11	1.14	1.20	1.27	1.27
JUL 18	.28	.34	.36	.38	.39	.40	.40	.40	.40	.40	.40	.40
AUG 14	.29	.45	.49	.51	.52	.52	.52	.52	.52	.52	.55	.55
SEP 26	.44	.64	.73	.76	.76	.76	.76	.76	.76	.76	.76	.76
INDIANA												
EVANSVILLE												
APR 27	.40	.56	.61	.74	.82	.85	.86	.87	.88	.88	.88	1.02
MAY 24	.26	.36	.42	.55	.70	.79	.92	.96	.97	.98	1.00	1.06
JUN 15	.70	1.00	*1.28	1.46	1.64	1.69	1.69	1.75	1.77	1.77	1.77	1.77
JUN 19	.68	*1.28	*1.70	2.00	*2.48	*2.68	*2.86	3.05	3.20	*3.20	3.22	3.23
JUL 14	.36	.48	.53	.53	.58	.65	.67	.67	.67	.73	.75	.80
SEP 2	.31	.62	.79	.79	.80	.81	.81	.81	.81	.81	.83	.88
OCT 3	.20	.35	.40	.42	.49	.51	.52	.57	.57	.57	.58	.58
OCT 15	.28	.47	.53	.54	.55	.55	.56	.63	.84	.91	.92	1.05
FORT WAYNE												
JUN 19	.22	.33	.35	.37	.55	.75	.75	.75	.75	.75	.75	.75
JUL 9	.18	.34	.40	.45	.53	.57	.61	.66	.67	.67	.67	.67
AUG 9	.32	.42	.45	.46	.46	.46	.46	.46	.46	.46	.46	.46
AUG 10	.27	.39	.44	.49	.57	.65	.91	1.00	1.01	1.02	1.08	1.08
INDIANAPOLIS												
MAY 11	.17	.34	.38	.42	.75	.78	.78	.79	.94	1.05	1.19	1.26
JUN 11	.25	.35	.36	.38	.40	.46	.52	.60	.62	.63	.63	.63
JUN 12	.25	.40	.46	.54	.68	.90	1.19	1.40	1.41	1.41	1.41	1.41
JUL 15	.26	.45	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46
JUL 19	.29	.48	.60	.70	.92	1.10	1.14	1.14	1.14	1.14	1.14	1.14
JUL 24	.26	.36	.41	.45	.54	.68	.70	.71	.76	.83	.87	.90
AUG 14	.16	.27	.34	.38	.56	.65	.67	.68	.70	.71	.72	.72
SEP 11	.20	.38	.42	.46	.53	.55	.56	.56	.56	.56	.56	.56
SOUTH BEND												
JUL 28	.18	.27	.34	.40	.63	.68	.77	.87	.99	1.07	1.28	1.46
AUG 10	.28	.50	.54	.73	1.04	1.33	1.52	1.57	1.58	1.59	1.60	1.60
AUG 24	.24	.38	.43	.49	.51	.52	.53	.55	.55	.55	.55	.55
SEP 6	.29	.32	.32	.33	.33	.51	.64	.64	.64	.64	.64	.64
IOWA												
DES MOINES												
MAY 18	.30	.35	.40	.43	.48	.52	.56	.60	.61	.66	.68	.68
MAY 23	.28	.32	.35	.36	.36	.36	.36	.36	.38	.38	.38	.38
MAY 23	.35	.46	.52	.56	.58	.59	.60	.62	.73	.76	.77	.77
JUN 6	.45	.52	.54	.55	.58	.60	.61	.62	.63	.64	.96	.99
JUN 13	.26	.48	.50	.54	.61	.61	.62	.67	.68	.68	.68	.68
JUN 18	.22	.34	.35	.36	.36	.37	.37	.40	.40	.40	.40	.40
JUN 29	.24	.48	.50	.60	.76	.80	.83	.85	.89	.92	1.06	1.16
JUL 10	.25	.48	.52	.54	.54	.54	.54	.54	.54	.54	.54	.54
SEP 4	.28	.31	.35	.44	.52	.61	.62	.63	.69	.76	.78	1.05
OCT 18	.16	.30	.31	.33	.33	.36	.37	.37	.37	.37	.37	.38
DUBUQUE												
MAY 18	.24	.43	.48	.49	.50	.50	.50	.50	.50	.52	.70	.82
MAY 31	.37	.73	.85	1.03	1.27	1.36	1.41	1.45	1.52	1.57	1.60	1.60
JUN 24	.25	.47	.50	.57	.65	.68	.70	.71	.82	.87	.91	.94
JUL 10	.18	.25	.27	.41	.50	.60	.75	.87	.95	1.00	1.02	1.02
JUL 12	.25	.45	.55	.68	.84	.88	.88	.88	.88	.88	.88	.88
JUL 18	.28	.56	.61	.67	.72	.75	.75	.75	.75	.75	.75	.75
AUG 10	.19	.30	.31	.36	.40	.45	.45	.45	.45	.45	.45	.45
SEP 4	.19	.35	.37	.48	.62	.75	.85	.86	.91	.96	1.06	1.06
SEP 9	.22	.34	.36	.36	.40	.43	.49	.50	.52	.55	.56	.65
NOV 1	.13	.26	.33	.43	.65	.82	.92	1.16	1.29	1.36	1.52	1.56
SIOUX CITY												
MAY 23	.33	.36	.42	.46	.54	.56	.57	.57	.57	.57	.57	.57
JUN 4	.24	.32	.33	.44	.46	.46	.47	.48	.48	.48	.48	.48
JUN 4	.24	.30	.36	.41	.52	.62	.68	.70	.71	.71	.71	.71
JUN 29	.34	.38	.39	.41	.43	.43	.43	.45	.46	.47	.50	.52
OCT 1	.24	.41	.44	.46	.48	.48	.48	.48	.48	.48	.48	.50
WATERLOO												
MAY 17	.14	.28	.40	.48	.62	.71	.75	.75	.75	.75	.75	.76
MAY 18	.30	.43	.49	.51	.55	.58	.70	.76	.77	.77	.77	.77
JUN 7	.40	.59	.62	.64	.68	.74	.83	.85	.87	.88	.88	.88
JUN 19	.22	.31	.32	.32	.32	.33	.33	.33	.33	.33	.38	.38
JUL 10	.18	.34	.42	.51	.73	.77	.80	.81	.95	1.01	1.06	1.06
SEP 4	.51	.55	.57	.66	.70	.73	.74	.75	.77	.78	.78	.78
KANSAS												
CONCORDIA												
MAY 17	.40	.60	.93	1.12	1.22	1.27	1.30	1.33	1.37	1.38	1.39	1.39
JUN 2	.24	.35	.41	.43	.44	.44	.44	.44	.44	.44	.44	.44
JUN 13	.17	.22	.33	.39	.56	.58	.59	.59	.59	.59	.59	.59
JUN 17	.31	.44	.58	.74	1.00	1.26	1.43	1.54	1.62	1.66	1.81	1.86
JUL 3	.18	.36	.38	.40	.55	.56	.73	.82	.82	.84	.84	.84
JUL 3	.33	.64	.80	.95	1.32	1.44	1.49	1.54	1.58	1.60	1.60	1.76
JUL 22	.18	.36	.43	.60	.79	.84	.92	.99	1.08	1.12	1.23	1.23
JUL 23	.45	.82	1.09	1.35	1.96	2.48	3.30	3.50	3.78	3.84	3.86	3.94
JUL 27	.17	.34	.36	.38	.39	.39	.40	.40	.40	.40	.40	.40
NOV 16	.17	.32	.36	.45	.63	.76	1.07	1.22	1.31	1.36	1.59	1.76
DODGE CITY												
APR 19	.37	.38	.38	.39	.43	.43	.50	.53	.54	.58	.63	.66
MAY 23	.32	.42	.44	.45	.47	.49	.50	.50	.51	.52	.52	.52
JUN 2	.34	.41	.42	.42	.48	.60	.73	.84	.92	1.22	1.27	1.27
JUN 8	.25	.30	.31	.31	.31	.34	.35	.37	.37	.38	.39	.40
JUN 19	.27	.47	.53	.58	.61	.70	.83	.88	.91	.97	1.03	1.05
JUL 22	.56	.86	.92	.98	1.00	1.03	1.08	1.13	1.16	1.16	1.16	1.16
JUL 29	.39	.58	.76	.86	.96	1.01	1.05	1.09	1.14	1.22	1.34	1.50
AUG 6	.30	.43	.51	.53	.63	.64	.64	.64	.64	.64	.64	.64
NOV 16	.20	.30	.39	.46	.51	.54	.59	.63	.70	.70	.94	1.27

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
KANSAS												
DODGE CITY												
NOV 17	.20	.28	.35	.43	.52	.53	.58	.62	.66	.69	.74	.84
GOODLAND												
MAY 15	.19	.24	.30	.45	.54	.57	.60	.60	.60	.60	.60	.60
MAY 17	.35	.60	.65	.67	.69	.72	.82	.83	.83	.84	.85	.86
JUN 9	.35	.53	.61	.64	.67	.67	.67	.67	.67	.67	.67	.67
JUN 12	.26	.34	.40	.43	.45	.47	.48	.48	.48	.48	.48	.48
JUL 5	.45	.67	.66	.68	.74	.77	.80	.82	.82	.82	.82	.82
TOPEKA												
APR 20	.18	.32	.35	.38	.40	.41	.44	.44	.44	.44	.44	.44
MAY 10	.38	.60	.74	.78	.80	.84	.87	.90	.91	.94	1.00	1.15
JUN 10	.28	.55	.65	.68	.70	.70	.71	.74	.79	.83	.92	.94
JUN 10	.18	.33	.39	.43	.46	.49	.49	.49	.49	.49	.49	.49
JUN 15	.18	.30	.37	.38	.38	.39	.39	.39	.39	.39	.39	.39
JUL 27	.30	.38	.39	.40	.41	.41	.43	.45	.46	.46	.46	.46
OCT 29	.20	.30	.36	.42	.56	.64	.69	.74	.85	.95	1.11	1.20
WICHITA												
MAY 22	.25	.45	.59	.67	.69	.70	.71	.94	1.20	1.26	1.34	1.35
JUN 7	.19	.32	.36	.45	.53	.54	.56	.56	.56	.56	.56	.56
JUL 4	.24	.36	.39	.42	.48	.54	.63	.72	.87	.99	1.09	1.26
JUL 5	.18	.35	.48	.53	.59	.66	.93	1.10	1.15	1.15	1.15	1.15
JUL 9	.16	.24	.37	.39	.39	.39	.39	.39	.39	.39	.39	.39
JUL 26	.22	.29	.38	.47	.54	.60	.64	.64	.64	.64	.64	.64
JUL 27	.22	.35	.50	.64	.76	.83	.86	.90	.96	.96	.96	.96
JUL 29	.18	.34	.39	.51	.66	.76	.86	.92	1.02	1.10	1.16	1.21
OCT 26	.12	.23	.35	.44	.56	.69	.85	.96	1.11	1.17	1.34	1.35
OCT 29	.20	.35	.47	.55	.66	.85	.97	1.04	1.14	1.26	1.38	1.57
NOV 17	.22	.31	.32	.33	.36	.48	.53	.64	.73	.79	.80	.86
KENTUCKY												
COVINGTON												
JUN 7	.24	.46	.52	.53	.55	.55	.55	.55	.55	.55	.55	.55
JUN 7	.20	.38	.44	.52	.54	.55	.55	.55	.55	.55	.55	.55
JUN 14	.27	.50	.52	.53	.57	.58	.59	.60	.61	.61	.61	.61
JUN 19	.40	.53	.55	.57	.63	.66	.67	.70	1.18	1.23	1.37	1.40
JUN 28	.20	.32	.34	.36	.39	.40	.40	.40	.40	.40	.40	.41
JUN 30	.18	.35	.37	.41	.42	.42	.42	.42	.42	.42	.57	.66
JUL 10	.25	.30	.32	.33	.44	.46	.48	.48	.48	.48	.48	.48
JUL 28	.23	.45	.50	.65	.76	.85	1.00	1.07	1.10	1.10	1.10	1.10
AUG 22	.27	.38	.41	.44	.53	.56	.58	.60	.60	.79	.80	.81
SEP 1	.28	.48	.54	.61	.69	.70	.71	.71	.71	.71	.71	.71
SEP 2	.22	.33	.36	.43	.45	.45	.45	.45	.45	.45	.45	.45
SEP 6	.32	.46	.48	.52	.54	.57	.57	.57	.57	.57	.57	.57
LEXINGTON												
MAY 24	.21	.30	.41	.42	.44	.48	.51	.52	.52	.52	.56	.75
JUN 14	.37	.65	.88	1.05	1.15	1.16	1.17	1.18	1.20	1.21	1.27	1.28
JUN 19	.44	.65	.82	.95	1.24	1.49	1.52	1.53	1.76	1.78	1.79	1.80
JUN 21	.43	.73	1.16	1.38	1.75	2.36	2.52	2.69	2.73	2.74	2.80	2.85
JUN 28	.18	.36	.49	.62	.75	.82	.89	.95	.95	.95	.95	.95
JUL 5	.20	.31	.37	.41	.43	.43	.43	.43	.43	.43	.43	.43
JUL 9	.31	.50	.62	.78	1.14	1.19	1.19	1.19	1.19	1.19	1.19	1.19
JUL 10	.32	.55	.76	1.01	1.04	1.05	1.06	1.07	1.08	1.08	1.09	1.12
JUL 18	.48	.78	1.03	1.43	1.47	1.59	1.68	1.74	1.77	1.80	1.84	1.87
SEP 25	.37	.44	.47	.49	.52	.55	.64	.65	.66	.68	.69	.70
SEP 26	.38	.54	.63	.74	.85	.85	.85	.85	.85	.85	.85	.85
LOUISVILLE												
MAR 15	.26	.40	.45	.47	.47	.47	.47	.47	.47	.47	.47	.47
APR 27	.25	.40	.45	.47	.53	.68	.82	.82	.82	.82	.82	.85
MAY 19	.26	.31	.32	.33	.38	.48	.52	.53	.53	.53	.53	.53
MAY 24	.28	.52	.54	.60	.70	1.08	1.36	1.37	1.38	1.38	1.42	1.42
JUL 6	.22	.43	.51	.55	.72	.77	.84	.87	.87	.87	.87	.87
JUL 13	.19	.36	.44	.46	.46	.46	.47	.47	.47	.47	.47	.47
JUL 18	.68*	1.18*	1.45	1.95*	2.66	3.28*	3.29	3.35	3.35	3.35	3.35	3.35
SEP 6	.32	.49	.68	.78	.84	.90	.94	.99	1.04	1.09	1.15	1.19
SEP 11	.38	.62	.65	.66	.66	.66	.66	.66	.66	.66	.66	.66
LOUISIANA												
ALEXANDRIA												
JAN 3	.15	.29	.34	.46	.68	.87	.97	1.11	1.14	1.23	1.25	1.25
FEB 26	.32	.43	.61	.76	.90	1.24	1.48	1.79	1.95	2.03	2.16	2.24
MAR 2	.19	.34	.38	.51	.64	.73	.78	.86	.89	.92	.95	.97
MAY 6	.24	.33	.40	.46	.48	.49	.51	.58	.62	.62	.64	.64
MAY 7	.32	.42	.51	.59	.68	.74	.87	.87	.87	.87	.87	.87
MAY 20	.32	.55	.63	.68	1.02	1.45	1.70	1.80	1.82	1.83	1.84	1.85
MAY 24	.46	.90	.93	.99	1.06	1.10	1.10	1.14	1.15	1.16	1.16	1.16
JUL 27	.62*	.99*	1.09	1.42	1.96	2.39	2.63	2.81	2.83*	2.84	2.87*	2.89
AUG 9	.55	.66	.71	.93	.94	.94	.94	.94	.94	.94	.94	.94
AUG 23	.26	.49	.57	.59	.85	1.06	1.09	1.10	1.12	1.12	1.12	1.12
SEP 10	.26	.35	.38	.41	.44	.45	.45	.46	.46	.46	.46	.46
SEP 19	.21	.42	.48	.49	.63	.77	.78	.81	.82	.84	.96	1.10
SEP 23	.59	.82	.86	.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
OCT 15	.23	.31	.37	.46	.47	.47	.47	.47	.48	.48	.48	.48
NOV 18	.20	.35	.37	.40	.47	.50	.55	.58	.61	.66	.72	.76
DEC 2	.19	.31	.40	.45	.48	.56	.67	.69	.81	.85	.91	.94
BATON ROUGE												
FEB 12	.25	.35	.42	.46	.53	.59	.65	.74	.82	.87	.94	.94
FEB 26	.30	.54	.60	.68	.78	.80	.83	.85	.93	.95	.96	.96
MAR 6	.44	.49	.50	.53	.53	.53	.53	.53	.53	.53	.53	.53
MAR 18	.32	.46	.64	.80	1.05	1.39	1.53	1.68	1.69	1.80	1.97	2.05
MAY 27	.45	.75	.90	.93	1.00	1.15	1.30	1.41	1.53	1.59	1.61	1.63
JUN 10	.25	.30	.31	.45	.53	.54	.55	.55	.55	.55	.55	.55
JUN 20	.29	.35	.37	.40	.46	.47	.48	.48	.52	.54	.56	.57
JUN 27	.20	.30	.35	.40	.43	.47	.48	.49	.50	.50	.50	.50
JUL 1	.28	.54	.73	.84	1.13	1.54	1.78	1.98	2.12	2.17	2.18	2.20
JUL 20	.25	.37	.45	.51	.56	.57	.67	.74	.76	.77	.81	.82
JUL 26	.30	.50	.65	.87	1.17	1.27	1.27	1.27	1.27	1.27	1.27	1.27
JUL 26	.22	.40	.44	.50	.56	.59	.61	.64	.65	.65	.65	.65
JUL 27	.40	.75	.95	1.15	1.32	1.55	1.57	1.57	1.57	1.57	1.57	1.57
JUL 28	.35	.58	.80	1.00	1.33	1.33	1.37	1.38	1.38	1.38	1.38	1.38
AUG 8	.30	.57	.63	.64	.64	.64	.64	.64	.65	.66	.67	.68
AUG 19	.30	.57	.77	.86	1.01	1.09	1.15	1.20	1.21	1.21	1.21	1.21
AUG 21	.38	.57	.73	.91	1.21	1.52	1.53	1.53	1.53	1.53	1.53	1.54
AUG 24	.17	.32	.38	.40	.42	.43	.44	.50	.55	.56	.59	.60
SEP 11	.30	.33	.38	.46	.52	.56	.58	.59	.59	.59	.59	.59
SEP 15	.30	.55	.72	.79	.90	.98	1.08	1.13	1.16	1.18	1.19	1.26
SEP 16	.27	.53	.67	.78	1.10	1.40	1.63	1.73	1.89	1.94	1.99	2.03

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
LOUISIANA												
BATON ROUGE												
SEP 19	.45	.84	1.01	1.12	1.14	1.16	1.19	1.20	1.20	1.20	1.20	1.20
SEP 21	.36	.65	.86	1.12	1.29	1.47	1.65	1.86	2.10	2.20	2.23	2.23
SEP 26	.38	.61	.66	.68	.71	.72	.72	.73	.74	.75	.75	.75
OCT 3	.37	.69	.80	.95	1.03	1.04	1.04	1.05	1.09	1.18	1.18	1.18
NOV 28	.38	.65	.72	.77	.86	.89	.90	.98	1.12	1.39	1.51	1.55
DEC 19	.18	.24	.42	.45	.46	.46	.48	.48	.48	.48	.48	.48
BOOTHVILLE												
MAY 12	.36	.57	.84	.92	1.01	1.05	1.10	1.15	1.15	1.16	1.16	1.16
JUN 21	.55*	.92*	1.04	1.17	1.23	1.24	1.25	1.25	1.25	1.26	1.27	1.28
JUN 27	.22	.38	.41	.48	.57	.60	.61	.61	.61	.61	.85	.85
JUL 6	.25	.46	.47	.56	.68	.74	.81	.84	.89	.92	1.01	1.07
JUL 21	.22	.30	.35	.35	.36	.37	.37	.37	.37	.37	.37	.37
JUL 23	.15	.28	.34	.45	.65	.72	.76	.77	.77	.77	.77	.77
JUL 30	.42	.77	.90	1.15*	1.77	2.08*	2.35	2.47	2.52	2.56	2.55	2.58
JUL 31	.26	.51	.73	.76	.87	.88	.89	.93	.96	.98	1.02	1.07
AUG 3	.22	.34	.36	.40	.46	.48	.48	.48	.48	.48	.48	.48
AUG 18	.41	.68	.77	.85	1.05	1.27	1.30	1.34	1.34	1.34	1.34	1.34
SEP 4	.28	.48	.50	.58	.67	.68	.69	.69	.70	.71	.83	.91
SEP 4	.32	.46	.46	.47	.47	.47	.47	.47	.47	.48	.49	.65
SEP 5	.37	.50	.53	.55	.58	.61	.71	.83	.97	1.30	1.41	1.42
SEP 16	.41	.46	.47	.48	.52	.53	.58	.64	.72	.75	.78	.79
SEP 30	.30	.54	.56	.62	.71	.72	.72	.72	.72	.72	.72	.72
DEC 10	.28	.42	.44	.52	.57	.70	.87	1.08	1.31	1.46	1.46	1.52
LAKE CHARLES												
MAY 11	.43	.69	.70	.80	.88	1.01	1.01	1.68	1.85	1.93	1.93	1.95
MAY 11	.33	.64	.75	.95	1.22	1.32	1.61	1.71	1.79	1.87	2.01	2.08
AUG 4	.25	.50	.65	.85	1.23	1.75	1.98	2.03	2.07	2.09	2.13	2.17
AUG 25	.40	.51	.85	.95	1.30	1.34	1.34	1.34	1.34	1.34	1.34	1.34
SEP 11	.20	.38	.40	.49	.71	.74	.74	.74	.74	.74	.74	.74
SEP 23	.25	.40	.52	.66	.75	.76	.78	.79	.94	.95	.95	.96
OCT 4	.30	.58	.63	.93	.93	.94	.95	.95	.95	.95	.95	.95
OCT 16	.27	.37	.37	.38	.40	.63	.70	.79	.87	.94	.96	.96
NOV 18	.34	.42	.47	.47	.48	.48	.49	.53	.54	.54	.55	.55
DEC 5	.25	.40	.45	.50	.72	.80	.90	1.25	1.28	1.40	1.53	1.69
NEW ORLEANS												
FEB 4	.20	.24	.29	.35	.53	.63	.67	.70	.73	.75	.75	.75
FEB 12	.45	.58	.70	.80	.98	1.17	1.37	1.53	1.62	1.77	1.82	1.82
FEB 26	.22	.33	.37	.43	.52	.60	.62	.70	.72	.74	.79	.81
MAR 10	.37	.52	.54	.57	.61	.62	.64	.65	.69	.72	.74	.75
MAR 19	.29	.43	.48	.56	.57	.59	.62	.64	.65	.66	.68	.68
MAR 29	.15	.30	.40	.55	.65	1.02	1.13	1.14	1.23	1.41	1.58	1.65
APR 2	.21	.32	.35	.36	.42	.56	.63	.65	.70	.73	.77	.78
APR 18	.24	.45	.55	.58	.58	.58	.71	.71	.71	.71	.71	.71
JUN 6	.30	.60	.68	.72	.77	.80	.98	1.02	1.04	1.06	1.09	1.16
JUN 22	.25	.37	.57	.64	.72	.74	.76	.78	.79	.81	.83	.83
JUN 24	.25	.42	.47	.53	.59	.63	.69	.75	.75	.75	.75	.75
JUN 28	.71	1.03	1.30	1.48	1.85	2.02	2.05	2.05	2.05	2.05	2.05	2.05
JUL 30	.31	.50	.73	.85	.99	1.05	1.08	1.08	1.08	1.08	1.08	1.08
JUL 27	.21	.33	.43	.50	.57	.60	.61	.67	.70	.72	.73	.75
AUG 10	.25	.36	.43	.46	.49	.50	.50	.50	.50	.50	.50	.50
AUG 11	.25	.47	.58	.75	1.00	1.21	1.36	1.42	1.45	1.45	1.45	1.45
AUG 20	.27	.31	.32	.35	.35	.35	.35	.35	.37	.37	.38	.38
AUG 31	.20	.40	.55	.62	.66	.70	.81	.81	.85	.86	.96	.97
SEP 4	.39	.70	.96	1.20	1.55	2.07	2.40	3.00	3.47	3.73	3.92	4.02
SEP 10	.20	.40	.55	.63	.85	1.10	1.14	1.19	1.19	1.19	1.19	1.19
SEP 11	.20	.32	.42	.48	.67	.68	.69	.71	.72	.75	.77	.77
SEP 15	.23	.31	.35	.45	.62	.77	.83	.93	1.00	1.38	1.61	1.74
SEP 16	.35	.70	1.01	1.10	1.30	1.45	1.57	1.65	1.82	1.96	2.05	2.12
NOV 28	.37	.48	.51	.53	.55	.58	.64	.69	.98	1.08	1.22	1.32
DEC 1	.30	.37	.45	.47	.57	.64	.72	.81	.86	.88	1.01	1.10
DEC 6	.35	.57	.67	.74	.78	.80	.81	.87	.88	.88	.88	.89
DEC 10	.35	.66	.68	.70	.76	.76	.77	.77	.83	.83	.84	.85
DEC 20	.15	.24	.35	.40	.46	.51	.53	.60	.63	.65	.65	.66
NEW ORLEANS												
JAN 4	.16	.28	.32	.38	.50	.68	.73	.73	.75	.76	.78	.79
FEB 7	.26	.38	.43	.43	.43	.43	.52	.54	.54	.55	.55	.73
FEB 12	.18	.32	.41	.53	.67	1.04	1.18	1.29	1.43	1.52	1.53	1.53
FEB 26	.24	.33	.49	.59	.79	.90	.97	.99	1.02	1.05	1.09	1.11
MAR 10	.26	.35	.36	.38	.40	.42	.46	.48	.48	.48	.48	.48
MAR 12	.25	.39	.46	.48	.52	.54	.58	.58	.58	.58	.58	.58
MAR 19	.27	.36	.37	.37	.61	.65	.67	.67	.67	.67	.67	.67
MAR 29	.19	.36	.43	.53	.73	1.03	1.23	1.25	1.26	1.27	1.50	1.53
MAY 12	.26	.38	.41	.50	.63	.74	.77	.78	.79	.79	.82	.82
MAY 26 T	M	M	M	M	M	M	M	M	M	M	M	M
JUL 2	.35	.62	.80	.99	1.18	1.55	2.10	2.16	2.49	2.90	2.93	2.94
JUL 9	.27	.52	.65	.65	.65	.65	.81	.93	.93	.93	.93	.93
JUL 10	.21	.38	.44	.53	.63	.64	.74	.80	.81	1.04	1.05	1.05
JUL 17	.29	.44	.62	.76	.97	1.05	1.06	1.06	1.06	1.06	1.06	1.06
JUL 30	.34	.45	.50	.59	.64	1.00	1.13	1.17	1.18	1.21	1.27	1.30
AUG 5	.25	.48	.62	.75	1.05	1.39	1.41	1.43	1.43	1.43	1.43	1.43
SEP 2	.27	.48	.62	.85	.98	1.15	1.21	1.21	1.21	1.21	1.76	1.83
SEP 4	.17	.31	.36	.45	.70	.92	1.18	1.52	1.71	1.97	2.20	2.26
SEP 5	.23	.46	.54	.69	.90	1.14	1.20	1.44	1.64	1.76	1.97	2.08
SEP 11	.24	.38	.40	.63	.79	.91	1.21	1.48	1.59	1.61	1.61	1.61
SEP 15	.35	.56	.61	.67	.74	.87	1.00	1.13	1.26	1.36	1.55	1.72
SEP 16	.45	.80	1.11	1.35	1.66	1.90	2.01	2.17	2.28	2.39	2.52	2.60
SEP 26	.19	.31	.40	.41	.42	.43	.43	.43	.43	.43	.43	.43
NOV 28	.25	.42	.59	.66	.88	1.27	1.39	1.60	2.02	2.25	2.43	2.49
DEC 6	.40	.58	.75	.80	.85	.94	.98	1.02	1.03	1.03	1.03	1.05
DEC 10	.50	.66	.75	.86	.87	.87	.87	.88	.90	.90	.90	.90
DEC 20	.16	.28	.33	.47	.60	.85	.97	1.09	1.09	1.09	1.10	1.10
SHREVEPORT												
FEB 15	.16	.24	.31	.39	.59	.66	.96	1.03	1.10	1.27	1.52	1.65
MAR 9	.38	.57	.62	.63	.67	.69	.69	.69	.69	.69	.69	.69
MAR 28	.32	.43	.45	.57	.75	.76	.76	.76	.76	.76	.84	.86
MAY 6	.42	.73	.91	1.06	1.18	1.33	1.33	1.33	1.33	1.58	1.91	1.95
MAY 12	.30	.59	.66	.96	1.19	1.37	1.54	1.66	1.72	1.76	1.81	1.82
JUN 15	.27	.31	.34	.36	.55	.66	.68	.68	.69	.69	.70	.70
JUL 3	.22	.36	.51	.63	.70	.70	.70	.70	.70	.70	.70	.70
JUL 22	.25	.40	.50	.75	.90	.91	.91	.93	.94	.96	.98	.98
JUL 24	.20	.36	.41	.43	.45	.48	.60	.81	.93	.95	1.13	1.35
AUG 2	.25	.32	.33	.34	.34	.45	.65	.65	.65	.65	.65	.65
AUG 4	.26	.46	.57	.75	.90	1.00	1.13	1.20	1.22	1.24	1.25	1.25
OCT 3	.14	.27	.33	.36	.48	.79	.94	1.03	1.05	1.05	1.07	1.11
OCT 23	.49	.76	.81	.98	1.10	1.30	1.35	1.41	1.41	1.41	1.41	1.41
NOV 18	.38	.70	.91	.99	1.26	1.46	1.76	1.92	2.00	2.09	2.14	2.21

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
MAINE												
CARIBOU												
JUN 30	.30	.31	.32	.33	.33	.35	.37	.38	.38	.38	.38	.38
PORTLAND												
AUG 2	.28	.39	.53	.65	.79	1.05	1.14	1.14	1.14	1.14	1.14	1.14
MARYLAND												
BALTIMORE												
JUN 3	.38	.75	.82	.82	.82	.92	.92	.92	.92	.92	.92	.92
JUL 26	.30	.40	.44	.52	.56	.56	.59	.59	.59	.59	.93	1.01
JUL 29	.15	.30	.37	.45	.51	.58	.74	.85	.88	.90	.97	.98
AUG 1	.27	.42	.45	.55	.90	.91	.96	1.00	1.27	1.40	1.50	2.14
AUG 3	.32	.50	.60	.77	1.00	1.02	1.07	1.07	1.19	1.19	1.21	1.22
AUG 19	.26	.47	.53	.66	.75	.95	1.08	1.21	1.29	1.30	1.32	1.35
SEP 11	.20	.36	.43	.49	.60	.85	1.09	1.15	1.57	1.65	1.70	1.96
SEP 12	.35	.58	.60	.60	.60	.61	.62	.63	.63	.63	.63	.63
SEP 17	.35	.50	.52	.54	.57	.63	.68	.72	.73	.73	.73	.73
BALTIMORE U												
JUN 14	.35	.49	.52	.52	.54	.84	.69	.69	.69	.69	.69	.69
AUG 1	.45	.85	.95	1.07	1.47	2.17	2.83	2.83	3.87	4.12	5.26	5.48
AUG 3	.40	.45	.50	.58	1.00	1.13	1.22	1.28	1.33	1.37	1.47	1.47
AUG 19	.26	.33	.34	.36	.44	.48	.58	.83	.95	.98	1.08	1.12
SEP 11	.28	.53	.64	.71	.77	.82	.98	1.20	1.45	1.55	1.65	1.67
SEP 12	.28	.49	.58	.64	.65	.71	.72	.72	.72	.72	.73	.74
SEP 17	.30	.46	.46	.55	.57	.61	.65	.70	.70	.70	.70	.70
OCT 3	.25	.35	.41	.52	.72	.75	.89	.92	.94	.96	.97	.98
MASSACHUSETTS												
BLUE HILL R	NONE											
BOSTON												
JUN 3	.21	.32	.44	.44	.46	.46	.46	.46	.46	.46	.46	.46
JUN 8	.27	.34	.35	.36	.40	.44	.47	.47	.47	.47	.47	.47
JUN 21	.25	.30	.31	.32	.34	.36	.37	.41	.42	.43	.44	.45
JUL 17	.25	.32	.32	.33	.34	.35	.35	.35	.35	.35	.35	.35
MICHIGAN												
ALPENA												
JUN 7	.20	.40	.58	.68	.70	.70	.70	.73	.80	.90	1.03	1.06
JUN 29	.35	.61	.63	.64	.69	1.11	1.24	1.27	1.35	1.49	1.56	1.60
JUN 30	.31	.46	.65	.69	.74	.75	.75	.75	.75	.75	.75	.75
JUL 22	.19	.34	.35	.36	.37	.40	.48	.51	.57	.58	.63	.74
AUG 9	.25	.37	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
AUG 22	.36	.65	.66	.67	.68	.75	.85	.86	1.07	1.15	1.21	1.31
DETROIT												
MAY 19	.30	.55	.60	.68	.70	.73	.75	.75	.77	.80	.85	.86
AUG 26	.45	.50	.50	.50	.65	.90	1.15	1.45	1.60	1.85	1.95	1.95
DETROIT M WAYNE CO												
MAY 19	.38	.41	.43	.57	.82	.83	.84	.86	.87	1.02	1.06	1.07
JUL 26	.40	.69	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81
AUG 10	.22	.34	.37	.41	.43	.43	.53	.59	.59	.59	.59	.74
AUG 26	.20	.36	.40	.47	.47	.47	.47	.47	.47	.47	.49	.49
FLINT												
MAY 19	.42	.54	.58	.60	.62	.62	.62	.63	.64	.64	.64	.64
JUN 6	.26	.33	.36	.39	.42	.46	.51	.57	.57	.57	.57	.57
JUN 13	.21	.36	.43	.48	.59	.60	.60	.60	.60	.60	.60	.68
JUL 15	.27	.32	.33	.36	.56	.69	.76	.92	1.03	1.03	1.03	1.03
JUL 25	.34	.46	.53	.55	.56	.63	.70	.70	.70	.70	.72	.72
DEC 15	.28	.44	.50	.54	.62	.75	.84	.97	1.08	1.16	1.22	1.28
GRAND RAPIDS												
SEP 5	.30	.60	.74	.83	.85	.87	.88	.88	.88	.88	.88	.88
SEP 6	.24	.46	.48	.54	.56	.56	.56	.56	.56	.56	.56	.56
SEP 27	.26	.44	.45	.49	.64	.79	.98	1.00	1.22	1.24	1.27	1.28
HOUGHTON LAKE												
JUN 7	.27	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
JUN 20	.40	.75	.83	.85	.86	.87	.87	.88	.88	.88	.88	.88
JUN 30	.33	.50	.60	.61	.64	.64	.64	.64	.64	.64	.64	.64
AUG 10	.25	.33	.50	.62	.74	.75	.76	.77	.77	.77	.77	.77
LANSING												
MAY 24	.40	.58	.60	.83	.86	.89	.92	.95	1.04	1.08	1.11	1.11
JUN 6	.33	.39	.41	.44	.47	.53	.60	.60	.60	.60	.60	.60
JUN 13	.35	.50	.55	.65	.92	1.00	1.27	1.42	1.52	1.53	1.57	1.66
JUN 20	.50	.70	.85	1.01	1.23	1.38	1.43	1.50	1.52	1.53	1.53	1.53
JUL 5	.15	.25	.40	.50	.72	.76	.81	.88	1.07	1.20	1.28	1.31
JUL 19	.20	.35	.45	.48	.54	.69	.74	.74	.75	.77	.78	.80
AUG 10	.36	.38	.38	.38	.42	.42	.42	.42	.42	.43	.45	.49
SEP 5	.38	.41	.42	.42	.51	.75	.77	.77	.77	.78	.79	.81
SEP 6	.42	.54	.56	.59	.62	.63	.71	.72	.72	.72	.72	.73
SEP 10	.33	.35	.40	.50	.57	.61	.63	.63	.63	.63	.63	.63
MARQUETTE U												
JUN 5	.14	.21	.28	.41	.55	.63	.69	.72	.78	.81	1.02	1.30
JUN 29	.13	.24	.30	.42	.49	.55	.56	.57	.61	.63	.66	.68
JUL 12	.29	.45	.57	.71	.94	1.05	1.11	1.18	1.22	1.26	1.30	1.32
MUSKEGON												
SEP 10	.18	.23	.36	.40	.43	.44	.44	.44	.44	.44	.44	.44
SAULT STE MARIE												
MAY 19	.21	.30	.31	.33	.39	.45	.48	.48	.48	.48	.48	.48
AUG 10	.45	.67	.72	.76	.82	.84	.85	.85	.85	.85	.85	.85
SEP 28	.27	.29	.29	.31	.33	.39	.43	.52	.69	.77	.78	.78
MINNESOTA												
DULUTH												
JUN 5	.23	.27	.34	.37	.39	.46	.62	.67	.70	.73	.74	.77
JUL 12	.30	.36	.58	.60	.78	.86	.93	1.04	1.09	1.16	1.16	1.16
JUL 12	.32	.55	.59	.78	.86	.88	.88	.88	.88	.88	.88	.88
AUG 17	.22	.38	.50	.60	.90	1.17	1.52	1.56	1.58	1.59	1.68	1.84

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
MINNESOTA												
INTERNATIONAL FALLS												
JUN 11	.19	.37	.45	.46	.46	.46	.51	.53	.53	.53	.53	.53
JUL 12	.25	.45	.55	.70	.78	.82	.88	1.10	1.18	1.28	1.35	1.40
SEP 28	.20	.38	.40	.45	.51	.57	.65	.70	.73	.73	.73	.86
SEP 30	.20	.26	.33	.41	.58	.61	.63	.73	.92	1.07	1.25	1.29
MINNEAPOLIS												
JUN 19	.26	.34	.39	.48	.55	.55	.55	.65	.67	.70	.70	.71
JUL 7	.50	.73	.79	.80	.82	.92	1.06	1.06	1.06	1.06	1.06	1.06
JUL 7	.38	.50	.60	.65	.80	1.28	1.28	1.28	1.28	1.28	1.28	1.28
SEP 29	.34	.62	.72	.80	.82	.82	.82	.82	.82	.90	.90	.91
ROCHESTER												
MAY 23	.18	.27	.37	.40	.48	.69	.75	.75	.75	.75	.75	.75
JUN 19	.20	.36	.43	.46	.51	.54	.60	.62	.62	.63	.63	.63
JUN 24	.26	.42	.53	.60	.73	.85	.87	.87	.87	.87	.87	.87
JUL 12	.21	.32	.37	.48	.50	.51	.87	.91	.94	1.03	1.03	1.03
AUG 21	.56	.80	.91	.97	1.04	1.14	1.16	1.16	1.16	1.16	1.16	1.16
SEP 9	.29	.54	.71	.81	.86	.91	.95	.99	1.01	1.02	1.07	1.12
ST CLOUD												
MAY 24	.17	.31	.35	.51	.57	.83	.85	.87	.93	.94	.97	.97
JUN 29	.26	.52	.54	.57	.63	.69	.83	.93	1.16	1.18	1.41	1.49
JUL 7	.21	.35	.38	.44	.61	.64	.66	.66	.66	.71	.73	.76
SEP 4	.42	.75	.82	.92	.95	.97	.99	1.07	1.08	1.11	1.16	1.17
SEP 7	.28	.32	.32	.33	.33	.34	.34	.34	.34	.34	.34	.34
MISSISSIPPI												
JACKSON												
JAN 14	.30	.50	.55	.65	.80	.96	.98	.98	1.05	1.06	1.16	1.20
FEB 21	.22	.35	.37	.48	.60	.65	.66	.66	.66	.73	.75	.75
FEB 26	.38	.61	.67	.90	1.33	1.47	1.59	1.71	1.76	1.79	1.86	1.86
MAR 13	.39	.62	.76	.85	1.00	1.43	1.51	1.52	1.53	1.54	1.54	1.54
APR 21	.40	.72	.84	.89	.97	1.00	1.19	1.62	1.80	1.83	1.94	2.02
APR 22	.58	1.00	1.02	1.04	1.11	1.26	1.33	1.35	1.41	1.46	1.48	1.75
APR 29	.25	.39	.46	.49	.58	.88	.94	1.04	1.04	1.05	1.05	1.05
APR 29	.32	.53	.55	.57	.58	.59	.63	.64	.66	.68	.71	.71
MAY 10	.27	.50	.64	.70	1.19	1.26	1.27	1.30	1.31	1.38	1.38	1.38
MAY 11	.30	.35	.35	.37	.41	.45	.46	.48	.51	.54	.55	.55
JUN 7	.50	.82	.92	.96	1.03	1.06	1.08	1.09	1.10	1.10	1.10	1.10
JUN 23	.27	.31	.33	.37	.39	.39	.46	.53	.55	.55	.57	.58
JUN 26	.26	.40	.45	.49	.54	.55	.55	.55	.55	.55	.55	.68
JUL 17	.22	.37	.39	.50	.61	.70	.79	.89	1.02	1.10	1.30	1.32
JUL 24	.27	.44	.50	.53	.58	.60	.62	.63	.66	.67	.68	.69
JUL 25	.33	.65	.72	.84	.90	.92	.92	.93	.93	.93	1.01	1.01
JUL 29	.40	.43	.45	.47	.54	.57	.57	.62	.81	.93	.95	.95
SEP 7	.26	.32	.33	.35	.36	.37	.37	.37	.37	.37	.37	.37
SEP 16	.11	.20	.30	.39	.53	.68	.93	1.25	1.49	1.65	1.97	2.25
NOV 18	.29	.48	.50	.56	.60	.65	.75	.95	1.15	1.25	1.38	1.39
DEC 28	.25	.45	.53	.70	.92	1.02	1.08	1.11	1.12	1.12	1.13	1.13
MERIDIAN												
JAN 4	.30	.45	.60	.73	1.10	1.35	1.44	1.65	1.71	1.77	1.77	1.77
JAN 24	.29	.46	.50	.52	.54	.57	.61	.64	.69	.71	.77	.78
FEB 4	.18	.30	.35	.42	.52	.55	.60	.65	.69	.74	.80	.83
FEB 26	.39	.41	.43	.45	.50	.55	.62	.70	.76	.74	.74	.74
MAR 2	.30	.52	.55	.60	.87	.91	.98	.98	.99	.99	.99	.99
APR 1	.22	.32	.43	.47	.57	.71	.79	.83	.86	.88	.91	.92
APR 29	.27	.37	.37	.39	.55	.64	.82	.87	1.09	1.24	1.32	1.34
MAY 10	.40	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46
MAY 11	.19	.32	.45	.45	.45	.47	.51	.65	.67	.71	.73	.78
MAY 12 T	M	M	M	M	M	M	M	M	M	M	M	M
JUN 17	.17	.27	.32	.43	.52	.53	.55	.57	.57	.59	.60	.61
JUL 2	.25	.30	.37	.38	.55	.68	.79	.80	.82	.82	.85	.85
JUL 16	.55	.83	.98	1.30	1.90	2.70	3.58	4.16	4.41	4.46	4.51	4.58
JUL 23	.26	.50	.55	.60	.69	.74	.80	.84	.84	.84	.84	.84
JUL 28	.20	.35	.40	.49	.55	.58	.59	.59	.60	.64	.65	.65
JUL 29	.41	.62	.69	.83	1.08	1.16	1.37	1.43	1.62	1.69	1.89	1.95
JUL 30	.26	.51	.60	.62	.74	.90	1.00	1.05	1.08	1.10	1.10	1.10
AUG 16	.48	.55	.55	.55	.73	.75	.75	.75	.75	.75	.75	.83
SEP 6	.25	.33	.35	.37	.40	.42	.46	.46	.46	.46	.46	.46
SEP 16	.20	.30	.45	.56	.75	.95	1.20	1.35	1.47	1.56	1.95	2.10
DEC 6	.25	.45	.55	.58	.66	.70	.80	.95	1.10	1.20	1.40	1.50
MISSOURI												
COLUMBIA												
MAY 6	.39	.71	.83	.97	1.17	1.24	1.25	1.26	1.26	1.26	1.26	1.26
JUN 12	.40	.46	.70	.82	.86	.86	1.16	1.34	1.35	1.40	1.43	1.45
JUN 14	.32	.45	.55	.55	.59	.59	.59	.59	.59	.59	.59	.59
JUL 18	.20	.40	.46	.47	.47	.47	.47	.47	.47	.47	.47	.47
JUL 18	.38	.46	.50	.52	.60	.64	.70	.73	.74	.74	.74	.75
KANSAS CITY												
APR 27	.20	.36	.48	.56	.70	.77	.79	.80	.80	.81	.82	.82
JUN 2	.16	.24	.36	.43	.53	.54	.56	.58	.59	.59	.64	.68
JUN 10	.19	.27	.29	.36	.57	.64	.66	.67	.71	.71	.72	.72
JUL 11	.10	.20	.30	.40	.50	.65	.79	.83	.87	.91	.93	.94
AUG 7	.16	.30	.37	.40	.42	.50	.60	.70	.70	.70	.70	.70
SEP 4	.25	.45	.63	.70	.84	.88	.88	.89	.89	.89	.89	.89
OCT 29	.20	.32	.35	.35	.35	.36	.36	.36	.37	.37	.37	.37
ST LOUIS												
MAR 14	.47	.51	.51	.52	.55	.77	.90	.92	.95	.96	.96	.96
MAY 6	.20	.28	.44	.49	.50	.50	.50	.50	.50	.50	.50	.60
JUN 10	.27	.31	.34	.40	.43	.48	.49	.50	.50	.50	.50	.50
JUN 11	.30	.38	.57	.67	.77	.87	.93	.95	1.00	1.00	1.00	1.00
JUL 4	.20	.32	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
JUL 4	.20	.24	.35	.38	.41	.42	.42	.42	.42	.47	.65	.66
JUL 10	.37	.57	.61	.68	.68	.68	.68	.68	.68	.68	.68	.68
SPRINGFIELD												
MAY 23	.18	.33	.42	.49	.82	.88	.90	.95	1.01	1.09	1.16	1.20
MAY 23	.32	.50	.69	.75	.75	.97	.98	.98	.98	.98	.98	.98
JUN 2	.23	.44	.64	.67	.75	.81	.82	.82	.82	.84	.84	.85
JUN 8	.22	.34	.37	.38	.40	.45	.49	.56	.68	.76	.93	1.05
JUN 20	.24	.44	.53	.60	.73	.81	.84	.90	.90	.90	.90	.90
AUG 3	.34	.48	.58	.70	.85	1.22	1.39	1.47	1.51	1.54	1.60	1.60
AUG 7	.24	.39	.47	.48	.52	.62	.62	.62	.62	.62	.62	.62
SEP 5	.18	.32	.39	.43	.50	.69	.94	.97	.99	1.00	1.08	1.18
OCT 19	.24	.39	.43	.49	.52	.56	.58	.59	.61	.62	.67	.69
DEC 14	.30	.34	.38	.39	.41	.45	.48	.52	.53	.54	.61	.66

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
MONTANA												
SPRINGFIELD						NONE						
BILLINGS						NONE						
GLASGOW												
JUN 3 T	M	M	M	M	M	M	M	M	M	M	M	M
GREAT FALLS						NONE						
HAVRE						NONE						
HELENA						NONE						
KALISPELL						NONE						
MISSOULA						NONE						
NEBRASKA												
GRAND ISLAND												
MAY 30	.25	.40	.45	.47	.49	.55	.56	.56	.56	.56	.56	.56
JUN 4	.25	.33	.40	.57	.58	.58	.58	.58	.58	.72	.74	.74
JUN 6	.25	.38	.42	.43	.52	.80	.82	.82	.82	.82	.82	.82
JUN 29	.35	.65	.81	1.05	1.35	1.70	2.00	2.33	2.49	2.60	2.89	2.91
LINCOLN U												
JUN 29	.38	.74	.79	.82	.83	.87	.88	.88	.88	.88	.89	.89
JUL 18	.22	.37	.39	.39	.40	.40	.41	.41	.41	.41	.41	.41
JUL 22	.20	.34	.47	.56	.86	1.08	1.18	1.25	1.26	1.26	1.27	1.28
NORFOLK												
JUN 6	.27	.49	.53	.62	.79	.85	.92	.95	1.05	1.09	1.10	1.10
JUN 9	.27	.37	.40	.48	.52	.61	.61	.61	.61	.61	.61	.61
JUN 10	.25	.40	.45	.50	.75	1.02	1.20	1.44	1.46	1.57	1.59	1.59
JUN 13	.20	.31	.35	.44	.55	.67	.67	.71	.71	.71	.71	.71
JUL 4	.38	.54	.57	.60	.63	.67	.72	.74	.77	.80	.83	.83
JUL 10	* .65	1.03	1.04	1.09	1.13	1.17	1.23	1.27	1.32	1.33	1.34	1.34
NORTH PLATTE												
JUN 2	.41	.61	.80	.85	.90	.94	.94	.94	.94	.94	.94	.94
JUN 9	.28	.44	.58	.78	.90	1.29	1.44	1.80	1.87	1.88	1.88	2.01
JUN 10	.20	.34	.40	.50	.54	.56	.60	.65	.67	.69	.70	.70
JUN 29	.24	.40	.56	.66	.68	.69	.72	.80	.80	.80	.80	.80
OMAHA												
MAY 10	.15	.22	.31	.36	.56	.66	.75	.83	.99	1.02	1.36	1.74
JUN 29	.20	.28	.33	.39	.66	.86	.90	.94	1.09	1.12	1.43	1.72
AUG 3	.19	.32	.39	.49	.52	.53	.58	.61	.62	.62	.62	.62
SCOTTSBLUFF												
MAY 30	.23	.37	.44	.55	.71	.78	.84	.91	1.05	1.08	1.10	1.10
JUN 2	.28	.47	.55	.66	.76	.82	.90	.92	.94	.96	1.02	1.08
JUN 12	.26	.33	.39	.43	.60	.70	.72	.75	.77	.78	.78	.80
JUL 8	.18	.34	.40	.45	.49	.50	.50	.50	.50	.50	.50	.50
AUG 9	.17	.32	.42	.51	.60	.62	.63	.63	.63	.63	.63	.63
AUG 29	.26	.46	.54	.61	.66	.69	.70	.71	.72	.74	.74	.74
VALENTINE												
JUL 4	.25	.33	.34	.35	.45	.48	.51	.58	.66	.66	.66	.66
AUG 29	.23	.43	.50	.67	.90	1.20	1.45	1.62	1.95	2.33	2.42	3.00
NEVADA												
ELKO						NONE						
ELY						NONE						
LAS VEGAS						NONE						
RENO												
JUL 31	.17	.26	.38	.48	.56	.62	.63	.63	.63	.63	.63	.63
WINNEMUCCA						NONE						
NEW HAMPSHIRE												
CONCORD												
JUN 8	.20	.33	.39	.42	.43	.43	.43	.43	.43	.43	.43	.43
JUL 17	.15	.30	.34	.38	.42	.42	.43	.43	.43	.43	.43	.43
JUL 29	.28	.47	.59	.74	.84	1.30	1.61	1.74	1.98	2.08	2.14	2.18
NEW JERSEY												
ATLANTIC CITY												
JUN 8	.26	.44	.49	.49	.50	.51	.51	.51	.51	.51	.51	.51
JUL 1	.26	.35	.37	.40	.54	.72	.73	.73	.82	.84	.84	.84
JUL 6	.29	.40	.48	.52	.63	.66	.66	.68	.68	.68	.68	.68
AUG 4	.48	.78	.88	1.28	1.76	2.12	2.43	2.49	2.55	2.65	2.80	2.85
AUG 11	.42	.54	.62	.83	1.08	1.37	1.39	1.41	1.44	1.88	2.04	2.34
AUG 28	.26	.33	.42	.66	.72	1.00	1.20	1.31	1.54	1.56	1.61	1.78
SEP 11	.25	.42	.47	.52	.62	.66	.69	.69	.69	.69	.69	.69
SEP 11	.34	.62	.80	1.09	1.40	1.55	1.58	1.59	1.61	1.61	1.61	1.61
SEP 13	.30	.38	.41	.43	.52	.62	.68	.82	.94	1.00	1.08	1.13
NEWARK												
JUN 14	.25	.30	.38	.40	.42	.50	.60	.60	.60	.60	.62	.62
JUL 1	.24	.39	.47	.53	.55	.59	.74	.75	.78	.78	.78	.90
JUL 19	.30	.48	.49	.49	.50	.50	.50	.50	.50	.50	.50	.50
JUL 30	.25	.42	.57	.63	.86	1.10	1.21	1.49	1.66	1.86	2.05	2.26
AUG 1	.16	.30	.36	.44	.69	.88	.99	1.06	1.06	1.18	1.24	1.34
AUG 27	.32	.52	.65	.77	1.19	1.37	1.64	2.30	2.30	2.68	*2.72	2.98 *3.56
AUG 28	.16	.27	.38	.51	.66	.88	.98	1.26	1.54	1.62	1.80	1.90
SEP 11	.25	.28	.34	.39	.52	.66	.78	.92	1.06	1.12	1.18	1.20
SEP 12	.35	.50	.54	.55	.74	1.18	1.48	1.80	1.90	2.07	2.24	2.79
TRENTON U												
JUL 1	.24	.36	.42	.45	.45	.45	.46	.48	.49	.50	.50	.50
JUL 19	.16	.31	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
JUL 30	.29	.39	.42	.51	.58	.61	.66	.78	.82	.83	.97	1.40
AUG 27	.35	.70	.78	.93	1.03	1.15	1.25	1.35	1.65	1.85	2.15	2.30
AUG 28	.23	.40	.50	.60	.98	1.25	1.60	1.90	2.20	2.52	2.75	2.91
SEP 11	.45	.73	.92	.96	1.00	1.01	1.01	1.02	1.02	1.02	1.03	1.03

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
NEW JERSEY												
TRENTON U												
SEP 13	.26	.37	.41	.42	.46	.51	.63	.68	.76	.80	.85	.91
SEP 13	.22	.38	.48	.57	.85	1.09	1.34	1.41	1.42	1.42	1.42	1.47
NEW MEXICO												
ALBUQUERQUE												
AUG 17	.26	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
CLAYTON												
MAY 29	.35	.50	.55	.60	.63	.70	.74	.77	.79	.80	.83	.84
JUN 8	.25	.35	.37	.40	.53	.58	.75	.78	.78	1.04	1.04	1.04
JUN 30	.68	.88	.98	1.11	1.16	1.18	1.20	1.20	1.20	1.20	1.20	1.20
AUG 21	.25	.40	.47	.49	.85	.98	1.03	1.03	1.04	1.08	1.08	1.10
ROSWELL												
AUG 10	.30	.50	.55	.57	.58	.59	.62	.71	.72	.72	.72	.72
NEW YORK												
ALBANY												
JUN 21	.46	.75	.87	.96	.99	.99	.99	.99	.99	1.03	1.17	1.17
JUN 25	.34	.54	.60	.61	.64	.69	.75	.85	.89	.89	.89	.89
JUL 27	.26	.30	.30	.30	.31	.31	.31	.31	.31	.31	.31	.31
JUL 29	.45	.62	.68	.72	.77	.81	.84	.85	.86	.86	.87	.90
AUG 21	.27	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
AUG 28	.10	.20	.30	.36	.50	.72	1.00	1.24	1.57	1.79	1.98	2.06
BINGHAMTON												
MAY 20	.30	.38	.42	.46	.54	.58	.70	.73	.96	1.08	1.15	1.26
JUL 31	.32	.50	.56	.64	.75	.88	1.05	1.25	1.40	1.52	1.74	1.94
BUFFALO												
JUN 2	.24	.46	.51	.74	.91	1.11	1.30	1.43	1.46	1.46	1.47	1.50
JUN 13	.38	.63	.70	.90	1.09	1.18	1.25	1.30	1.30	1.30	1.30	1.30
JUL 24	.29	.58	.67	.80	.83	.86	1.00	1.04	1.08	1.12	1.22	1.35
AUG 22	.45	.75	.82	.96	1.10	1.16	1.22	1.24	1.27	1.27	1.28	1.28
AUG 26	.23	.32	.33	.34	.36	.37	.50	.56	.58	.58	.58	.71
AUG 27	.25	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35	.35
NEW YORK CENT PK												
JUN 21	.23	.41	.57	.62	.63	.64	.65	.70	.71	.71	.71	.71
JUL 1	.25	.36	.38	.44	.65	.68	.71	.77	.80	.82	.85	1.10
JUL 30	.24	.36	.48	.56	.66	.91	1.04	1.27	1.41	1.52	1.71	2.00
AUG 1	.19	.23	.38	.43	.52	.62	.77	.79	.83	.87	.92	.96
AUG 27	.37	.43	.47	.55	.61	.79	1.01	1.30	1.61	1.72	1.86	1.95
AUG 28	.22	.32	.46	.52	.66	.87	1.11	1.27	1.34	1.43	1.48	1.59
SEP 12	.32	.40	.41	.41	.42	.75	.80	.90	.90	.90	.90	.90
SEP 14	.21	.30	.37	.43	.51	.65	.78	1.02	1.11	1.38	1.52	1.75
NEW YORK (JFK)												
JUN 13	.40	.66	.70	.74	.76	.89	.90	.90	.91	.91	.91	.92
NEW YORK LA GUARDIA												
JUN 21	.45	.55	.61	.62	.63	.65	.66	.69	.71	.74	.74	.74
JUL 26	.32	.35	.36	.37	.41	.47	.47	.47	.47	.47	.47	.47
JUL 30	.39	.68	.77	.94	1.17	1.32	1.37	1.78	2.23	2.37	2.42	2.51
AUG 1	.27	.41	.47	.48	.51	.59	.60	.86	1.01	1.06	1.09	1.39
AUG 27	.51	.90	*1.16	1.28	*1.50	2.00	*2.29	2.39	2.43	*2.91	3.13	*3.20
SEP 12	.19	.35	.44	.45	.56	.61	.68	.84	.89	.91	.92	.92
ROCHESTER												
JUN 13	.25	.30	.36	.39	.48	.70	.76	.76	.76	.76	.76	.76
JUL 13	.40	.65	.67	.72	.75	.83	1.08	1.37	1.53	1.86	1.98	1.98
SYRACUSE												
JUN 13	.26	.42	.53	.56	.64	.67	.68	.76	.76	.76	.79	.99
JUL 13	.44	.54	.76	.76	.84	.90	.96	.97	1.00	1.03	1.05	1.05
JUL 24	.44	.68	1.01	1.20	1.38	1.51	1.73	1.74	1.90	1.95	2.11	2.11
JUL 26	.22	.34	.52	.64	.90	1.24	1.34	1.34	1.36	1.36	1.36	1.36
AUG 20	.27	.39	.40	.40	.40	.40	.40	.40	.40	.40	.40	.40
NORTH CAROLINA												
ASHEVILLE												
JUN 3	.23	.40	.49	.51	.56	.57	.57	.57	.57	.57	.57	.57
JUN 15	.55	.73	.74	.75	.75	.75	.75	.75	.75	.75	.75	.75
JUN 18	.24	.35	.40	.41	.43	.44	.45	.45	.45	.45	.45	.45
JUN 21	.38	.64	.86	.92	1.03	1.27	1.42	1.50	1.50	1.50	1.50	1.50
JUL 29	.35	.45	.54	.56	.56	.56	.56	.56	.56	.56	.56	.59
AUG 11	.22	.43	.46	.51	.57	.60	.64	.64	.64	.64	.64	.64
SEP 24	.36	.46	.52	.52	.52	.53	.75	.94	.95	.95	.95	.95
OCT 5	.43	.56	.58	.60	.60	.60	.61	.61	.61	.61	.61	.61
OCT 15	.25	.41	.44	.49	.59	.83	.88	.97	.98	1.14	1.21	1.31
OCT 15	.25	.40	.44	.49	.59	.69	.72	.75	.75	.76	.76	.76
CAPE HATTERAS R												
JAN 24	.13	.25	.30	.40	.51	.60	.63	.80	.86	.94	1.02	1.10
FEB 13	.22	.39	.41	.44	.49	.56	.64	.70	.81	.95	.97	1.04
MAY 21	.25	.40	.50	.60	1.00	1.21	1.50	1.52	1.65	1.90	2.11	2.20
JUN 5	.27	.35	.37	.40	.42	.43	.44	.48	.60	.60	.60	.60
JUL 4	.40	.60	.95	1.02	1.07	1.07	1.07	1.07	1.07	1.08	1.08	1.09
JUL 16	.23	.30	.38	.53	.61	.64	.64	.64	.64	.68	.70	.71
JUL 23	.16	.31	.32	.32	.32	.39	.41	.41	.41	.41	.41	.41
AUG 5	.20	.30	.40	.52	.70	.86	.93	.93	.94	.94	.94	.94
AUG 18	.30	.55	.70	.75	.75	.75	.93	1.01	1.05	1.08	1.15	1.25
AUG 26	.40	.75	.90	1.05	1.19	1.23	1.25	1.38	1.46	1.46	1.46	1.46
AUG 27	.26	.37	.45	.48	.62	.70	.81	.90	1.02	1.09	1.12	1.18
SEP 30	.35	.60	.70	.95	1.05	1.37	1.85	2.05	2.38	2.65	3.00	3.20
OCT 1	.35	.47	.63	.83	.91	.95	.95	1.00	1.45	1.46	1.75	1.90
OCT 6	.27	.36	.39	.43	.46	.48	.48	.48	.48	.48	.48	.48
OCT 10	.34	.49	.58	.70	.78	.84	.88	.92	1.00	1.03	1.20	1.60
OCT 10	.28	.45	.53	.60	.65	.70	.76	.80	.85	.88	.98	1.10
CHARLOTTE												
JAN 5	.20	.30	.32	.34	.37	.39	.40	.43	.44	.46	.49	.51
APR 28	.27	.47	.51	.53	.55	.56	.56	.56	.56	.56	.56	.57
MAY 12	.29	.40	.43	.48	.58	.68	.83	.95	1.06	1.11	1.28	1.39
JUN 20	.21	.26	.32	.33	.57	.61	.61	.61	.61	.61	.61	.61
JUN 21	.19	.33	.38	.45	.51	.57	.62	.62	.62	.62	.62	.62
JUN 23	.25	.43	.47	.55	.79	.90	.93	.94	.94	.94	.94	.94
JUL 9	.33	.47	.52	.61	.71	.75	.77	.79	.84	.89	.94	.97
JUL 14	.25	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26	.26

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
NORTH CAROLINA												
CHARLOTTE												
JUL 24	.19	.30	.31	.33	.35	.37	.40	.43	.46	.46	.49	.51
JUL 29	.24	.35	.36	.39	.39	.39	.40	.41	.42	.42	.42	.44
AUG 1	.30	.31	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32
SEP 18	.21	.31	.32	.35	.38	.40	.42	.42	.44	.44	.44	.44
OCT 16	.36	.62	.74	.82	1.02	1.13	1.26	1.27	1.28	1.33	1.40	1.50
NOV 3	.30	.34	.35	.37	.44	.48	.55	.57	.61	.63	.63	.63
GREENSBORO												
MAY 13	.32	.43	.49	.56	.64	.88	1.25	1.13	1.21	1.26	1.32	1.38
JUN 29	.31	.40	.43	.44	.46	.48	.50	.51	.51	.51	.51	.51
JUN 30	.25	.32	.36	.37	.37	.37	.37	.37	.37	.37	.37	.37
JUL 9	.28	.41	.48	.53	.57	.59	.62	.63	.68	.74	.83	.87
JUL 27	.40	.73	.96	1.05	1.23	1.32	1.35	1.35	1.35	1.35	1.35	1.35
AUG 11	.27	.41	.54	.65	.69	.70	.70	.81	.82	.82	.82	.82
AUG 22	.18	.31	.36	.37	.38	.39	.41	.45	.53	.57	.59	.59
SEP 12	.24	.43	.60	.78	.97	1.02	1.03	1.04	1.04	1.04	1.04	1.04
SEP 18	.25	.44	.55	.63	.65	.67	.70	.72	.74	.75	.77	.79
RALEIGH												
JAN 5	.21	.30	.45	.58	.70	.88	1.03	1.09	1.12	1.17	1.19	1.28
MAY 13	.25	.35	.45	.54	.63	.66	.71	.82	.88	1.00	1.05	1.05
JUN 16	.25	.26	.27	.33	.35	.38	.38	.38	.38	.38	.38	.38
JUN 27	.27	.35	.40	.47	.50	.50	.50	.50	.50	.50	.50	.50
JUN 29	.35	.60	.70	.82	1.02	1.10	1.13	1.13	1.13	1.13	1.13	1.13
JUN 30	.23	.33	.34	.35	.35	.35	.35	.35	.35	.35	.35	.35
JUL 6	.27	.46	.62	.76	.80	.86	.90	.90	.90	.90	.92	.98
JUL 9	.35	.50	.63	.82	1.07	1.28	1.35	1.41	1.42	1.43	1.44	1.45
JUL 29	.23	.31	.32	.32	.32	.32	.32	.32	.32	.32	.32	.38
AUG 4	.21	.36	.43	.50	.70	.80	.90	1.13	1.18	1.19	1.19	1.19
AUG 15	.18	.35	.44	.50	.58	.61	.61	.61	.61	.61	.61	.86
SEP 12	.30	.40	.55	.61	.85	1.05	1.25	1.37	1.50	1.46	1.55	1.65
DEC 12	.37	.42	.42	.42	.43	.45	.47	.47	.47	.47	.47	.47
WILMINGTON												
FEB 13	.17	.28	.31	.42	.48	.55	.63	.67	.75	.82	.83	.83
MAY 15	.16	.30	.33	.42	.48	.50	.54	.66	.67	.68	.68	.70
JUN 16	.35	.60	.71	.77	.98	1.12	1.23	1.39	1.48	1.48	1.57	1.72
JUN 20	.35	.51	.63	.85	1.20	1.32	1.43	1.46	1.47	1.47	1.47	1.47
JUN 24	.34	.58	.60	.78	.93	.95	.96	.96	.96	.96	.96	.96
JUL 8	.29	.42	.48	.51	.62	.64	.65	.65	.65	.65	.66	.66
JUL 26	.29	.48	.55	.69	.73	.77	.78	.78	.78	.79	.79	.79
JUL 27	.35	.64	.69	.85	.95	.97	.97	.97	.97	.97	.97	.97
AUG 16	.32	.46	.49	.60	.68	.75	.81	.83	.83	.83	.83	.83
AUG 17	.30	.39	.39	.42	.46	.59	.70	.76	.82	.86	1.02	1.06
AUG 23	.22	.32	.32	.45	.47	.50	.52	.52	.53	.53	.53	.53
AUG 26	.40	.55	.65	.80	.97	1.08	1.13	1.20	1.24	1.25	1.27	1.27
AUG 27	.34	.41	.46	.46	.48	.48	.51	.52	.54	.54	.55	.58
AUG 27	.18	.28	.32	.41	.53	.61	.71	.79	.92	.98	.99	.99
SEP 12	.45	.55	.56	.57	.73	.80	.90	1.13	1.26	1.28	1.29	1.30
OCT 10	.34	.40	.43	.44	.55	.60	.64	.66	.68	.69	.76	.79
OCT 24	.30	.41	.42	.43	.45	.45	.46	.49	.52	.54	.55	.55
NOV 3	.35	.41	.43	.50	.53	.53	.53	.56	.63	.94	.95	1.02
NORTH DAKOTA												
BISMARCK												
JUN 4	.25	.30	.37	.48	.48	.48	.48	.46	.48	.48	.48	.48
JUN 26	.22	.35	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
JUL 12	.20	.34	.40	.49	.56	.70	.74	.75	.75	.76	.76	.77
OCT 17	.18	.29	.39	.51	.62	.66	.70	.75	.78	.78	.78	.78
FARGO												
JUL 7	.40	.58	.60	.62	.62	.62	.62	.62	.62	.62	.62	.62
JUL 12	.18	.32	.38	.46	.64	.66	.70	.73	.75	.75	.75	.75
SEP 3	.18	.34	.36	.42	.64	.88	.98	1.17	1.40	1.72	1.97	2.09
SEP 30	.25	.49	.53	.59	.73	.79	.88	.89	.90	.90	.92	.92
OCT 16	.21	.37	.39	.48	.55	.62	.67	.74	.99	1.07	1.20	1.24
WILLISTON												
JUN 11	.26	.32	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUN 23	.14	.24	.34	.48	.62	.75	.83	.86	.86	.86	.86	.86
JUL 9	.45	.75	.80	.85	.93	.93	.93	.93	.93	.93	.93	.93
OHIO												
AKRON												
JUN 4	.56	.90	1.06	1.15	1.23	1.23	1.26	1.26	1.26	1.26	1.26	1.26
JUN 29	.38	.64	.81	.99	1.17	1.30	1.64	1.86	1.87	1.87	1.87	1.87
AUG 26	.42	.61	.74	.99	1.46	1.78	2.19	2.22	2.36	2.36	2.37	2.38
CINCINNATI OBS												
APR 27	.38	.55	.62	.65	.65	.65	.65	.65	.65	.65	.66	.70
JUN 14	.15	.27	.35	.45	.53	.56	.58	.58	.58	.58	.58	.58
JUL 10	.18	.30	.46	.56	.71	.79	.79	.79	.79	.79	.79	.79
AUG 25	.33	.48	.49	.49	.50	.51	.68	.70	.71	.79	.81	.81
SEP 2	.23	.44	.62	.80	1.09	1.57	2.06	2.47	2.56	2.63	2.72	2.81
SEP 3	.22	.40	.56	.70	.87	.95	1.14	1.34	1.34	1.37	1.49	1.62
SEP 26	.24	.32	.36	.36	.40	.68	.73	.75	.77	.88	.88	.89
MAR 31						NONE						
CLEVELAND												
MAY 24	.30	.40	.41	.42	.52	.53	.60	.64	.69	.69	.69	.76
JUN 5	.26	.30	.33	.38	.40	.40	.40	.40	.40	.40	.40	.40
JUN 7	.23	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUN 20	.18	.32	.41	.51	.69	.81	.93	1.00	1.04	1.04	1.38	1.43
SEP 4	.25	.43	.44	.44	.46	.51	.52	.53	.53	.54	.54	.54
COLUMBUS												
JUN 13	.26	.46	.68	.90	1.24	1.28	1.28	1.28	1.28	1.28	1.28	1.28
JUN 25	.14	.21	.34	.41	.52	.57	.57	.57	.57	.68	.87	.88
JUL 15	.27	.45	.47	.48	.48	.48	.48	.48	.48	.48	.48	.48
JUL 24	.28	.43	.52	.56	.60	.61	.61	.61	.62	.64	.66	.70
DEC 30	.26	.40	.47	.48	.48	.60	.75	.77	.80	.81	.85	.95
DAYTON												
JUN 26	.25	.45	.53	.65	.75	.90	1.24	1.29	1.31	1.32	1.37	1.61
AUG 3	.25	.31	.40	.52	.67	.77	.82	.98	1.16	1.22	1.32	1.32
AUG 22	.40	.60	.70	.68	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
SEP 3	.17	.33	.36	.41	.41	.41	.51	.60	.65	.66	.78	.95
SEP 6	.42	.63	.66	.71	.72	.73	.75	.77	.79	.79	.79	.79

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
OHIO												
MANSFIELD												
JUL 26	.44	.49	.51	.51	.51	.51	.51	.5	.51	.51	.51	.51
AUG 26	.30	.54	.59	.63	.66	.75	.87	.92	.97	1.04	1.04	1.04
TOLEDO												
JUN 11	.23	.42	.45	.52	.60	.65	.67	.68	.71	.71	.72	.72
YOUNGSTOWN												
JUN 5	.30	.50	.80	.83	.85	.85	.85	.85	.85	.85	.85	.85
JUL 23	.35	.68	.75	.79	.79	.79	.79	.79	.79	.79	.79	.79
AUG 20	.20	.32	.40	.47	.65	.73	.80	.99	1.23	1.25	1.25	1.25
SEP 27	.23	.33	.44	.53	.53	.54	.54	.54	.54	.54	.54	.54
OKLAHOMA												
OKLAHOMA CITY												
MAY 23	.26	.42	.46	.48	.51	.52	.55	.60	.60	.60	.60	.60
JUN 2	.36	.67	.82	.97	1.18	1.34	1.43	1.44	1.45	1.45	1.45	1.45
JUN 7	.16	.27	.36	.46	.53	.61	.68	.73	.76	.77	.77	.77
JUL 1	.38	.52	.53	.54	.54	.54	.54	.54	.54	.54	.54	.54
JUL 23	.30	.44	.47	.50	.60	.66	.70	.70	.70	.70	.70	.70
AUG 14	.20	.35	.45	.55	.81	.96	1.04	1.07	1.08	1.08	1.08	1.08
TULSA												
JAN 3	.28	.38	.43	.46	.50	.55	.66	.72	.82	.88	.93	.98
FEB 4	.25	.32	.35	.40	.56	.72	.98	1.08	1.37	1.40	1.67	2.05
MAY 10	.35	.56	.65	.78	1.25	1.48	1.58	1.58	1.58	1.58	1.58	1.58
MAY 18	.25	.47	.53	.76	.80	.81	.88	1.08	1.10	1.10	1.10	1.10
MAY 22	.40	.55	.57	.65	.71	.73	.84	.86	.87	.87	.98	1.14
MAY 23	.20	.33	.36	.36	.36	.36	.37	.52	.56	.56	.56	.56
MAY 26	.45	.85	1.00	1.22	1.34	1.39	1.40	1.45	1.52	1.54	1.54	1.54
JUN 2	.16	.32	.35	.50	.69	.78	.83	.85	.88	.94	1.07	1.18
JUN 7	.31	.39	.40	.43	.43	.43	.43	.48	.50	.50	.50	.50
JUL 28	.32	.48	.58	.75	.98	.99	1.00	1.02	1.03	1.03	1.04	1.04
AUG 7	.30	.43	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
AUG 22	.16	.30	.36	.42	.54	.62	.66	.90	.98	1.05	1.06	1.12
SEP 4	.62	1.08	1.18	1.43	1.78	2.18	2.29	2.43	2.53	2.73	2.87	2.96
SEP 6	.60	1.18	1.24	1.50	2.11	2.40	2.75	2.76	3.03	3.04	3.06	3.09
SEP 6	.28	.44	.48	.58	.62	.64	.65	.65	.66	.83	.95	.96
SEP 16	.43	.85	1.06	1.30	2.11	2.20	2.91	3.51	4.03	4.16	4.82	4.95
OCT 18	.33	.58	.63	.78	.81	.83	.84	.85	.89	1.07	1.12	1.13
OCT 20	.35	.53	.60	.67	.90	1.03	1.20	1.47	1.65	1.75	2.05	2.20
OCT 20	.25	.32	.37	.46	.48	.48	.50	.61	.67	.67	.67	.67
DEC 14	.27	.37	.42	.58	.83	.98	1.13	1.27	1.40	1.61	1.88	1.99
DEC 29	.41	.44	.45	.47	.48	.49	.51	.52	.52	.52	.53	.54
OREGON												
ASTORIA						NONE						
BURNS U												
MAY 3	.28	.30	.31	.31	.31	.33	.34	.34	.34	.35	.38	.38
JUL 21	.30	.35	.40	.45	.50	.65	.80	.85	.86	.96	.99	1.00
EUGENE						NONE						
MEACHAM						NONE						
MEDFORD						NONE						
PENDLETON						NONE						
PORTLAND												
AUG 22	.34	.39	.42	.44	.46	.48	.52	.53	.53	.53	.53	.55
PORTLAND U						NONE						
SALEM						NONE						
SEXTON SUMMIT R						NONE						
PACIFIC AREA												
GUAM												
JAN 23	.19	.35	.49	.60	.73	.79	.80	.87	.88	.88	.92	.92
MAR 2	.15	.24	.35	.43	.61	.79	.94	.99	1.05	1.07	1.08	1.09
MAR 5	.14	.27	.39	.50	.67	.86	.98	1.21	1.36	1.47	1.51	1.54
MAR 17	.20	.31	.43	.52	.58	.64	.66	.68	.83	1.10	1.27	1.27
MAR 19	.29	.32	.33	.33	.34	.34	.34	.34	.34	.34	.34	.34
MAR 25	.30	.48	.56	.60	.77	.90	.97	1.15	1.16	1.16	1.16	1.63
APR 1	.29	.49	.62	.78	.89	.92	.93	.93	.93	.93	.93	.94
MAY 2	.23	.39	.47	.48	.48	.48	.48	.50	.51	.51	.51	.51
MAY 2	.20	.31	.32	.32	.33	.37	.51	.54	.55	.58	.58	.58
MAY 3	.28	.51	.77	.98	1.42	1.60	1.89	2.25	2.59	2.83	3.66	4.00
MAY 3	.23	.40	.48	.52	.64	.95	1.15	1.27	1.33	1.52	1.82	1.92
MAY 4	.37	.42	.50	.53	.54	.62	.86	.90	.91	.92	.97	.97
MAY 4	.33	.39	.40	.41	.49	.52	.70	.90	1.08	1.18	1.30	1.41
MAY 7	.33	.55	.76	.98	1.37	1.85	2.17	2.34	2.40	2.44	2.44	2.44
JUL 20	.36	.58	.74	.76	.78	.81	.96	1.00	1.03	1.14	1.25	1.31
JUL 20	.26	.47	.60	.75	.93	1.09	1.31	1.54	1.64	1.87	2.01	2.02
JUL 20	.37	.45	.48	.50	.53	.57	.59	.62	.63	.69	.87	1.27
JUL 23	.23	.32	.48	.48	.48	.48	.48	.49	.55	.55	.55	.55
JUL 25	.44	.66	.79	.93	1.33	1.89	1.85	1.94	1.95	1.95	2.05	2.19
AUG 4	.25	.38	.56	.71	1.02	1.18	1.26	1.44	1.81	1.88	2.44	3.00
AUG 4	.27	.46	.58	.76	1.07	1.22	1.32	1.37	1.37	1.42	1.57	1.74
AUG 5	.19	.34	.45	.53	.63	.79	.88	.97	1.13	1.16	1.22	1.29
AUG 5	.14	.24	.29	.36	.49	.67	.73	.77	.85	1.05	1.29	1.30
AUG 8	.27	.36	.42	.52	.67	.77	.78	.78	.98	.99	.99	.99
AUG 9	.49	.65	.79	.82	.82	.82	.82	.82	.82	.82	.82	.83
AUG 24	.28	.41	.55	.63	.64	.64	.64	.64	.64	.64	.64	.64
AUG 28	.27	.37	.55	.57	.61	.62	.62	.62	.62	.62	.62	.62
AUG 29	.31	.50	.58	.76	.89	.89	1.16	1.34	1.40	1.43	1.43	1.43
SEP 4	.20	.33	.38	.40	.41	.66	.80	.90	.92	.93	.93	.93
SEP 6	.25	.36	.38	.39	.39	.39	.40	.42	.45	.45	.45	.45
SEP 20	.48	.80	.98	1.05	1.10	1.15	1.25	1.31	1.34	1.34	1.35	1.35
SEP 25	.26	.30	.30	.31	.32	.33	.33	.33	.33	.33	.33	.33
OCT 5	.23	.27	.30	.45	.49	.49	.49	.49	.49	.49	.49	.49
OCT 6	.16	.23	.37	.46	.49	.49	.49	.49	.49	.49	.52	.52
OCT 7	.19	.30	.37	.37	.39	.40	.41	.42	.42	.42	.57	.61
OCT 8	.22	.28	.36	.41	.45	.58	.65	.71	.76	.84	.90	.91
OCT 21	.34	.57	.61	.65	.65	.65	.66	.66	.66	.66	.66	.66
NOV 20	.20	.29	.41	.44	.46	.49	.53	.53	.60	.60	.64	.64

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA												
JOHNSTON ISLAND												
MAR 22	.29	.49	.59	.61	.61	.61	.61	.62	.71	.71	.73	.75
MAR 27	.32	.50	.64	.73	.81	.84	.86	.88	.88	.88	.88	.88
SEP 2	.30	.56	.75	.93	1.13	1.46	1.54	1.69	1.70	1.70	1.85	2.16
KOROR												
JAN 6	.37	.56	.72	.89	1.19	1.37	1.51	1.83	2.06	2.12	2.16	2.16
JAN 9	.13	.23	.30	.38	.57	.79	.96	1.07	1.15	1.23	1.26	1.46
JAN 10	.20	.30	.40	.48	.57	.66	.72	1.02	1.22	1.30	1.41	1.60
JAN 22	.34	.60	.71	.71	.71	.71	.71	.91	.91	.91	.91	.95
JAN 23	.36	.55	.65	.68	.70	.71	.71	.73	.79	.79	.79	.79
JAN 30	.27	.41	.58	.64	.68	.68	.86	.87	.87	.87	.87	.87
FEB 1	.20	.29	.42	.53	.55	.56	.56	.56	.56	.56	.56	.56
FEB 9	.24	.36	.44	.47	.47	.47	.48	.48	.48	.48	.48	.48
FEB 14	.51	.93*	1.33	1.61	1.84	1.84	1.86	1.86	2.37	3.15	3.86*	4.33
FEB 17	.22	.35	.38	.39	.39	.39	.39	.39	.39	.39	.39	.39
MAR 5	.21	.40	.57	.71	.88	.99	1.19	1.31	1.37	1.54	1.57	1.59
MAR 6	.13	.23	.32	.40	.54	.77	.93	1.14	1.24	1.38	1.49	1.56
MAR 13	.53*	1.00	1.12	1.13	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.18
MAR 13	.42	.51	.55	.55	.55	.55	.55	.55	.55	.59	.59	.59
MAR 20	.17	.24	.37	.39	.39	.40	.40	.40	.40	.40	.40	.40
MAR 25	.21	.34	.47	.53	.63	.71	.73	.73	.73	.73	.73	.73
MAR 31	.24	.33	.39	.42	.43	.49	.50	.52	.52	.53	.55	.55
APR 3	.28	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
APR 18	.20	.27	.34	.38	.44	.51	.81	.88	.88	.88	.88	.88
APR 24	.31	.53	.79	.95	1.33	1.56	1.74	1.77	1.81	1.86	1.95	1.96
APR 28	.22	.35	.46	.56	.66	.73	.75	.80	1.07	1.11	1.14	1.30
MAY 10	.26	.36	.39	.40	.41	.43	.45	.47	.49	.54	.63	.65
MAY 21	.43	.78	.87	.94	.98	1.03	1.06	1.19	1.27	1.28	1.39	1.41
MAY 28	.20	.31	.43	.50	.74	.96	1.22	1.65	1.90	2.00	2.43	2.62
MAY 28	.33	.58	.86	1.15	1.56	2.02	2.59	3.15	3.30	3.45	3.69	4.12
MAY 30	.20	.38	.51	.56	.60	.60	.60	.61	.61	.61	.61	.61
JUN 3	.33	.46	.50	.51	.54	.54	.66	.69	.70	.71	.74	.79
JUN 5	.29	.40	.48	.49	.50	.50	.50	.51	.51	.51	.51	.51
JUN 8	.23	.32	.35	.38	.49	.52	.53	.56	.60	.61	.62	.62
JUN 11	.34	.60	.83	1.11	1.62	2.26	2.46	2.54	2.60	2.81	3.21	3.31
JUN 15	.26	.42	.61	.77	.87	.95	.99	1.00	1.01	1.02	1.02	1.02
JUN 23	.18	.32	.41	.50	.58	.75	.83	.93	1.02	1.09	1.29	1.41
JUN 27	.17	.30	.46	.59	.72	.81	.81	.81	.81	.81	.81	.81
JUL 5	.16	.29	.38	.38	.38	.38	.38	.45	.45	.45	.45	.45
JUL 7	.23	.37	.47	.59	.69	1.02	1.15	1.15	1.15	1.16	1.21	1.30
JUL 11	.25	.42	.50	.52	.54	.56	.62	.79	.81	.83	.84	1.03
JUL 12	.44	.73	.85	.88	.90	1.01	1.04	1.12	1.14	1.35	1.62	1.73
JUL 12	.31	.42	.48	.51	.54	.56	.56	.56	.56	.56	.56	.57
JUL 27	.36	.52	.60	.74	.89	.93	.96	.98	1.00	1.01	1.02	1.07
AUG 2	.25	.48	.66	.75	.82	.83	.84	.84	.84	.84	.85	.85
AUG 19	.42	.80	1.08	1.36	1.89	2.05	2.22	2.40	2.49	2.63	2.86	2.89
AUG 29	.31	.41	.58	.67	.71	.86	.94	.98	.98	.98	.98	1.00
SEP 18	.15	.28	.40	.46	.62	.71	.74	.79	.81	.81	.81	.81
SEP 19	.19	.27	.34	.40	.49	.51	.51	.51	.51	.51	.51	.51
SEP 19	.17	.28	.36	.41	.50	.53	.53	.53	.53	.53	.53	.53
SEP 22	.22	.35	.52	.64	.82	.93	.93	.93	.93	.93	.93	.93
SEP 25	.37	.69	1.05	1.29	1.59	1.70	1.74	1.80	1.88	1.90	1.90	1.90
SEP 25	.23	.33	.43	.53	.68	.99	1.11	1.17	1.17	1.17	1.17	1.17
SEP 27	.31	.51	.64	.70	.73	.77	.80	.83	.84	.90	.95	1.09
SEP 28	* .57	.90	1.28	1.48	1.58	1.60	1.68	1.85	1.86	1.86	1.91	1.91
SEP 30	.34	.49	.52	.54	.56	.56	.56	.56	.56	.56	.56	.56
SEP 30	.26	.33	.40	.43	.44	.44	.44	.44	.44	.44	.44	.44
OCT 1	.20	.28	.35	.43	.65	.86	.88	.95	.98	.98	1.39	1.39
OCT 14	.26	.41	.56	.77	1.02	1.10	1.40	1.58	1.58	1.59	1.59	1.59
OCT 17	.35	.60	.76	.95	1.33	1.48	1.48	1.50	1.50	1.50	1.51	1.65
OCT 17	.26	.41	.55	.59	.64	.64	.64	.72	.72	.72	.73	.73
OCT 18	.37	.50	.55	.55	.56	.56	.56	.56	.56	.56	.56	.56
OCT 18	.26	.51	.75	.93	1.16	1.22	1.23	1.24	1.24	1.24	1.24	1.25
OCT 26	.26	.38	.40	.41	.45	.45	.47	.62	.66	.68	.71	.71
OCT 28	.24	.41	.57	.70	.77	.80	.82	.82	.82	.82	.82	.82
NOV 4	.35	.62	.66	.68	.71	.77	.77	.77	.77	.77	.77	.77
NOV 7	.30	.54	.76	.77	.77	.77	.77	.77	.77	.77	.81	.83
NOV 17	.23	.33	.39	.54	.62	.63	.74	.88	.99	1.35	1.44	1.71
NOV 30	.30	.37	.43	.43	.43	.43	.43	.43	.43	.43	.43	.43
DEC 9	.20	.29	.32	.39	.61	.62	.62	.63	.66	.67	.67	.69
DEC 19	.38	.55	.62	.62	.62	.62	.63	.66	.66	.66	.67	.67
DEC 19	.36	.61	.69	.70	.73	.73	.73	.73	.73	.74	.98	1.02
DEC 25	.33	.38	.38	.38	.38	.38	.38	.38	.38	.42	.42	.42
DEC 27	.18	.34	.40	.49	.70	.81	.98	1.16	1.36	1.77	1.84	1.88
MAJURO												
JAN 6	.22	.38	.52	.58	.67	.80	.97	1.09	1.12	1.13	1.24	1.26
JAN 6	.29	.39	.46	.53	.55	.56	.56	.57	.57	.57	.60	.60
FEB 8	.17	.28	.38	.42	.44	.44	.44	.69	.70	.77	.80	.89
FEB 8	.22	.32	.36	.41	.71	.75	.76	.79	.82	.82	.82	.82
MAR 30	* .45	.76	1.04	1.25	1.53	1.63	1.68	1.82	1.83	1.85	1.87	1.87
MAR 31	.21	.27	.35	.39	.52	.68	.75	.76	.76	.76	.76	1.02
APR 2	.21	.38	.50	.56	.68	.79	.88	.94	.98	1.02	1.09	1.17
APR 3	.23	.39	.55	.59	.70	.75	.78	.80	.82	.83	.83	.84
APR 6	.29	.50	.70	.88	1.15	1.32	1.64	1.94	2.16	2.55	2.64	2.64
APR 7	.25	.32	.33	.35	.35	.35	.36	.64	.69	.69	.69	.69
APR 7	.34	.36	.36	.36	.38	.50	.50	.50	.50	.50	.50	.50
APR 7	.28	.44	.50	.52	.52	.52	.52	.52	.52	.52	.52	.52
APR 11	.18	.31	.41	.55	.70	.78	.85	1.18	1.31	1.37	1.40	1.40
APR 13	.32	.56	.76	.82	.90	1.12	1.50	1.84	2.11	2.52	3.27	3.66
APR 16	.29	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31
APR 16	.41	.73	.91	.93	.95	1.29	1.33	1.37	1.45	1.71	1.71	1.71
APR 18	.22	.31	.38	.43	.45	.51	.58	.75	.95	1.00	1.08	1.12
APR 25	.16	.26	.35	.45	.65	.87	1.03	1.32	1.55	1.77	1.92	2.16
MAY 2	.31	.46	.50	.62	.63	.69	.74	.83	.85	.85	.85	.91
MAY 10	.18	.32	.39	.47	.73	1.03	1.16	1.25	1.38	1.44	1.82	1.93
MAY 12	.23	.39	.47	.50	.54	.54	.54	.54	.54	.63	.63	.65
MAY 15	.44	.86	1.07	1.19	1.28	1.34	1.38	1.44	1.51	1.57	1.64	1.65
MAY 16	.42	.67	.81	.93	.99	1.03	1.04	1.17	1.22	1.22	1.22	1.22
MAY 29	.15	.23	.31	.42	.47	.48	.48	.48	.48	.48	.48	.48
JUN 7	.17	.26	.35	.42	.48	.50	.52	.56	.59	.59	.59	.59
JUN 7	.32	.38	.47	.57	.66	.73	.93	.97	1.01	1.04	1.20	1.35
JUN 15	.33	.58	.75	.86	.99	1.03	1.05	1.06	1.09	1.12	1.18	1.21
JUN 17	.16	.30	.39	.53	.69	.86	.88	.91	.96	1.01	1.16	1.16
JUN 23	.21	.38	.52	.59	.61	.63	.64	.87	.90	.90	.91	.91
JUN 26	.23	.35	.35	.35	.37	.67	.72	.74	.75	.75	.76	.76
JUL 18	.22	.31	.38	.52	.75	1.00	1.01	1.20	1.24	1.25	1.25	1.25
JUL 22	.25	.46	.62	.73	1.02	1.51	1.64	1.97	2.10	2.50	3.01	3.47
AUG 6	.40	.57	.73	.81	1.04	1.06	1.06	1.06	1.08	1.16	1.16	1.16
AUG 10	.35	.66	.75	.80	.87	.93	.96	1.16	1.25	1.31	1.34	1.36
AUG 10	.22	.32	.51	.60	.79	.81	.89	.92	.98	1.07	1.11	1.11
AUG 20	.27	.49	.62	.75	.80	.84	.84	.86	.86	.87	.87	.87
AUG 21	.16	.27	.35	.38	.39	.40	.41	.41	.41	.41	.41	.41
AUG 22	.30	.44	.54	.65	.81	.95	1.01	1.05	1.06	1.23	1.25	1.27
AUG 23	.31	.35	.40	.41	.43	.44	.45	.76	.82	.85	1.15	1.20

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA												
MAJURO												
AUG 29	.20	.32	.39	.41	.42	.43	.44	.46	.56	.59	.59	.60
SEP 7	.24	.40	.52	.65	.78	.95	.95	.99	1.00	1.01	1.01	1.01
SEP 14	.15	.24	.34	.40	.55	.58	.58	.60	.60	.60	.60	.61
SEP 24	.25	.46	.59	.63	.73	.90	1.02	1.23	1.24	1.26	1.26	1.28
OCT 2	.14	.28	.39	.49	.65	.87	1.10	1.44	1.79	2.13	2.48	2.58
OCT 5	.12	.22	.31	.38	.50	.62	.67	.76	.86	.91	.93	.96
OCT 8	.15	.27	.38	.41	.46	.64	.64	.65	.65	.65	.65	.65
OCT 9	.25	.33	.38	.41	.47	.61	.67	.67	.67	.67	.68	.68
OCT 10	.17	.23	.36	.43	.46	.49	.49	.49	.49	.49	.49	.50
OCT 15	.31	.41	.47	.50	.61	.63	.64	.64	.64	.70	.71	.71
OCT 16	.36	.50	.54	.58	.64	.69	.74	.84	.88	.91	.94	.95
OCT 20	.34	.56	.70	.79	.85	.87	.88	.88	.88	.88	.88	.88
OCT 21	.16	.29	.35	.41	.42	.44	.44	.44	.44	.44	.45	.45
OCT 26	.32	.63	.94	1.11	1.33	1.66	1.86	1.93	1.96	1.96	1.96	1.98
OCT 31	.25	.39	.49	.56	.65	.76	.76	.76	.86	1.08	1.15	1.28
NOV 2	.23	.33	.40	.44	.53	.66	.72	.77	.81	.85	.92	.97
NOV 12	.25	.40	.62	.78	1.03	1.23	1.24	1.24	1.41	1.44	1.46	1.55
NOV 21	.29	.43	.58	.69	.82	.84	.85	.94	.96	.96	.96	.96
DEC 28	.23	.41	.50	.56	.64	.68	.74	.83	.85	.90	.99	1.24
DEC 28	.27	.49	.66	.78	.94	1.16	1.52	1.74	1.83	1.87	1.89	1.94
PAGO PAGO, A.S.												
JAN 15	.23	.36	.38	.38	.38	.38	.38	.38	.38	.38	.38	.38
JAN 18	.40	.79	.88	.96	1.06	1.06	1.09	1.16	1.48	1.51	1.53	1.60
JAN 20	.17	.31	.38	.39	.40	.41	.41	.41	.41	.45	.47	.47
JAN 21	.18	.30	.32	.32	.35	.37	.37	.38	.41	.46	.51	.51
JAN 22	.33	.55	.70	.87	1.12	1.19	1.22	1.23	1.23	1.23	1.23	1.23
JAN 26	.23	.39	.53	.57	.67	.75	.82	.87	.89	.90	.90	.95
JAN 27	.22	.33	.42	.45	.46	.52	.53	.53	.53	.53	.53	.53
FEB 1	.37	.62	.68	.70	.73	.92	.97	.99	.99	1.01	1.01	1.01
FEB 3	.23	.35	.44	.50	.65	.84	.92	.95	1.06	1.12	1.15	1.17
FEB 10	.29	.49	.57	.61	.65	.68	.70	.76	.86	.90	.91	.92
FEB 11	.22	.35	.53	.64	.81	.95	.96	.98	.99	.99	1.00	1.01
FEB 17	.15	.25	.35	.42	.50	.54	.58	.64	.71	.78	.79	.79
FEB 18	.13	.24	.35	.45	.52	.56	.57	.59	.60	.60	.60	.60
FEB 21	.29	.42	.53	.56	.62	.69	.71	.72	.72	.79	1.07	1.09
FEB 22	.28	.33	.33	.33	.33	.33	.33	.35	.43	.47	.47	.47
MAR 2	.20	.39	.50	.59	.69	.79	.83	.89	.91	.92	.94	.97
MAR 2	.33	.54	.60	.61	.63	.64	.64	.64	.66	.67	.67	.67
MAR 11	.18	.25	.34	.44	.51	.51	.56	.59	.63	.64	.64	.64
MAR 29	.18	.29	.38	.42	.47	.47	.47	.47	.47	.47	.47	.47
APR 2	.26	.42	.61	.81	1.10	1.56	1.84	1.95	2.14	2.59	2.76	3.32
APR 27	.33	.51	.56	.56	.56	.56	.56	.56	.56	.56	.56	.56
APR 30	.15	.25	.36	.47	.56	.61	.61	.61	.61	.61	.62	.62
MAY 6	.19	.28	.39	.46	.50	.52	.52	.52	.53	.53	.53	.53
MAY 7	.20	.32	.36	.37	.38	.38	.38	.38	.38	.38	.38	.38
MAY 26	.25	.41	.51	.58	.66	.70	.70	.70	.70	.70	.70	.70
JUN 5	.20	.35	.49	.64	.90	1.13	1.25	1.30	1.45	1.49	1.55	1.60
JUN 8	.23	.33	.53	.57	.58	.66	.71	.75	.75	.75	.75	.75
JUN 9	.20	.30	.42	.49	.56	.60	.60	.60	.69	.88	.90	.93
JUN 13	.26	.45	.64	.67	.69	.72	.72	.72	.72	.81	.81	.81
JUN 23	.30	.45	.57	.64	.66	.77	.84	.91	.91	.91	.95	.98
JUN 24	.37	.67	.93	1.14	1.36	1.57	1.75	1.86	1.88	1.91	1.97	1.99
JUL 17	.20	.30	.34	.35	.35	.38	.38	.46	.46	.47	.47	.47
AUG 6	.19	.22	.31	.38	.53	.62	.80	.97	1.06	1.16	1.17	1.23
AUG 7	.15	.25	.38	.45	.60	.75	.95	1.14	1.28	1.33	1.38	1.47
OCT 19	.25	.40	.58	.76	1.05	1.15	1.31	1.33	1.33	1.33	1.35	1.65
OCT 20	.17	.29	.38	.46	.61	.90	1.12	1.28	1.45	1.47	1.47	1.47
NOV 13	.35	.62	.84	.94	1.19	1.50	1.54	1.72	2.17	2.21	2.21	2.22
NOV 23	.25	.38	.42	.48	.66	.69	.70	.71	.76	.82	.85	.86
DEC 2	.31	.44	.59	.63	.65	.66	.66	.66	.66	.66	.66	.66
DEC 21	.25	.47	.57	.64	.67	.67	.67	.67	.70	.70	.70	.70
PONAPE												
JAN 1	.41	.59	.64	.65	.70	.70	.70	.71	.71	.79	.79	.81
JAN 1	.26	.40	.47	.54	.62	.74	.96	1.18	1.24	1.29	1.35	1.45
JAN 2	.29	.46	.55	.61	.61	.67	.67	.71	.90	.93	.98	1.13
JAN 3	.16	.29	.40	.48	.55	.71	.83	.90	.90	.90	.90	.90
JAN 7	.23	.35	.43	.52	.64	.79	.85	.87	.88	.94	1.26	1.66
JAN 7	.16	.28	.40	.46	.54	.64	.69	.73	.88	.96	1.06	1.11
JAN 9	.32	.38	.41	.41	.41	.41	.42	.59	.63	.63	.63	.65
JAN 18	.31	.38	.41	.55	.77	.79	.80	.80	.80	.83	1.12	1.32
FEB 16	.25	.36	.44	.45	.45	.45	.49	.49	.49	.49	.50	.50
FEB 21	.30	.47	.62	.68	.80	.86	1.07	1.08	1.08	1.08	1.08	1.08
FEB 24	.19	.29	.41	.50	.53	.57	.60	.60	.60	.60	.61	.68
FEB 26	.20	.32	.39	.49	.65	.73	.76	.80	.80	.88	.89	.90
FEB 27	.16	.29	.37	.45	.54	.74	.93	1.14	1.26	1.36	1.36	1.36
MAR 3	.25	.32	.35	.37	.42	.47	.52	.57	.59	.60	.62	.84
MAR 15	.31	.47	.61	.79	.91	.91	.94	1.08	1.08	1.08	1.29	1.29
MAR 15	.38	.70	.91	1.02	1.18	1.63	1.79	1.95	2.07	2.10	2.19	2.26
MAR 16	.29	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
MAR 22	.27	.42	.56	.74	.98	1.22	1.34	1.34	1.34	1.34	1.34	1.34
MAR 28	.19	.21	.33	.42	.60	.64	.64	.64	.68	.72	.72	.72
APR 6	.17	.28	.38	.51	.55	.55	.55	.55	.55	.55	.59	.61
APR 11	.19	.32	.47	.57	.69	.73	.74	.76	.78	.85	.85	.87
APR 23	.23	.38	.45	.46	.48	.49	.49	.49	.49	.49	.49	.49
APR 24	.48	.77	.96	1.29	1.71	1.95	1.98	2.01	2.06	2.06	2.09	2.12
APR 26	.22	.38	.44	.47	.58	.90	.93	1.13	1.16	1.21	1.21	1.23
APR 27	.34	.63	.90	1.19	1.73	2.26	2.56	2.69	2.71	2.75	2.81	2.85
MAY 3	.16	.27	.38	.40	.42	.46	.50	.51	.81	.81	.81	.81
MAY 3	.30	.53	.64	.76	.83	.94	.94	.95	1.14	1.34	1.39	1.39
MAY 5	.31	.61	.83	.97	.98	.99	1.02	1.20	1.20	1.20	1.45	1.45
MAY 10	.18	.27	.34	.37	.57	.60	.60	.60	.62	.69	.71	.72
MAY 14	.34	.52	.57	.57	.60	.60	.61	.61	.61	.61	.74	.82
MAY 23	.54*	.95	1.14	1.28	1.47	1.48	1.48	1.60	1.92	2.39	2.69	2.82
MAY 24	.33	.60	.68	.73	.87	.96	.96	.98	1.03	1.03	1.11	1.12
MAY 27	.20	.32	.36	.39	.41	.42	.42	.42	.42	.42	.42	.42
MAY 27	.24	.38	.53	.59	.64	.65	.74	.82	.83	.83	.83	.83
JUN 4	.26	.45	.59	.60	.60	.60	.60	.60	.60	.60	.98	1.00
JUN 5	.24	.31	.43	.56	.57	.57	.58	.58	.58	.58	.58	.58
JUN 7	.32	.55	.72	.89	1.04	1.18	1.20	1.68	1.90	1.96	2.11	2.48
JUN 8	.37	.50	.58	.58	.58	.58	.58	.95	.96	.96	.96	.96
JUN 8	.22	.39	.46	.48	.48	.48	.48	.48	.48	.48	.48	.50
JUN 10	.45	.70	.83	.86	1.02	1.02	1.19	1.19	1.19	1.23	1.58	1.75
JUN 13	.29	.42	.45	.46	.46	.46	.47	.49	.71	.79	.80	.80
JUN 19	.22	.38	.48	.55	.59	.59	.59	.59	.59	.59	.59	.59
JUN 21	.19	.27	.38	.43	.53	.59	.63	.65	.69	.69	.70	.70
JUN 22	.23	.42	.56	.68	.91	.93	1.26	1.26	1.26	1.26	1.26	1.26
JUN 25	.34	.34	.34	.35	.35	.35	.35	.35	.35	.35	.37	.37
JUN 26	.33	.38	.39	.46	.53	.53	.54	.55	.55	.55	.55	.55
JUN 30	.36	.60	.77	.91	1.05	1.32	1.41	1.42	1.42	1.42	1.46	1.55
JUL 6	.23	.36	.46	.54	.66	.70	.70	.97	1.26	1.40	1.50	1.79
JUL 7	.33	.49	.55	.56	.56	.56	.63	.70	.70	.70	.70	.71
JUL 10	.20	.32	.41	.41	.41	.41	.42	.43	.48	.48	.50	.57
JUL 12	.40	.63	.71	.80	.94	.99	.99	.99	.99	1.00	1.00	1.00

EXCESSIVE SHORT DURATION RAINFALL

Station and date		Maximum precipitation in inches (5 to 180 minutes)											
		5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA													
PONAPE													
JUL	14	.26	.35	.40	.45	.55	.71	.72	.72	.73	.73	.73	.73
JUL	14	.30	.58	.84	1.02	1.22	1.25	1.25	1.25	1.25	1.25	1.26	1.28
JUL	17	.16	.25	.33	.47	.48	.48	.50	.50	.55	.55	.57	.57
JUL	17	.37	.61	.95	1.17	1.52	2.01	2.46	2.93	3.78*	4.23	4.50*	4.76
JUL	22	.52*	1.03	1.16	1.20	1.27	1.43	1.52	1.72	1.76	1.76	1.79	1.79
JUL	27	.30	.39	.40	.45	.47	.50	.72	.72	.72	.84	1.19	1.39
JUL	31	.19	.29	.44	.49	.65	.81	.95	1.03	1.10	1.17	1.18	1.49
AUG	14	.45	.73	.97	1.08	1.29	1.50	1.58	1.58	1.58	1.58	1.58	1.58
AUG	14	.38	.51	.59	.68	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
AUG	15	.30	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
AUG	15	.24	.34	.40	.41	.41	.41	.41	.41	.41	.41	.41	.41
AUG	21	.31	.53	.72	.90	1.04	1.40	1.52	1.53	1.53	1.53	1.53	1.67
AUG	30	.39	.69	.99	1.22	1.45	1.67	1.73	1.88	1.97	2.05	2.23	2.39
SEP	2	.33	.50	.60	.64	.71	.71	.77	.91	1.05	1.05	1.05	1.05
SEP	7	.34	.58	.76	.84	.86	.86	.86	.86	.86	.86	.86	.86
SEP	20	.38	.55	.65	.66	.70	.70	.70	.70	.70	.70	.70	.70
OCT	2	.26	.48	.59	.76	.98	1.29	1.53	1.84	2.24	2.57	2.65	2.88
OCT	8	.25	.41	.49	.52	.64	.66	.66	.66	.66	.66	.67	.71
OCT	12	.39	.50	.53	.53	.53	.53	.55	.55	.55	.55	.73	.73
OCT	13	.29	.38	.41	.41	.42	.42	.42	.42	.42	.42	.42	.45
OCT	18	.38	.50	.64	.89	1.19	1.49	1.53	1.57	1.57	1.57	1.61	1.69
OCT	24	.21	.33	.43	.46	.54	.55	.55	.55	.56	.57	.57	.58
OCT	25	.31	.44	.53	.61	.76	.92	.93	.97	1.00	1.02	1.17	1.30
NOV	14	.33	.49	.57	.71	.77	.78	.89	.92	.93	.93	.95	1.20
NOV	27	.27	.32	.36	.40	.52	.53	.53	.60	.66	.72	1.07	1.20
DEC	25	.26	.36	.46	.47	.48	.51	.51	.51	.52	.52	.52	.52
TRUK													
JAN	4	.20	.31	.35	.41	.45	.45	.46	.56	.63	.63	.74	.76
JAN	5	.25	.40	.49	.56	.58	.60	.62	.64	.79	.84	.88	.90
JAN	6	.28	.39	.49	.52	.58	.66	.67	.68	.69	.69	.69	.71
JAN	18	.34	.52	.74	.91	1.04	1.10	1.22	1.22	1.22	1.22	1.22	1.22
JAN	19	.36	.48	.58	.63	.69	.72	.74	.76	.76	.77	.77	.77
FEB	3	.18	.28	.39	.39	.40	.40	.41	.47	.48	.48	.69	.77
FEB	4	.53	.99	1.06	1.08	1.09	1.09	1.09	1.09	1.09	1.10	1.53	1.56
MAR	2	.27	.30	.32	.32	.33	.33	.33	.33	.33	.34	.36	.36
MAR	13	.28	.39	.47	.53	.64	1.03	1.18	1.20	1.20	1.20	1.23	1.25
MAR	14	.37	.53	.56	.58	.60	.61	.62	.65	.66	.68	.83	.85
MAR	18	.22	.25	.31	.39	.55	.71	.81	.89	1.07	1.17	1.24	1.26
APR	7	.47	.61	.70	.81	1.03	1.31	1.37	1.38	1.38	1.38	1.38	1.39
APR	14	.37	.57	.68	.68	.68	.68	.84	.91	.91	.96	.97	.97
MAY	1	.26	.50	.60	.80	1.00	1.26	1.26	1.26	1.30	1.32	1.33	1.36
MAY	1	.37	.59	.71	.76	.79	1.09	1.15	1.33	1.51	1.56	1.65	1.82
MAY	5	.26	.39	.46	.56	.59	.60	.66	.67	.67	.71	.75	.76
MAY	14	.27	.33	.37	.39	.53	.54	.55	.58	.62	.62	.62	.62
MAY	31	.22	.30	.33	.33	.33	.33	.34	.34	.34	.34	.34	.34
JUN	3	.36	.52	.57	.63	.72	.82	.92	.97	.98	1.11	1.11	1.41
JUN	9	.19	.26	.34	.42	.55	.75	1.03	1.31	1.54	1.70	1.78	1.87
JUN	10	.20	.27	.42	.48	.56	.69	.79	.94	.96	.96	.97	.97
JUN	13	.37	.47	.54	.65	.70	.73	.74	.75	.82	.92	.95	.99
JUN	17	.41	.57	.73	.79	.92	1.33	1.45	1.52	1.56	1.57	1.58	1.63
JUN	20	.26	.37	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
JUN	25	.23	.31	.33	.34	.39	.39	.39	.39	.39	.39	.39	.39
JUN	30	.37	.57	.61	.61	.61	.62	.72	.72	.83	.84	.84	.84
JUL	4	.33	.33	.33	.33	.33	.45	.52	.58	.59	.59	.59	.74
JUL	5	.40	.53	.61	.64	.66	.69	.74	.76	.76	.76	.82	1.19
JUL	6	.29	.36	.41	.43	.44	.44	.44	.44	.59	.59	.59	.60
JUL	11	.26	.33	.35	.35	.35	.36	.36	.36	.36	.36	.36	.36
JUL	12	.28	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41	.41
JUL	12	.18	.33	.44	.46	.61	.76	.76	.76	.76	.77	.78	.79
JUL	27	.39	.59	.73	.83	1.05	1.19	1.21	1.22	1.22	1.22	1.22	1.22
JUL	29	.27	.42	.46	.48	.53	.61	.71	.82	.85	.88	.93	.94
AUG	1	.32	.36	.37	.38	.54	.59	.59	.59	.59	.59	.59	.59
AUG	6	.25	.33	.40	.45	.50	.57	.61	.61	.61	.64	.64	.64
AUG	6	.19	.26	.39	.52	.75	.95	1.17	1.28	1.34	1.39	1.48	1.52
AUG	9	.43	.61	.77	.89	.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SEP	3	.25	.33	.37	.43	.49	.66	.70	.70	.70	.70	.70	.70
SEP	11	.36	.47	.51	.53	.57	.62	.73	.79	.84	.90	.93	.93
SEP	12	.45	.58	.68	.74	.80	.85	.92	.95	.96	.98	.98	.98
SEP	18	.29	.40	.44	.45	.47	.47	.48	.51	.56	.56	.58	.59
SEP	18	.23	.30	.33	.34	.35	.36	.36	.38	.41	.44	.46	.46
SEP	20	.66	1.09	1.27	1.42	1.53	1.55	1.56	1.75	1.83	1.84	1.96	2.14
SEP	20	.33	.52	.77	.92	1.10	1.21	1.25	1.27	1.28	1.30	1.31	1.32
SEP	21	.18	.32	.38	.41	.58	.60	.64	.65	.66	.73	.91	.98
SEP	24	.32	.47	.53	.61	.64	.66	.84	.93	.94	.95	.95	.95
SEP	27	.20	.37	.44	.44	.44	.44	.44	.44	.44	.44	.61	.64
OCT	3	.32	.38	.39	.52	.60	.65	.85	.88	.90	.92	.94	.94
OCT	4	.26	.46	.62	.77	1.03	1.17	1.26	1.29	1.41	1.50	1.76	1.83
OCT	7	.25	.35	.39	.39	.39	.44	.58	.67	.67	.69	.69	.77
OCT	7	.16	.25	.38	.45	.48	.50	.50	.50	.50	.50	.50	.50
OCT	21	.27	.45	.52	.60	.73	1.18	1.25	1.41	1.52	1.55	1.61	1.70
OCT	23	.34	.43	.51	.51	.52	.54	.55	.71	.81	.85	.90	.93
OCT	24	.26	.30	.31	.33	.34	.34	.37	.38	.38	.40	.41	.42
OCT	25	.30	.33	.34	.41	.43	.44	.45	.46	.50	.53	.59	.61
OCT	25	.30	.34	.37	.38	.39	.47	.52	.52	.53	.53	.54	.54
OCT	26	.27	.41	.43	.43	.44	.44	.44	.47	.48	.48	.48	.48
OCT	27	.21	.35	.41	.45	.47	.65	.85	.88	.89	.89	.89	.89
OCT	27	.22	.32	.43	.46	.56	.63	.67	.72	.75	.80	.94	.98
NOV	20	.26	.47	.56	.63	.71	.76	.77	.77	.77	.80	1.11	1.12
NOV	28	.31	.36	.37	.37	.37	.37	.38	.38	.38	.38	.38	.38
DEC	1	.34	.44	.44	.44	.44	.44	.44	.48	.50	.50	.50	.52
DEC	20	.47	.58	.58	.58	.58	.58	.60	.60	.60	.60	.69	.74
DEC	26	.31	.48	.59	.63	.71	.72	.72	.72	.72	.72	.72	.82
DEC	27	.23	.44	.48	.56	.65	.68	.73	.82	.94	1.05	1.05	1.09
WAKE													
FEB	24	.28	.37	.41	.43	.44	.46	.49	.51	.52	.53	.58	.61
JUN	4	.27	.41	.41	.44	.46	.46	.46	.46	.46	.46	.46	.46
JUN	15	.34	.46	.47	.47	.47	.47	.47	.47	.47	.48	.48	.48
JUN	20	.34	.56	.67	.77	.93	1.14	1.31	1.35	1.41	1.45	1.45	1.47
AUG	14	.36	.62	.84	1.04	1.37	1.69	1.83	2.06	2.20	2.26	2.34	2.41
SEP	6	.35	.55	.80	1.03	1.40	1.47	1.67	1.88	1.93	2.05	2.22	2.31
SEP	6	.25	.27	.30	.39	.42	.43	.46	.47	.48	.49	.62	.83
SEP	7	.26	.38	.57	.60	.64	.65	.67	.67	.70	.73	.77	.79
SEP	9	.25	.35	.45	.53	.67	.76	1.00	1.13	1.23	1.33	1.35	1.41
SEP	10	.48	.56	.63	.65	.65	.67	.67	.70	.70	.71	.71	.71
OCT	3	.23	.36	.42	.43	.43	.43	.43	.43	.43	.43	.43	.50
OCT	29	.24	.30	.30	.31	.31	.36	.46	.48	.48	.48	.51	.52
NOV	6	.17	.28	.39	.46	.50	.50	.50	.50	.50	.50	.50	.50
NOV	8	.20	.35	.47	.59	.61	.62	.63	.66	.67	.69	.69	.73

Station and date		Maximum precipitation in inches (5 to 180 minutes)											
		5	10	15	20	30	45	60	80	100	120	150	180
PACIFIC AREA													
YAP R													
JAN	1	.23	.32	.34	.34	.34	.34	.34	.34	.34	.34	.34	.40
JAN	5	.26	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30	.30
JAN	9	.27	.39	.48	.49	.49	.50	.50	.50	.50	.50	.50	.50
JAN	19	.26	.35	.44	.55	.70	.75	.77	.77	.77	.77	.77	.90
JAN	20	.44	.72	.96	1.09	1.25	1.46	1.63	1.67	1.85	1.86	1.86	1.89
FEB	3	* .68	.91	1.10	1.31	1.54	1.57	1.57	1.57	1.57	1.57	1.57	1.57
FEB	7	.27	.34	.43	.44	.48	.48	.49	.52	.56	.59	.63	.65
FEB	16	.27	.33	.36	.39	.43	.49	.53	.58	.62	.69	.81	.83
FEB	18	.30	.46	.50	.51	.68	.84	.84	.84	.84	.84	.84	.84
FEB	23	.28	.45	.58	.65	.79	.92	1.06	1.16	1.68	1.73	1.80	1.81
FEB	25	.19	.30	.38	.39	.42	.42	.42	.49	.49	.49	.49	.54
MAR	6	.24	.35	.44	.52	.63	.67	.67	.67	.67	.67	.67	.67
MAR	7	.30	.43	.51	.53	.53	.53	.53	.53	.53	.59	.59	.59
MAR	7	.30	.41	.43	.48	.50	.54	.58	.68	.68	.68	.68	.69
MAR	13	.21	.33	.39	.42	.42	.43	.47	.47	.68	.83	.89	.92
MAR	14	.43	.66	.74	.75	.86	.93	1.00	1.12	1.16	1.17	1.24	1.26
MAR	18	.19	.24	.30	.41	.50	.58	.73	.82	.85	.89	1.03	1.31
APR	4	.27	.52	.64	.68	.69	.69	.69	.69	.69	.75	.75	.75
APR	10	.17	.25	.30	.39	.50	.63	.64	.64	.66	.66	.66	.77
APR	20	.28	.50	.65	.70	.89	1.00	1.02	1.02	1.03	1.03	1.08	1.09
APR	24	.38	.75	1.03	1.21	1.55	1.71	1.90	2.00	2.18	2.25	2.50	2.67
APR	27	.31	.39	.45	.50	.60	.69	.72	.79	.80	.80	.81	.82
MAY	1	.30	.37	.56	.61	.76	.77	.77	.77	.77	.97	1.39	1.40
MAY	8	.23	.30	.36	.36	.52	.64	.64	.65	.65	.66	.66	.66
MAY	14	.36	.51	.64	.76	.88	.91	.92	.93	.93	.94	.94	.94
MAY	25	.36	.58	.80	.82	.98	1.05	1.11	1.18	1.23	1.28	1.33	1.36
MAY	27	.27	.34	.41	.47	.50	.52	.57	.58	.58	.59	.69	.82
MAY	31	.29	.44	.54	.55	.60	.75	.84	.96	1.07	1.52	1.59	1.61
JUN	10	.26	.32	.36	.37	.38	.38	.43	.66	.66	.66	.67	.67
JUN	14	.29	.32	.32	.32	.32	.32	.48	.49	.49	.52	.52	.52
JUN	20	.29	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31
JUN	23	.40	.61	.70	.74	.92	1.04	1.08	1.24	1.87	1.96	1.99	2.02
JUN	29	.27	.38	.49	.61	.68	.81	.83	.87	.94	1.01	1.07	1.14
JUN	30	.23	.34	.37	.48	.52	.55	.56	.57	.57	.58	.59	.59
JUL	6	.26	.32	.44	.47	.48	.49	.49	.49	.49	.49	.49	.49
JUL	8	.24	.33	.40	.41	.41	.42	.42	.42	.42	.42	.42	.42
JUL	8	.30	.39	.52	.61	.79	.92	1.03	1.12	1.24	1.32	1.38	1.44
JUL	14	.19	.33	.42	.46	.54	.63	.68	.75	.96	.98	.98	.98
JUL	15	.30	.31	.31	.32	.36	.57	.63	.67	.73	.78	.85	.90
AUG	6	.60*	.95*	1.30	1.53	1.83	1.96	2.01	2.06	2.10	2.16	2.25	2.29
AUG	14	.27	.49	.52	.53	.54	.56	.57	.57	.57	.57	M	M
AUG	14	.21	.38	.49	.53	.57	.57	.57	.71	.74	.74	.74	.74
AUG	19	.30	.37	.45	.58	.70	.78	.84	.93	.97	1.02	1.03	1.03
AUG	29	.39	.59	.63	.73	1.07	1.22	1.25	1.26	1.26	1.26	1.26	1.30
AUG	30	.31	.41	.45	.46	.46	.51	.52	.53	.54	.54	.55	.55
SEP	2	.24	.37	.48	.59	.68	.91	1.08	1.16	1.32	1.32	1.32	1.33
SEP	6	.27	.35	.46	.52	.65	.87	.96	1.00	1.10	1.41	1.51	1.53
SEP	13	.46	.50	.58	.73	.79	.80	.82	.83	.84	.87	.87	.87
SEP	14	.29	.31	.31	.31	.32	.33	.33	.33	.33	.33	.33	.33
SEP	14	* .71*	.95	1.16	1.33	1.56	1.85	1.97	2.00	2.00	2.00	2.00	2.00
SEP	15	.28	.42	.47	.49	.49	.49	.49	.49	.49	.49	.49	.49
SEP	25	.32	.46	.55	.63	.74	.98	1.14	1.20	1.22	1.23	1.25	1.26
SEP	25	.18	.31	.41	.45	.54	.55	.55	.56	.57	.57	.58	.61
SEP	26	.29	.40	.51	.61	.78	.80	.80	.80	.80	.80	.80	.80
OCT	2	.30	.39	.47	.49	.51	.52	.57	.77	.79	.82	.84	.85
OCT	3	.27	.39	.48	.61	.91	1.14	1.36	1.43	1.46	1.49	1.49	1.51
OCT	7	.48	.66	.76	.82	.93	1.06	1.10	1.15	1.26	1.29	1.31	1.34
OCT	10	.25	.34	.45	.48	.54	.57	.60	.62	.66	.68	.70	.73
OCT	17	.38	.66	.86	1.06	1.16	1.18	1.20	1.24	1.27	1.28	1.32	1.36
NOV	9	.33	.33	.33	.33	.33	.33	.33	.34	.34	.34	.34	.34
NOV	10	.40	.65	.74	.85	1.10	1.66	1.93	2.24	2.27	2.28	2.28	2.28
NOV	17	.25	.37	.46	.52	.54	.54	.55	.55	.55	.55	.55	.55
NOV	21	.33	.49	.53	.53	.53	.53	.53	.53	.53	.53	.53	.53
NOV	25	.31	.55	.71	.95	1.24	1.28	1.28	1.31	1.49	1.49	1.51	1.59
DEC	8	.30	.42	.47	.48	.49	.56	.65	.68	.71	.72	.72	.72
DEC	22	.36	.52	.61	.61	.63	.67	.71	.73	.75	.90	.90	.90
DEC	23	.34	.54	.66	.84	.95	.96	.98	1.04	1.07	1.09	1.17	1.19
DEC	24	.20	.34	.39	.40	.40	.48	.71	.72	.75	.75	.76	.77
PENNSYLVANIA													
ALLENTOWN													
JUL	26	.20	.30	.40	.42	.48	.50	.59	.59	.61	.61	.62	.63
AUG	2	.23	.31	.36	.38	.44	.45	.45	.45	.45	.45	.45	.45
AUG	3	.22	.33	.41	.50	.60	.75	1.02	1.09	1.14	1.43	1.45	1.46
ERIE													
JUN	29	.33	.42	.56	.52	.66	.88	1.07	1.09	1.20	1.20	1.28	1.28
JUL	24	.20	.34	.43	.48	.53	.54	.57	.81	.85	.86	.90	.98
JUL	24	.22	.38	.51	.54	.62	.63	.64	.65	.66	.67	.68	.69
SEP	4	.20	.36	.39	.47	.48	.48	.48	.48	.48	.52	.52	.52
HARRISBURG													
MAY	25	.29	.31	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUN	4	.30	.50	.64	.73	.74	.74	.74	.74	.74	.74	.74	.74
JUL	14	.25	.31	.32	.33	.33	.33	.33	.33	.33	.33	.33	.33
AUG	1	.35	.61	.72	.80	1.10	1.31	1.34	1.36	1.53	1.65	1.68	1.69
AUG	3	.39	.57	.75	.95	1.29	1.42	1.48	1.52	1.76	2.13	2.29	2.30
AUG	27	.21	.36	.40	.52	.60	.66	.73	.80	.87	.94	.98	1.10
PHILADELPHIA													
JUN	13	.20	.32	.38	.42	.42	.43	.44	.44	.44	.44	.44	.44
JUL	30	.40	.60	.66	.80	.87	1.01	1.21	1.47	1.60	1.94	2.38	2.62
AUG	1	.21	.37	.42	.46	.81	.86	1.16	1.17	1.30	1.39	1.73	1.80
AUG	27	.33	.43	.55	.59	.75	.87	1.01	1.12	1.13	1.28	1.38	1.68
AUG	28	.14	.28	.36	.42	.54	.70	.92	1.10	1.26	1.54	1.68	1.80
SEP	10	.44	.58	.62	.71	.74	.76	.76	.76	.76	.76	.76	.76
SEP	11	.35	.62	.77	.85	.97	.97	1.17	1.17	1.18	1.19	1.19	1.20
SEP	21	.22	.44	.54	.65	.82	.90	.90	.91	.95	.96	.96	.96
PITTSBURGH													
JUN	13	.21	.31	.31	.31	.33	.39	.47	.47	.47	.47	.47	.47
JUL	1	.25	.47	.51	.57	.59	.59	.59	.59	.59	.59	.59	.61
JUL	6	.29	.43	.45	.57	.63	.64	.64	.64	.64	.64	.64	.64
JUL	11	.20	.39	.47	.53	.66	1.05	1.19	1.25	1.27	1.34	1.41	1.45
SEP	29	.19	.34	.35	.44	.48	.49	.49	.49	.49	.49	.49	.49
PITTSBURGH U													
JUN	13	.18	.28	.35	.40	.45	.60	.78	.78	.78	.78	.78	.78
AUG	27	.35	.45	.50	.55	.57	.59	.62	.62	.62	.62	.62	.62
SEP	16	.28	.30	.33	.36	.40	.43	.45	.48	.49	.49	.50	.51

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
PENNSYLVANIA												
WILKES BARRE												
JUL 13	.28	.36	.40	.42	.45	.46	.47	.47	.47	.47	.47	.47
JUL 16	.26	.39	.40	.41	.41	.41	.41	.41	.41	.41	.41	.41
JUL 29	.40	.50	.59	.70	.89	.95	1.04	1.12	1.24	1.31	1.36	1.36
AUG 1	.18	.32	.34	.38	.41	.42	.43	.43	.43	.43	.43	.43
AUG 2	.34	.44	.48	.50	.51	.51	.51	.63	.64	.64	.64	.64
AUG 3	.18	.31	.35	.40	.56	.63	.67	.70	.71	.72	.79	.81
RHODE ISLAND												
BLOCK ISLAND												
JUL 26 T	M	M	M	M	M	M	M	M	M	M	M	M
JUL 27 T	M	M	M	M	M	M	M	M	M	M	M	M
JUL 30 T	M	M	M	M	M	M	M	M	M	M	M	M
NOV 25	.12	.22	.25	.30	.48	.56	.80	.92	1.05	1.16	1.55	1.75
PROVIDENCE												
JUN 8	.22	.32	.42	.49	.61	.72	.92	1.12	1.46	1.50	1.52	1.52
JUL 19	.22	.40	.58	.66	.88	1.02	1.19	1.42	1.74	1.84	2.10	2.13
AUG 20	.38	.59	.69	.75	.82	.89	.92	.93	.95	.98	1.00	1.01
SOUTH CAROLINA												
CHARLESTON												
FEB 26	.40	.41	.41	.45	.48	.48	.48	.48	.48	.48	.74	.77
APR 21	.27	.33	.33	.36	.40	.41	.45	.48	.49	.50	.50	.50
APR 23	.30	.57	.62	.64	.73	.78	.80	.90	.93	.95	1.17	1.32
APR 23	.35	.36	.37	.38	.38	.45	.45	.45	.45	M	M	M
JUN 10	.28	.47	.51	.67	.72	.75	.87	.95	.95	.95	.95	.95
JUN 14	.38	.40	.40	.40	.40	.40	.43	.48	.48	.48	.48	.48
JUN 17	.45	.60	.61	.68	.75	.80	.83	.86	.91	.98	1.02	1.02
JUL 2	.25	.44	.50	.52	.55	.55	.65	.76	.78	.87	1.02	1.08
JUL 12	.45	.77	.92	1.26	1.44	1.48	1.53	1.55	1.55	1.56	1.56	1.57
JUL 19	.22	.37	.41	.43	.63	.69	.74	.75	.75	.75	.75	.75
JUL 31	.22	.30	.31	.33	.33	.34	.34	.34	.52	.55	.57	.57
AUG 1	.35	.45	.48	.55	.63	.79	.82	.83	.83	.83	.83	.83
AUG 6	.29	.35	.35	.37	.39	.39	.39	.48	.54	.55	.55	.62
AUG 15	.30	.43	.50	.59	.80	1.05	1.20	1.57	1.61	1.63	1.69	1.71
AUG 15 T	M	M	M	M	M	M	M	M	M	M	M	M
AUG 17	.45	.59	.75	.93	1.12	1.38	1.63	2.17	2.50	2.61	2.77	2.86
AUG 25	.35	.55	.64	.77	1.06	1.10	1.20	1.93	2.14	2.40	2.44	2.62
AUG 26	.43	.82	.85	.90	1.15	1.18	1.25	1.60	1.71	1.73	1.77	1.82
OCT 9	.38	.73	.75	.81	1.04	1.13	1.60	1.97	2.24	2.41	2.43	2.49
CHARLESTON U												
MAY 15	.20	.37	.42	.46	.61	.70	.81	.86	.92	.97	1.01	1.01
JUN 22	.43	.65	.82	.94	1.31	1.42	1.42	1.43	1.43	1.43	1.43	1.43
JUN 23	.17	.30	.40	.42	.45	.47	.47	.48	.50	.51	.53	.53
JUL 26	.28	.42	.55	.58	.61	.65	.67	.79	.85	.92	.97	.97
JUL 29	.29	.56	.85	.92	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
AUG 8	.32	.62	.84	1.09	1.54	1.89	1.99	2.01	2.03	2.04	2.04	2.04
AUG 15	.32	.47	.76	.92	.98	1.00	1.00	1.04	1.04	1.05	1.05	1.06
AUG 17	.32	.54	.70	.85	1.14	1.63	2.07	2.58	2.67	2.82	3.21	3.42
AUG 21	1.06	1.07	1.08	1.09	1.11	1.13	1.13	1.14	1.16	1.22	1.33	1.33
AUG 25	.22	.35	.54	.68	.98	1.27	1.31	1.33	1.35	1.35	1.35	1.35
OCT 9	.25	.50	.63	.76	.91	1.07	1.25	1.42	1.54	1.69	1.76	1.90
OCT 16	.27	.31	.49	.51	.62	.63	.63	.63	.63	.63	.63	.63
COLUMBIA												
FEB 22	.31	.40	.46	.57	.86	.91	1.05	1.19	1.52	1.75	1.97	1.99
APR 23	.24	.46	.54	.61	.73	.78	.84	.94	1.03	1.07	1.21	1.28
APR 28	.27	.34	.41	.55	.77	.78	.80	.81	.84	.87	.88	.91
MAY 12	.35	.45	.50	.70	.78	.81	.93	1.00	1.02	1.05	1.06	1.08
JUN 16	.25	.38	.40	.41	.42	.42	.42	.42	.42	.42	.42	.42
JUN 18	.30	.52	.56	.68	.94	1.24	1.25	1.25	1.25	1.25	1.25	1.25
JUN 18	.45	.75	.88	1.09	1.32	1.43	1.46	1.46	1.47	1.48	1.48	1.48
JUN 22	.35	.63	.70	.95	1.14	1.15	1.15	1.15	1.15	1.15	1.21	1.25
JUN 23	.22	.36	.45	.60	.72	.74	.75	.75	.76	.76	.76	.76
JUN 26	.31	.52	.61	.86	1.01	1.13	1.16	1.16	1.16	1.16	1.16	1.16
JUL 1	.25	.40	.46	.52	.62	.63	.63	.64	.64	.65	.72	.77
JUL 2	.47	.65	.90	1.12	1.58	1.60	1.62	1.63	1.66	1.69	1.71	1.72
JUL 5	.25	.46	.56	.73	.92	.97	1.00	1.09	1.17	1.22	1.35	1.43
JUL 19	.35	.64	.73	.88	.90	.91	.93	.95	.95	.98	1.04	1.07
JUL 25	.25	.38	.40	.47	.70	.77	.86	1.05	1.16	1.25	1.39	1.41
JUL 29	.43	.70	.76	.78	.79	.79	.80	.93	1.13	1.15	1.15	1.15
AUG 11	.46	.73	.76	.95	1.26	1.40	1.45	1.50	1.52	1.53	1.53	1.55
AUG 16	.28	.53	.65	.77	1.00	1.25	1.70	1.91	2.04	2.15	2.41	2.82
AUG 31	.31	.42	.47	.50	.74	.93	1.23	1.39	1.46	1.50	1.54	1.54
SEP 10	.22	.41	.59	.65	.67	.67	.67	.67	.69	.69	.69	.69
SEP 18	.26	.51	.59	.72	1.09	1.39	1.80	2.12	2.30	2.42	2.59	2.75
OCT 24	.16	.32	.37	.46	.51	.55	.57	.60	.63	.67	.70	.72
GNVLE SPARTANBURG												
FEB 22	.23	.33	.39	.44	.53	.68	.75	.81	.84	.85	.86	.88
FEB 22	.25	.43	.51	.58	.67	.72	.74	.74	.74	.74	.74	1.07
MAR 13	.25	.30	.33	.36	.40	.43	.47	.50	.54	.56	.57	.57
MAY 12	.42	.68	.84	.90	1.02	1.38	1.40	1.44	1.46	1.48	1.51	1.86
MAY 29	.25	.32	.35	.36	.41	.43	.56	.61	.62	.62	.62	.62
JUN 9	.20	.28	.36	.43	.53	.63	.71	.77	.77	.77	.77	.77
JUN 13	.18	.36	.47	.49	.52	.54	.54	.54	.54	.54	.54	.54
JUL 5	.19	.31	.39	.42	.46	.52	.57	.72	.82	.82	.83	.84
JUL 6	.20	.32	.36	.40	.41	.41	.41	.41	.41	.42	.42	.42
JUL 19	.24	.45	.61	.62	.64	.64	.65	.67	.67	.67	.67	.67
JUL 25	.40	.63	.81	.99	1.11	1.14	1.18	1.19	1.21	1.23	1.23	1.23
JUL 29	.24	.33	.39	.42	.43	.46	.48	.50	.55	.55	.56	.56
JUL 29	.25	.34	.36	.42	.46	.48	.49	.52	.54	.56	.56	.56
AUG 4	.25	.45	.51	.53	.54	.54	.54	.54	.54	.54	.54	.54
SEP 19	.27	.31	.31	.33	.33	.33	.33	.33	.33	.33	.33	.33
OCT 9	.15	.30	.40	.47	.54	.60	.62	.62	.62	.62	.63	.70
OCT 15	.25	.43	.65	.76	.86	1.01	1.07	1.07	1.07	1.21	1.64	1.68
OCT 31	.21	.38	.51	.61	.72	1.15	1.42	1.67	1.82	1.88	1.98	2.08
NOV 2	.19	.28	.38	.42	.45	.47	.47	.47	.47	.47	.47	.47
NOV 3	.28	.48	.63	.74	.85	.99	1.08	1.15	1.22	1.25	1.25	1.25
DEC 16	.20	.37	.42	.44	.45	.45	.45	.45	.45	.45	.45	.45
SOUTH DAKOTA												
ABERDEEN												
JUN 4	.26	.39	.41	.44	.47	.47	.48	.48	.48	.48	.48	.48
JUN 22	.22	.30	.38	.40	.41	.41	.41	.41	.41	.41	.41	.41
JUN 29	.20	.30	.32	.35	.40	.45	.62	.82	.87	.99	1.25	1.28
JUL 3	.43*	.85*	.94	1.09	1.20	1.28	1.34	1.35	1.37	1.39	1.39	1.39
JUL 7	.46*	.86	.88	.88	.89	.89	.89	.89	.89	.89	.89	.89

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
SOUTH DAKOTA												
ABERDEEN												
JUL 9	.28	.40	.42	.51	.64	.70	.82	.86	.87	.87	.87	.87
SEP 4	.59*	.76	.89	1.06*	1.46	1.59*	1.72	1.72	1.72*	1.72	1.72	1.72
HURON												
JUL 24	.34	.50	.55	.59	.60	.60	.62	.63	.65	.65	.65	.65
AUG 18	.28	.39	.41	.41	.42	.43	.43	.45	.45	.45	.45	.46
SEP 3	.23	.40	.58	.68	.90	.95	.96	1.00	1.05	1.07	1.07	1.07
RAPID CITY												
JUN 25	.18	.33	.40	.43	.69	.72	.72	.73	.73	.73	.73	.73
JUL 3	.34	.42	.42	.42	.42	.42	.42	.42	.42	.42	.42	.42
SIOUX FALLS												
MAY 23	.36	.49	.61	.66	.71	.73	.76	.78	.81	.83	.86	.86
JUN 9	.30	.40	.48	.52	.53	.56	.58	.75	.75	.75	.75	.75
JUL 6	.18	.30	.31	.31	.31	.31	.31	.31	.31	.31	.31	.31
JUL 10	.18	.30	.35	.40	.56	.70	.80	.86	1.00	1.34	1.58	1.72
SEP 4	.23	.32	.46	.54	.73	.84	1.11	1.30	1.52	1.54	1.54	1.54
TENNESSEE												
BRISTOL												
MAY 6	.28	.30	.30	.31	.31	.31	.31	.31	.31	.31	.31	.31
JUN 8	.20	.28	.36	.42	.57	.62	.64	.64	.64	.64	.64	.64
JUN 10	.40	.56	.56	.57	.59	.98	1.17	1.19	1.20	1.24	1.30	1.32
JUN 14	.26	.30	.35	.35	.36	.36	.37	.39	.39	.39	.39	.39
JUN 26	.24	.30	.33	.35	.35	.35	.35	.35	.35	.35	.35	.35
JUN 30	.28	.50	.57	.75	1.00	1.11	1.13	1.13	1.13	1.13	1.13	1.13
JUL 2	.21	.37	.41	.42	.44	.45	.47	.47	.47	.47	.47	.47
JUL 9	.26	.42	.46	.47	.48	.49	.51	.55	.57	.58	.60	.60
JUL 11	.22	.33	.34	.34	.34	.34	.34	.34	.34	.39	.50	.50
JUL 19	.37	.47	.49	.50	.53	.55	.58	.61	.66	.68	.73	.74
JUL 19	.26	.45	.47	.51	.53	.54	.54	.54	.54	.54	.55	.55
AUG 5	.26	.43	.49	.62	.67	.68	.68	.68	.68	.68	.68	.68
AUG 10	.38	.55	.56	.57	.58	.58	.58	.58	.58	.58	.58	.58
OCT 24	.30	.45	.54	.63	.82	.83	.83	.83	.83	.83	.83	.83
CHATTANOOGA												
JAN 30	.34	.53	.59	.63	.77	.85	.86	.89	.89	.89	.89	.89
JUN 16	.35	.48	.82	.95	1.05	1.05	1.05	1.07	1.07	1.08	1.11	1.11
JUL 14	.28	.35	.36	.36	.36	.36	.36	.36	.36	.36	.36	.36
JUL 25	.33	.51	.63	.69	.77	.78	.93	.97	1.02	1.04	1.06	1.06
JUL 25	.24	.29	.46	.55	.61	.83	.93	1.00	1.05	1.15	1.20	1.22
JUL 26	.26	.41	.50	.51	.59	.62	.63	.66	.74	.79	.81	.82
JUL 29	.18	.35	.47	.61	.75	.76	.76	.76	.76	.76	.76	.76
AUG 7	.44	.69	.80	.87	.88	.88	.88	.88	.88	.88	.88	.88
OCT 15	.29	.41	.43	.44	.45	.47	.54	.67	.69	.69	.69	.69
KNOXVILLE												
APR 28	.27	.45	.45	.48	.50	.50	.52	.55	.56	.57	.57	.57
JUN 8	.30	.42	.48	.51	.55	.56	.56	.57	.57	.57	.57	.57
JUN 29	.26	.40	.40	.42	.52	.56	.56	.58	.58	.58	.58	.58
JUL 14	.27	.34	.37	.54	.72	.75	.79	.81	.95	.96	.96	.96
JUL 19	.38	.68	.78	.81	.82	.82	.85	.92	.92	1.00	1.01	1.03
JUL 19	.25	.36	.42	.43	.54	.55	.70	.76	.83	.95	.99	.99
JUL 29	.30	.49	.54	.69	.71	.73	.88	.90	.92	.92	.92	.92
AUG 3	.41	.57	.63	.66	.69	.69	.69	.69	.69	.69	.69	1.17
AUG 23	.30	.44	.48	.53	.63	.65	.67	.68	.72	.74	.74	.74
SEP 20	.20	.35	.39	.46	.59	.95	1.06	1.06	1.06	1.07	1.07	1.08
OCT 15	.14	.25	.30	.41	.50	.52	.55	.63	.65	.66	.72	.72
DEC 30	.25	.40	.48	.65	.71	.76	.83	.84	.90	1.00	1.00	1.00
MEMPHIS												
FEB 4	.43	.58	.76	.83	.87	.92	.98	1.05	1.14	1.17	1.18	1.18
FEB 19	.28	.40	.45	.51	.57	.65	.68	.71	.71	.71	.73	.76
FEB 21	.51	.71	.79	.86	.91	1.32	1.42	1.51	1.56	1.72	1.80	1.81
APR 23	.32	.44	.53	.59	.63	.71	.83	.87	1.15	1.18	1.19	1.26
JUN 8	.24	.41	.55	.64	.83	.92	.97	.98	1.02	1.10	1.16	1.18
JUN 21	.32	.50	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51
JUN 21	.32	.50	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51
JUL 23	.35	.49	.58	.59	.61	.66	.76	.78	.78	.78	.78	.78
AUG 2	.21	.37	.49	.57	.61	.63	.64	.71	.77	.82	.82	.82
AUG 6	.24	.40	.49	.59	.72	.79	.83	.84	.85	.88	.94	.96
AUG 6	.44	.67	.88	1.08	1.27	1.44	1.49	1.53	1.53	1.54	1.54	1.54
AUG 22	.27	.47	.51	.54	.56	.56	.56	.56	.56	.56	.56	.56
SEP 2	.25	.40	.41	.42	.44	.44	.44	.44	.44	.44	.44	.44
SEP 26	.34	.56	.57	.58	.58	.58	.58	.58	.58	.58	.58	.58
DEC 9	.21	.29	.37	.43	.51	.52	.52	.56	.57	.59	.59	.59
DEC 30	.28	.39	.48	.53	.58	.59	.64	.65	.70	.73	.73	.73
NASHVILLE												
APR 27	.32	.53	.59	.70	.87	.87	.87	.87	.87	.87	.87	.87
JUN 27	.32	.45	.49	.58	.79	.88	.90	.91	.93	.93	.93	.93
JUN 28	.28	.36	.40	.47	.60	.61	.61	.62	.62	.62	.62	.62
JUL 26	.22	.30	.35	.38	.40	.40	.40	.40	.40	.40	.46	.46
JUL 28	.23	.30	.47	.48	.48	.53	.53	.53	.53	1.00	1.05	1.05
AUG 3	.22	.29	.35	.42	.60	.77	1.03	1.12	1.12	1.12	1.12	1.12
AUG 4	.30	.50	.67	.73	.76	.78	.79	.79	.79	.79	.79	.79
AUG 11	.35	.47	.50	.52	.55	.61	.67	.67	.67	.67	.67	.67
AUG 18	.30	.55	.78	.85	1.03	1.35	1.52	1.59	1.60	1.61	1.62	1.62
SEP 25	.32	.44	.45	.47	.50	.73	.78	.78	.78	.80	.80	.80
TEXAS												
ABILENE												
APR 16	.15	.28	.32	.40	.57	.62	.72	.80	.93	.95	.95	.98
APR 17	.25	.28	.30	.31	.33	.33	.33	.33	.33	.33	.33	.33
MAY 29	.23	.36	.41	.55	.80	.83	.85	.88	.88	.88	.88	.89
JUN 11	.28	.45	.50	.65	.72	.75	.75	.75	.75	.75	.75	.75
JUL 23	.20	.32	.33	.34	.43	.53	.58	.59	.63	.63	.70	.72
AUG 14	.32	.55	.56	.70	.83	.92	.96	.97	.99	.99	1.01	1.02
AUG 26	.20	.34	.36	.40	.47	.49	.53	.67	.83	.98	1.03	1.05
AMARILLO												
JUN 19	.12	.19	.25	.31	.50	.62	.63	.63	.63	.63	.65	.65
JUN 30	.25	.27	.37	.49	.63	.69	.69	.77	.81	.84	.85	.87
SEP 22	.17	.31	.36	.47	.72	.88	.98	1.12	1.23	1.29	1.37	1.43
OCT 1	.21	.32	.37	.37	.37	.37	.37	.37	.37	.37	.37	.37
OCT 17	.38	.61	.64	.66	.71	.71	.95	1.19	1.20	1.22	1.23	1.23
NOV 17	.18	.31	.40	.45	.53	.65	.73	.76	.81	.87	.97	1.01

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
TEXAS												
HOUSTON U												
FEB 4	.26	.37	.46	.49	.65	.75	.75	.75	.75	.75	.75	.75
FEB 5	.34	.58	.77	.83	.90	1.01	1.12	1.15	1.15	1.20	1.24	1.26
FEB 26	.27	.47	.55	.60	.69	.74	.77	.77	.77	.77	.77	.79
MAR 18	.22	.38	.47	.47	.51	.55	.66	.66	.66	.66	.66	.68
APR 16	.23	.32	.38	.60	.76	.88	.91	1.01	1.11	1.15	1.20	1.25
MAY 11	.30	.45	.55	.62	.77	.92	.98	1.03	1.03	1.04	1.07	1.16
MAY 24	33	.50	.60	.63	.68	.74	.76	.76	.76	.76	.76	.76
JUL 13	.36	.67	.78	.84	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
JUL 19	.36	.57	.58	.58	.58	.58	.58	.58	.58	.58	.58	.58
AUG 25	.24	.38	.45	.51	.63	.73	.77	.83	.84	.85	.85	.85
SEP 10	.14	.23	.32	.36	.54	.65	.76	.94	1.04	1.27	1.54	1.70
OCT 4	.32	.47	.50	.51	.52	.52	.52	.53	.53	.53	.53	.53
DEC 5	.17	.34	.48	.61	.66	.97	1.04	1.12	1.34	1.40	1.45	1.47
LUBBOCK												
MAY 30	.40	.60	.64	.68	.77	.87	1.08	1.25	1.40	1.63	1.70	1.70
JUN 5	.25	.36	.38	.41	.43	.47	.50	.55	.73	.76	.79	.80
JUN 11	.15	.24	.35	.43	.51	.53	.62	.66	.66	.66	.66	.66
AUG 15	.12	.21	.30	.37	.50	.57	.61	.63	.64	.75	.84	.88
AUG 22	.21	.30	.36	.41	.53	.77	.95	.95	.95	.95	.97	1.00
SEP 17	.28	.40	.56	.63	.67	.68	.69	.74	1.10	1.25	1.33	1.36
OCT 18	.18	.28	.43	.53	.73	.80	.81	.81	.81	.81	.81	.81
OCT 25	.30	.40	.41	.42	.42	.42	.42	.42	.42	.43	.43	.43
MIDLAND												
APR 16	.24	.36	.45	.49	.60	.66	.70	.73	.75	.78	.78	.79
MAY 29	.52	.84	.90	.91	.92	.98	.98	.98	1.05	1.50	1.76	1.78
PORT ARTHUR												
FEB 12	.20	.28	.33	.51	.62	.67	.67	.67	.67	.67	.68	.70
FEB 26	.46	.69	.84	.92	1.21	1.54	1.64	1.68	1.70	1.73	1.81	1.91
MAY 9	.31	.58	.74	.83	.87	.87	.88	.89	.89	.89	.89	.89
JUN 15	.30	.37	.40	.41	.42	.51	.54	.56	.56	.56	.56	.57
JUL 27	.28	.36	.41	.42	.45	.46	.46	.62	.86	.86	.86	.86
JUL 30	.25	.44	.57	.57	.57	.57	.57	.57	.58	.58	.58	.58
AUG 2	.28	.38	.38	.39	.50	.71	.71	.71	.71	.71	.71	.71
AUG 3	.29	.48	.68	.82	.92	.93	.97	.97	.97	.97	1.00	1.11
AUG 4	.38	.66	.95	1.13	1.32	1.42	1.45	1.45	1.45	1.45	1.45	1.45
AUG 4	.36	.58	.71	.95	1.26	1.60	2.07	2.36	2.63	2.83	3.20	3.36
AUG 22	.29	.46	.47	.51	.56	.65	.67	.67	.67	.67	.67	.67
AUG 25	.33	.40	.49	.50	.51	.52	.53	.58	.59	.59	.59	.59
SEP 10	.17	.32	.45	.48	.50	.50	.50	.50	.50	.50	.50	.50
SEP 15	.26	.49	.56	.59	.61	.64	.67	.88	1.01	1.14	1.27	1.43
OCT 4	.18	.23	.33	.44	.50	.56	.58	.59	.60	.62	.67	.69
NOV 18	.44	.71	.73	.73	.73	.80	.92	.96	1.00	1.00	1.02	1.02
DEC 2	.13	.23	.34	.40	.49	.60	.67	.84	.90	.92	.95	.97
DEC 5	.17	.29	.37	.40	.43	.46	.47	.50	.51	.51	.51	.51
DEC 17	.22	.34	.44	.48	.54	.57	.62	.62	.64	.65	.66	.67
SAN ANGELO												
APR 16	.22	.43	.50	.54	.64	.68	.98	1.03	1.09	1.19	1.52	1.85
MAY 29	.20	.35	.43	.54	.56	.56	.58	.58	.56	.56	.56	.57
MAY 29	.20	.40	.47	.54	.60	.76	.78	.79	.79	.80	.82	.83
JUL 28	.28	.46	.57	.59	.64	.70	.71	.72	.73	.73	.76	1.20
AUG 4	.21	.34	.38	.47	.64	.64	.64	.64	.64	.64	.64	.64
AUG 10	.24	.45	.47	.66	.80	.96	1.03	1.31	1.42	1.50	1.53	1.94
SAN ANTONIO												
FEB 25	.30	.51	.55	.55	.57	.60	.63	.64	.64	.64	.64	.64
MAY 24	.25	.42	.54	.68	.77	.82	.82	.82	.82	.82	.82	.82
JUN 20	.18	.32	.39	.43	.44	.44	.44	.44	.44	.44	.44	.44
JUN 27	.34	.47	.49	.50	.51	.51	.62	.98	1.00	1.00	1.04	1.05
JUN 27	.25	.36	.42	.46	.48	.49	.49	.50	.52	.55	.57	.58
JUL 26	.29	.46	.58	.65	.67	.68	.68	.97	1.03	1.03	1.03	1.03
AUG 1	.18	.36	.54	.61	.64	.66	.67	.68	.71	.73	.77	.78
AUG 3	.12	.24	.31	.39	.59	.70	.72	.72	.72	.74	.74	.74
AUG 12	.28	.53	.56	.57	.59	.60	.62	.67	.73	.80	.91	.96
AUG 13	.19	.28	.40	.52	.54	.55	.58	.58	.56	.58	.58	.56
AUG 30	.34	.49	.57	.60	.64	.64	.65	.67	.69	.70	.70	.70
SEP 10	.21	.32	.38	.42	.45	.52	.58	.64	.75	.79	1.01	1.34
SEP 22	.24	.44	.53	.55	.56	.56	.56	.56	.56	.56	.56	.56
OCT 19	.27	.35	.39	.46	.55	.64	.73	.80	.83	.92	.99	1.12
NOV 18	.23	.39	.47	.53	.68	.82	1.11	1.27	1.28	1.43	1.77	1.96
VICTORIA												
APR 16	.37	.46	.51	.63	.68	.78	.88	.87	.92	1.01	1.02	1.03
JUN 6	.33	.55	.67	.76	.86	.88	.91	.93	.93	.93	.93	.93
JUN 15	.40	.66	.80	1.02	1.21	1.34	1.35	1.35	1.35	1.35	1.35	1.35
JUN 18	.23	.41	.46	.49	.54	.55	.55	.55	.55	.55	.55	.55
JUN 19	.25	.40	.43	.46	.50	.50	.51	.51	.51	.51	.51	.51
AUG 6	.21	.31	.41	.44	.46	.48	.50	.50	.50	.50	.50	.50
SEP 12	.37	.56	.62	.73	1.22	1.36	1.50	1.59	1.80	1.87	1.97	2.08
SEP 25	.32	.51	.55	.57	.58	.58	.58	.58	.58	.58	.58	.58
T OCT 17	M	M	M	M	M	M	M	M	M	M	M	M
OCT 20	.30	.38	.50	.66	.72	.82	.84	.93	.95	.96	1.00	1.00
WACO												
JUL 24	.21	.40	.51	.65	1.00	1.25	1.53	1.66	1.72	1.77	1.94	2.04
JUL 25	.49	.68	.93	1.25	1.81	2.04	2.25	2.40	2.44	2.50	2.56	2.62
JUL 27	.39	.62	.66	.79	.95	1.04	1.05	1.05	1.06	1.07	1.10	1.13
AUG 4	.21	.41	.46	.59	.70	.75	.80	.82	.83	.83	.85	.90
AUG 30	.18	.35	.36	.38	.40	.43	.46	.46	.47	.47	.47	.47
OCT 19	.51	.76	.77	.78	.78	.78	.78	.78	.78	.78	.78	.78
NOV 17	.37	.46	.47	.49	.53	.55	.61	.66	.67	.71	.73	.75
DEC 9	.23	.40	.57	.67	.70	.80	.82	.86	.95	1.07	1.08	1.11
WICHITA FALLS												
AUG 6	.32*	.55	.68	.69	.79	.86	.87	.87	.87	.87	.87	.87
AUG 15	.30	.48	.59	.69	1.01	1.22	1.30	1.54	1.75	1.83	2.43*	2.56
SEP 4	.38*	.71*	.91	1.10	1.35	1.50	1.68	1.86	1.95	1.97	1.97	1.97
OCT 19	.29	.55	.65	.71	.85	1.03	1.14	1.19	1.26	1.34	1.34	1.34
UTAH												
MILFORD												
AUG 3	.18	.30	.30	.41	.46	.50	.50	.50	.55	.58	.58	.61
SALT LAKE CITY												
JUL 19	.16	.30	.36	.43	.54	.60	.61	.75	.76	.86	.90	.90
AUG 8	.22	.33	.44	.49	.54	.56	.56	.56	.56	.56	.56	.56
AUG 29	.14	.23	.34	.43	.55	.67	.78	.81	.81	.83	.83	.83

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
TEXAS												
AUSTIN												
MAR 12	.26	.43	.54	.56	.69	.71	.71	.71	.71	.74	.74	.74
MAY 24	.29	.46	.60	.62	.63	.65	.67	.69	.69	.69	.72	.72
JUN 21	.35	.60	.85	.98	1.03	1.12	1.16	1.19	1.21	1.27	1.33	1.34
JUL 26	.14	.22	.31	.36	.51	.62	.76	.80	.83	.83	.83	.87
AUG 3	.21	.38	.45	.51	.65	.72	.73	.75	.91	.92	.92	.93
AUG 4	.25	.41	.55	.72	.94	1.18	1.34	1.43	1.45	1.45	1.51	1.55
OCT 19	.23	.37	.39	.41	.47	.53	.56	.62	.65	.69	.71	.71
NOV 17	.23	.44	.56	.69	.83	1.01	1.21	1.36	1.41	1.43	1.60	1.77
BROWNSVILLE												
MAY 11	.28	.55	.76	.83	.91	.91	1.08	1.38	1.39	1.40	1.40	1.40
MAY 25	.15	.26	.36	.46	.70	.75	.80	.80	.80	.80	.80	.80
JUN 19	.16	.30	.37	.44	.53	.79	.89	1.04	1.28	1.37	1.49	1.58
JUN 21	.23	.36	.38	.39	.39	.39	.39	.39	.39	.39	.39	.39
JUN 26	.15	.28	.39	.47	.51	.60	.63	.68	.80	.84	.85	.87
AUG 3	.20	.40	.49	.55	.72	.79	.80	.80	.82	1.08	1.23	1.23
SEP 17	.16	.24	.31	.42	.48	.58	.63	.70	.78	.90	1.01	1.06
SEP 18	.23	.39	.50	.55	.63	.96	1.22	1.52	1.62	1.71	1.81	1.92
SEP 28	.24	.34	.37	.40	.59	.83	1.05	1.19	1.25	1.27	1.30	1.33
SEP 29	.28	.46	.57	.60	.62	.62	.63	.64	.70	.72	.72	.72
OCT 6	.20	.37	.49	.52	.53	.54	.54	.54	.54	.55	.75	.91
CORPUS CHRISTI												
APR 16	.17	.29	.34	.39	.59	.67	.72	.76	.76	.77	.80	.80
MAY 10	.33	.52	.63	.69	.71	.74	.75	.76	.76	.76	.76	.76
MAY 24	.32	.46	.63	.77	.96	1.49	1.69	1.99	2.33	2.47	2.58	2.62
JUN 26	.22	.38	.50	.55	.61	.65	.65	.65	.65	.65	.65	.65
AUG 2	.29	.39	.53	.74	.91	.95	1.08	1.13	1.16	1.17	1.17	1.18
AUG 2	.29	.37	.40	.42	.45	.54	.78	.89	.94	.99	1.07	1.20
AUG 4	.17	.32	.40	.44	.47	.47	.47	.47	.47	.47	.47	.47
SEP 10	.20	.40	.54	.68	.97	1.30	1.63	1.81	1.98	2.17	2.39	2.69
SEP 18	.23	.40	.54	.68	.94	1.02	1.20	1.63	1.84	2.01	2.40	2.53
SEP 22	.24	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32	.32
SEP 24	.33	.44	.48	.49	.52	.54	.54	.55	.56	.56	.56	.56
OCT 8	.15	.23	.32	.41	.48	.53	.59	.60	.61	.61	.61	.61
OCT 20	.23	.40	.52	.55	.65	.66	.66	.66	.66	.66	.66	.66
DEC 12	.16	.24	.30	.46	.58	.72	.82	.97	1.00	1.01	1.01	1.01
DALLAS												
FEB 18	.38	.44	.45	.45	.46	.64	.65	.66	.66	.66	.66	.66
FEB 21	.30	.50	.65	.78	.86	1.00	1.02	1.09	1.18	1.20	1.20	1.20
APR 29	.25	.27	.27	.27	.27	.27	.27	.27	.27	.27	.27	.27
MAY 27	.40	.80	1.00	1.30	1.55	1.78	2.04	2.23	2.35	2.51	2.56	2.57
JUN 28	.26	.38	.42	.46	.48	.49	.50	.50	.50	.50	.50	.50
JUL 24	.20	.22	.31	.38	.58	.69	.80	.80	.80	.80	.80	.80
JUL 28	.21	.40	.52	.72	.84	1.15	1.23	1.30	1.31	1.32	1.32	1.33
AUG 14	.41	.66	.72	.75	.77	.82	.86	.92	.97	1.00	1.00	1.00
AUG 14	.30	.47	.65	.81	1.15	1.21	1.21	1.21	1.21	1.21	1.21	1.21
AUG 24	.17	.28	.30	.32	.57	.64	.66	.66	.66	.66	.66	.66
OCT 3	.22	.37	.50	.55	.68	.87	1.15	1.50	1.87	2.20	2.60	2.87
OCT 18	.36	.51	.56	.59	.65	1.02	1.12	1.16	1.33	1.67	1.77	1.77
OCT 19	.55	.74	.82	.85	.92	1.17	1.34	1.41	1.45	1.51	1.55	1.57
NOV 17	.44	.58	.66	.74	.76	.77	.78	.79	.79	.79	.79	.79
DEC 9	.26	.40	.46	.49	.54	.80	1.05	1.33	1.42	1.55	1.78	1.93
DEL RIO												
APR 15	.44	.53	.72	1.05	1.22	1.27	1.30	1.30	1.31	1.31	1.31	1.31
APR 16	.30	.36	.37	.38	.39	.40	.52	.52	.52	.52	.52	.60
JUN 11	.40	.70	.78	.82	.88	.91	.94	.98	1.03	1.04	1.04	1.04
AUG 11	.21	.41	.45	.59	.79	1.02	1.21	1.43	1.52	1.55	1.61	1.66
AUG 15	.33	.51	.53	.57	.63	.65	.68	.75	.78	.81	.83	1.07
OCT 19	.24	.40	.42	.46	.50	.51	.56	.58	.59	.59	.59	.59
NOV 15	.30	.38	.40	.42	.47	.48	.49	.50	.50	.50	.50	.50
EL PASO												
JUL 2	.19	.28	.40	.45	.56	.80	1.09	1.15	1.27	1.37	1.44	1.48
AUG 9	.33	.57	.62	.62	.62	.62	.62	.62	.62	.62	.62	.62
FORT WORTH												
JUL 2	.19	.37	.39	.42	.53	.72	.82	.82	.82	.82	.82	.82
AUG 14	.42	.67	.68	.73	.96	1.03	1.13	1.37	1.42	1.42	1.42	1.42
AUG 14	.28	.55	.66	.73	.96	1.03	1.10	1.14	1.16	1.17	1.17	1.17
AUG 25	.25	.45	.50	.65	.90	.99	1.03	1.05	1.09	1.10	1.10	1.12
SEP 2	.35	.70	.82	.96	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
SEP 24	.27	.54	.66	.68	.70	.72	.72	.72	.72	.72	.72	.72
OCT 17	.25	.42	.45	.47	.50	.52	.57	.61	.61	.61	.61	.61
OCT 18	.25	.36	.40	.44	.60	.65	.73	.77	.77	.83	.90	.94
OCT 19	.38	.75	.80	.91	.95	1.45	1.51	1.58	1.63	1.69	1.74	1.80
NOV 17	.25	.48	.55	.63	.74	.76	.79	.80	.80	.80	.80	.80
DEC 8	.32	.41	.42	.43	.44	.45	.45	.45	.45	.46	.82	.82
DEC 9	.19	.34	.41	.54	.76	.85	.93	1.06	1.13	1.17	1.30	1.35
GALVESTON U												
FEB 6	.26	.35	.45	.50	.52	.55	.59	.64	.64	.66	.73	.73
FEB 26	.42	.74	.97	1.11	1.22	1.37	1.86	2.20	2.38	2.49	2.59	2.84
APR 17	.17	.28	.38	.46	.62	.75	.84	.98	1.12	1.24	1.33	1.47
JUL 30	.34	.55	.63	.65	.65	.65	.65	.66	.66	.66	.67	.67
AUG 6	.17	.26	.32	.46	.60	.66	.68	.69	.69	.72	.72	.76
SEP 1	.23	.40	.45	.48	.52	.59	.66	.68	.73	.76	.76	.76
SEP 9	.37	.59	.74	.96	1.11	1.36	1.56	2.16	2.28	2.32	2.41	2.50
SEP 10	.29	.35	.42	.45	.45	.45	.45	.45	.45	.45	.45	.46
SEP 11	.34	.50	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51
SEP 18	.22	.34	.45	.56	.76	1.11	1.30	1.52	1.83	1.88	1.90	1.90
OCT 5	.19	.29	.40	.47	.51	.56	.57	.59	.60	.61	.64	.65
NOV 23	.33	.60	.85	1.13	1.48	1.58	1.62	1.67	1.69	1.69	1.72	1.72
DEC 5	.20	.40	.50	.58	.75	.89	.98	1.03	1.16	1.28	1.66	1.76
DEC 17	.25	.36	.48	.51	.55	.75	.78	.78	.78	.78	.78	.78
HOUSTON												
FEB 25	* .30*	.57*	.65	.70*	.74	.85*	.87	.91	.92*	.92	.92*	.93
MAR 9	* .43	.48	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
APR 16	.18	.25	.31	.43	.62	.64	.75	.88	.93*	.95	1.00*	1.18
MAY 11	.23	.32	.35	.46	.64	.70	.75	.78	.81	.87	.98	1.07
JUN 15	.35*	.65*	.70	.80*	.90	.90*	.90	.90	.90	.90	.90	.90
JUN 22	* .55*	.80*	.86	.92*	.98	1.00*	1.00	1.00	1.00*	1.00	1.00	1.00
JUL 20	.20	.35	.37	.40	.48	.50	.52	.52	.52	.52	.52	.53
AUG 2	.38	.52	.60	.64	.75	.80	.81	.82	.83	.83	.83	.83
AUG 3	.30	.48	.53	.62	.81	1.13*	1.41	1.50	1.57*	1.60	1.67*	1.70
AUG 4	.35	.55	.59	.64	.74	.82	.87	.95	1.01	1.03	1.07	1.15
AUG 10	.45*	.80*	.90	1.05*	1.52	1.78*	1.82	1.85	1.90*	1.90	1.90*	1.90
OCT 4	.25	.43	.50	.68	.78	.93	1.18	1.50	1.59	1.59	1.59	1.59
NOV 18	.29	.30	.30	.31	.35	.40	.41	.55	.57	.58	.58	.60
DEC 2	.21	.38	.42	.57	.76	.92	1.08	1.27	1.58	1.71	2.00*	2.14
DEC 16	.28	.42	.50	.52	.55	.56	.58	.65	.67	.67	.67	.67

EXCESSIVE SHORT DURATION RAINFALL

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
UTAH												
SALT LAKE CITY						NONE						
VERMONT												
BURLINGTON												
JUL 17	.28	.36	.38	.38	.39	.43	.46	.50	.56	.57	.58	.58
VIRGINIA												
LYNCHBURG												
MAY 12	.29	.38	.43	.45	.46	.46	.50	.67	.97	1.00	1.07	1.22
JUN 8	.35	.68	.94	.96	.99	1.02	1.04	1.07	1.07	1.07	1.07	1.07
JUL 6	.24	.41	.43	.44	.48	.50	.52	.54	.56	.59	.61	.63
JUL 9	.27	.40	.50	.60	.75	.86	.88	.90	.94	.95	.99	1.00
JUL 26	.25	.40	.59	.61	.61	.61	.61	.61	.61	.61	.61	.61
AUG 4	.27	.39	.51	.53	.65	.69	.71	.72	.73	.75	.75	.75
OCT 9	.18	.33	.50	.64	.72	.80	.86	1.02	1.08	1.11	1.15	1.20
NORFOLK												
MAR 15	.31	.44	.47	.47	.48	.52	.54	.54	.54	.54	.54	.55
MAY 8	.20	.40	.54	.58	.59	.63	.65	.66	.66	.67	.69	.69
JUN 5	.22	.33	.43	.51	.53	.53	.53	.53	.53	.53	.53	.53
JUL 11	.45	.67	.80	.85	.92	.95	.99	1.03	1.06	1.09	1.10	1.10
JUL 27	.32	.56	.73	.91	1.16	1.55	1.61	1.67	1.71	1.75	1.76	1.76
AUG 27	.21	.32	.35	.35	.36	.38	.38	.38	.38	.38	.48	.52
AUG 27	.14	.26	.38	.47	.61	.82	1.06	1.25	1.39	1.46	1.68	1.81
OCT 1	.17	.31	.37	.47	.57	.89	1.03	1.10	1.19	1.27	1.45	1.72
OCT 5	.33	.40	.44	.54	.55	.56	.56	.56	.56	.56	.56	.57
DEC 12	.15	.30	.41	.43	.44	.45	.45	.45	.45	.45	.45	.45
RICHMOND												
JUN 14	.35	.49	.52	.52	.53	.54	.55	.55	.55	.55	.55	.55
JUN 15	.37	.61	.73	.79	.81	.83	.84	.84	.94	.99	1.00	1.00
JUL 11	.46	.73	.86	.88	.95	.98	1.00	1.01	1.01	1.01	1.01	1.01
JUL 16	.14	.25	.37	.41	.48	.50	.50	.50	.50	.50	.50	.50
JUL 31	.32	.57	.73	.80	.85	.90	.95	.95	.98	1.02	1.02	1.02
JUL 31	.23	.34	.37	.39	.39	.39	.39	.39	.39	.39	.39	.39
AUG 4	.31	.47	.66	.82	.90	.93	.94	.95	.97	1.02	1.05	1.06
SEP 11	.30	.49	.52	.57	.68	.68	.68	.68	.68	.68	.68	.68
OCT 5	.15	.28	.38	.40	.43	.53	.68	.82	.82	.82	.83	.83
OCT 25	.26	.39	.46	.48	.49	.49	.49	.49	.49	.49	.49	.52
OCT 25	.25	.40	.61	.72	.82	.84	.87	.88	.89	.89	.89	.89
ROANOKE												
JUN 7	.40	.60	.85	1.14	1.34	1.58	1.67	1.71	1.72	1.74	1.74	1.74
JUL 1	.40	.78	.82	.84	1.03	1.11	1.11	1.14	1.15	1.15	1.15	1.15
JUL 1	.25	.32	.33	.33	.33	.33	.33	.33	.33	.33	.33	.33
JUL 6	* .71	*1.11	*1.17	1.21	1.23	1.25	1.25	1.25	1.26	1.29	1.29	1.29
JUL 29	.25	.33	.38	.40	.43	.43	.43	.44	.45	.48	.51	.51
AUG 1	.27	.34	.58	.80	.85	.85	.85	1.01	1.26	1.29	1.29	1.29
AUG 2	.66	.77	.79	1.00	1.26	1.34	1.34	1.34	1.34	1.34	1.34	1.36
SEP 11	.34	.51	.59	.76	.99	1.03	1.06	1.16	1.36	1.38	1.46	1.46
WALLOPS ISLAND												
MAY 2	* .55	*.90	*.94	.97	1.10	1.18	1.18	1.18	1.18	1.18	1.18	1.18
JUL 10	.45	.80	.80	.80	.84	.89	.94	1.15	1.22	1.22	1.22	1.22
JUL 11	.22	.39	.43	.50	.53	.53	.53	.57	.58	.58	.58	.58
OCT 25	.20	.32	.34	.39	.48	.53	.67	.76	.85	.97	1.00	1.01
WASH NATL AP												
JUN 4	.27	.50	.53	.56	.58	.58	.58	.58	.58	.58	.58	.58
JUL 1	.23	.36	.39	.42	.46	.46	.46	.46	.46	.46	.46	.46
JUL 6	.26	.46	.52	.68	.82	.95	1.12	1.15	1.16	1.16	1.22	1.25
JUL 17	.32	.59	.68	.72	.72	.72	.72	.72	.72	.72	.72	.72
JUL 18	.20	.32	.32	.33	.33	.34	.34	.34	.34	.34	.34	.34
JUL 29	.24	.40	.44	.51	.53	.56	.61	.65	.66	.69	.71	.71
JUL 30	.43	.62	.63	.63	.64	.68	.68	.69	.71	.71	.73	.73
AUG 3	.38	.65	.80	1.02	1.46	1.50	1.50	1.50	1.50	1.51	1.60	1.62
SEP 17	.29	.44	.52	.64	1.02	1.10	1.13	1.13	1.13	1.13	1.13	1.13
WASHINGTON												
OLYMPIA						NONE						
QUILLAYUTE						NONE						
SEATTLE TACOMA						NONE						
SPOKANE												
JUN 10	.17	.30	.32	.41	.46	.57	.70	.72	.72	.72	.72	.72
STAMPEDE PASS						NONE						
WALLA WALLA U												
MAY 26	.36	.70	* .93	1.19	*1.56	1.70	*1.72	1.73	1.81	*1.84	1.84	*1.84
YAKIMA						NONE						

Station and date	Maximum precipitation in inches (5 to 180 minutes)											
	5	10	15	20	30	45	60	80	100	120	150	180
WEST INDIES												
SAN JUAN P.R.												
APR 12	.35	.53	.59	.61	.70	.73	.79	.82	.82	.82	.82	.82
MAY 8	.18	.30	.32	.33	.33	.33	.33	.33	.33	.33	.33	.34
AUG 5	.23	.30	.40	.55	.61	.61	.61	.61	.61	.61	.61	.61
AUG 9	.47	.52	.53	.53	.56	.56	.56	.57	.57	.61	.62	.62
SEP 1	.20	.34	.41	.49	.58	.62	.62	.62	.63	.63	.63	.63
SEP 2	.14	.23	.30	.43	.53	.71	.71	.71	.71	.71	.71	.71
OCT 12	.30	.47	.56	.57	.58	.58	.59	.59	.59	.69	.99	1.00
WEST VIRGINIA												
BECKLEY												
JUL 9	.25	.50	.50	.50	.50	.51	.52	.53	.53	.54	.54	.54
JUL 19	.35	.62	.64	.64	.64	.64	.64	.64	.64	.64	.64	.64
CHARLESTON												
JUL 9	.46	.47	.52	.57	.99	1.07	1.07	1.07	1.07	1.07	1.07	1.07
JUL 17	.30	.32	.35	.37	.38	.38	.38	.38	.38	.38	.38	.38
JUL 19	.40	.45	.45	.45	.45	.45	.45	.45	.45	.45	.45	.47
AUG 4	.26	.42	.44	.45	.46	.46	.46	.46	.46	.46	.46	.46
SEP 6	.39	.70	.73	.84	.94	1.06	1.23	1.48	1.56	1.57	1.60	1.68
ELKINS												
JUN 5	.27	.48	.59	.61	.63	.63	.63	.64	.67	.67	.67	.67
JUN 30	.35	.40	.41	.43	.47	.49	.50	.50	.50	.50	.50	.50
JUL 9	.23	.40	.45	.57	.72	.72	.91	.94	.94	.94	.94	.94
AUG 21	.23	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34	.34
HUNTINGTON												
MAY 25	.18	.32	.33	.33	.47	.49	.53	.56	.56	.56	.56	.56
JUN 25	.19	.36	.44	.55	.67	.68	.69	.70	.74	.74	.74	.74
JUN 30	.30	.50	.51	.52	.52	.52	.52	.52	.52	.52	.52	.52
JUL 17	.21	.40	.45	.58	.67	.72	.77	.79	.79	.79	.81	.81
JUL 18	.16	.31	.38	.39	.40	.42	.42	.42	.46	.47	.47	.50
JUL 18	.32	.47	.57	.58	.60	.60	.60	.62	.78	.93	.94	.96
JUL 19	.23	.45	.47	.53	.63	.66	.69	.70	.70	.70	.73	.73
JUL 19	.51	.52	.53	.53	.53	.55	.56	.56	.57	.57	.57	.74
PARKERSBURG U												
JUN 28	.28	.41	.43	.45	.53	.83	.87	.88	.88	.88	.88	.88
JUL 1	.30	.52	.71	.89	.95	1.08	1.09	1.09	1.09	1.09	1.09	1.09
AUG 3	.22	.42	.52	.61	.88	1.03	1.09	1.14	1.18	1.22	1.26	1.28
SEP 16	.23	.36	.37	.37	.37	.37	.37	.38	.45	.45	.53	.62
WISCONSIN												
GREEN BAY												
JUN 22	.25	.32	.33	.33	.33	.33	.33	.50	.65	.65	.65	.65
JUL 8	.30	.37	.38	.40	.50	.68	.71	.73	.74	.75	.79	.79
AUG 22	.25	.41	.50	.70	.95	1.18	1.21	1.22	1.23	1.23	1.23	1.23
SEP 27	.27	.50	.55	.65	.85	.92	.95	.97	.97	.97	.97	.97
MADISON												
JUN 22	.20	.40	.53	.64	.70	.73	.74	.75	.75	.75	.75	.75
JUL 8	.17	.23	.37	.46	.56	.62	.64	.65	.65	.65	.65	.65
AUG 14	.20	.32	.48	.64	.92	1.04	1.14	1.16	1.17	1.22	1.32	1.52
AUG 22	.26	.42	.50	.54	.66	.80	.81	.81	.81	.81	.81	.81
SEP 27	.22	.37	.38	.38	.38	.41	.41	.41	.41	.41	.41	.41
MILWAUKEE												
JUN 19	.26	.36	.49	.51	.52	.53	.53	.53	.53	.53	.53	.53
JUL 8	.48	.73	.86	.96	1.08	1.14	1.18	1.20	1.22	1.24	1.56	1.67
AUG 10	.25	.39	.42	.50	.66	.70	.70	.70	.71	.71	.72	.72
WYOMING												
CASPER												
MAY 29	.56	.72	.84	1.10	1.16	1.16	1.16	1.17	1.17	1.17	1.17	1.17
CHEYENNE						NONE						
LANDER						NONE						
SHERIDAN						NONE						

Data from airport unless otherwise specified.
U Indicates Urban sites.
R Indicates Rural sites.
M No record
T Clock malfunction
* Maximum of record for this duration and station. Period of record is that compiled in Weather Bureau Technical Paper No. 2, revised, plus 1962 and 1963 data. New records are denoted only for 5, 10, 15, 30, 60, 120, and 180 minutes. The continuity of record at stations that have changed location is described on page 2 of the above reference.
District of Columbia - See Virginia.

CORRECTIONS : September 17, 1969 and January 22, 1970 - Airport Data improperly entered under Portland U.

SUNSHINE, AMOUNT AND PERCENT

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
ALABAMA																										
BIRMINGHAM	136	43	168	55	229	62	300	77	322	75	308	71	232	53	274	66	218	59	204	58	182	58	92	30	2661	60
MONTGOMERY	141	44	187	60	242	65	261	67	264	62	268	63	210	48	208	50	208	56	191	54	196	62	141	48	2526	57
ALASKA																										
ANCHORAGE	157	77	128	51	245	67	212	48	199	37	189	33	237	42	166	34	117	30	83	27	99	27	46	26	1839	41
JUNEAU	84	37	43	16	129	35	141	33	179	34	253	46	251	46	62	13	81	21	77	24	30	13	61	30	1390	31
NOME	66	39	164	69	303	83	331	73	273	47	292	46	238	39	276	54	149	38	82	27	40	21	38	30	2255	49
ARIZONA																										
PHOENIX	288	91	274	89	352	95	347	89	401	93	406	94	391	89	311	75	335	90	285	81	236	75	209	68	3833	86
TUCSON	297	93	271	88	361	97	362	93	404	95	398	93	369	85	305	74	325	88	268	76	237	75	202	64	3800	86
YUMA	279	87	271	88	337	91	364	93	383	89	414	97	406	93	349	85	346	93	310	88	250	79	229	74	3937	89
ARKANSAS																										
FORT SMITH	202	64	161	53	258	69	267	68	280	64	335	77	306	69	229	55	238	64	213	61	189	61	132	43	2809	63
LITTLE ROCK	172	55	187	61	239	64	297	76	344	79	352	81	349	79	325	78	296	80	254	72	175	56	104	34	3093	70
CALIFORNIA																										
EUREKA U	150	50	127	42	186	50	209	52	262	58	274	61	290	63	278	65	241	64	191	56	144	48	139	48	2491	56
FRESNO	172	56	214	70	323	87	344	87	327	75	429	98	431	97	394	94	353	95	307	88	212	69	122	41	3627	82
LOS ANGELES U	242	77	247	81	281	76	311	80	153	35	234	54	341	78	379	91	291	78			214	69	184	60	2878	-
RED BLUFF	188	63	227	76	257	69	346	87	347	78	402	89	443	97	412	97	352	94	297	86	195	65	153	53	3619	81
SACRAMENTO	159	52	214	71	278	75	354	89	319	72	420	94	440	97	417	99	354	95	297	86	239	79	158	54	3650	82
SAN DIEGO	219	69	217	70	290	78	278	71	244	57	247	58	297	68	316	76	263	71	275	78	204	65	204	69	3054	69
SAN FRANCISCO U	205	67	242	80	268	72	289	73	271	62	322	73	302	67	298	71	320	86	292	84	198	65	194	65	3200	72
COLORADO																										
DENVER	188	62	193	65	256	69	303	76	272	61	327	73	285	63	320	75	282	75	266	77	183	61	201	69	3077	69
GRAND JUNCTION	176	58	197	66	264	71	268	68	287	65	360	81	346	76	342	81	312	83	240	69	186	62	142	48	3118	70
PUEBLO	205	67	213	71	317	85	323	82	350	81	369	83	335	74	356	84	316	85	294	85	229	75	203	68	3518	79
CONNECTICUT																										
HARTFORD	176	59	144	49	222	60	234	58	201	44	333	73	289	63	303	71	168	45	152	44	119	40	163	57	2504	56
DIST/COLUMBIA																										
WASHINGTON NAT.L	118	39	137	45	205	55	292	74	218	49	239	54	261	58	304	72	189	51	118	34	146	42	106	36	2333	52
FLORIDA																										
APALACHICOLA U	214	66	239	77	310	83	330	85	383	91	383	91	168	39	227	55	255	69	321	90	284	89	248	78	3361	76
JACKSONVILLE	195	60	193	62	261	70	260	67	298	70	285	67	265	62	259	63	258	70	179	50	219	69	150	47	2820	63
KEY WEST	304	91	254	80	336	90	337	88	362	88	337	82	348	83	305	76	276	75	269	75	244	74	284	86	3656	82
LAKELAND U	216	66	205	65	293	79	257	67	338	81	302	72	272	64	259	64	255	69	223	63	211	65	201	62	3032	68
TAMPA	203	62	231	74	302	81	276	72	344	82	264	63	225	53	193	47	192	52	176	49	165	51	142	44	2710	61
GEORGIA																										
ATLANTA	137	43	178	58	225	60	306	78	307	71	281	65	175	40	215	52	209	56	189	54	239	76	129	42	2589	58
MACON	149	47	166	54	240	65	274	70	300	70	289	68	226	52	242	59	215	58	158	45	234	74	110	35	2603	59
SAVANNAH	146	46	186	60	267	72	305	78	325	76	327	77	270	62	266	64	261	70	168	47	219	69	133	43	2872	65
HAWAII																										
HILO	97	28	128	40	102	27	80	21	144	36	172	43	141	34	212	53	188	51	163	45	98	29	71	21	1595	36
HONOLULU	169	49	265	83	241	65	232	61	317	78	306	76	327	79	319	80	271	74	232	64	219	66	220	65	3117	70
KAHULUI	192	56	275	86	233	62	232	61	329	81	338	84	327	80	332	84	263	71	262	73	241	72	247	76	3281	74
LIHUE	151	44	190	59	149	40	122	32	288	70	247	61	271	66	287	72	212	58	176	49	101	30	78	23	2149	51
IDAHO																										
BOISE	120	41	190	65	241	65	285	71	320	70	323	70	415	89	364	84	307	82	235	69	112	38	54	19	2966	66
POCATELLO	106	36	146	49	174	47	192	48	248	55	352	77	398	86	341	79	295	79	183	54	100	34	52	19	2587	58
ILLINOIS																										
CAIRO U	107	35	149	49	228	62	298	76	265	60	287	65	279	63	278	66	224	60	196	56	176	57	93	31	2581	58
CHICAGO MIDWAY	163	55	89	30	181	49	271	68	301	67	334	73	286	62	312	73	221	59	245	71	161	55	96	34	2661	60
MOLINE	183	62	140	47	181	49	302	76	257	57	288	63	322	70	334	78	278	74	211	61	122	41	71	25	2688	60
PEORIA	163	54	141	47	237	64	322	81	302	67	376	83	341	75	298	70	241	65	219	63	126	42	65	23	2832	64
SPRINGFIELD	172	57	149	50	211	57	279	70	278	62	360	80	318	70	327	77	262	70	225	65	156	52	74	25	2810	63
INDIANA																										
EVANSVILLE	135	44	134	44	221	60	295	75	272	62	349	79	357	79	319	76	238	64	245	70	180	59	107	36	2853	64
FORT WAYNE	141	47	89	30	195	53	285	71	307	68	349	77	335	73	343	80	192	51	220	64	138	46	76	26	2669	60
INDIANAPOLIS	162	54	134	45	184	50	301	76	301	67	339	76	318	70	318	75	216	58	207	60	123	41	56	19	2657	60
IOWA																										
DES MOINES	176	59	139	47	222	60	317	79	307	68	374	82	296	64	274	64	254	68	186	54	145	49	66	23	2755	62
SIOUX CITY	181	62	176	60	246	66	300	75	291	64	335	73	353	76	365	80	243	65	189	55	147	50	114	40	2920	65
KANSAS																										
CONCORDIA	199	66	165	55	246	66	298	75	329	74	376	84	382	84	352	83	281	75	261	75	191	64	118	40	3197	72
DODGE CITY	194	63	189	62	260	70	255	64	316	72	367	81	358	80	329	78	278	74	261	75	189	62	160	54	3145	71
TOPEKA	182	60	154	51	218	58	247	62	270	61	315	71	285	63	297	70	246	66	192	55	163	54	100	34	2670	60
WICHITA	213	69	154	51	267	72	255	65	269	61	299	65	304	68	266	63	229	61	248	71	183	60	122	41	2798	63
KENTUCKY																										
LOUISVILLE	134	44	145	48	220	59	289	73	279	63	303	68	278	62	253	60	194	52	204	59	143	47	103	35	2543	57
LOUISIANA																										
SHREVEPORT	149	47	196	61	208	56	220	56	227	53	299	70	262	60	232	56	225	61	200	57	202	64	106	34	2525	57
MAINE																										
PORTLAND	187	64	161	55	224	61	186	46	182	40	332	72	317	68	304	70	230	61	205	60	148	51	157	56	2634	59
MARYLAND																										
BALTIMORE	134	44	154	51	214	58	286	72	209	47	260	58	306	68	290	68	176	47	116	33	172	57	122	41	2439	55
MASSACHUSETTS																										
BLUE HILL OBS R	162	57	130	46	193	54	188	49			337	77	280	63	304	73	184	51	197	60	118	42	138	50	2230	-
BOSTON	194	66	164	55	253	68	243	60	213	47	347	78	327	71	325	76	220	59	234	68	125	43	146	52	2801	63
MICHIGAN																										
ALPENA	112	39	123	42	223	60	220	54	288	62	310	66	288	61	270	62	200	53	163	48	68	24	76	28	2341	52
DETROIT METRO.	106	36	72	24	164	44	240	60	310	69	303	66	301	65	309	72	207	55	201	59	129	44	86	30	2427	54
GRAND RAPIDS	97	33	81	27	157	42	244	61	313	69	336	73	328	71	328	76	179	48	159	46	87	30	43	15	2350	53
LANSING	112	38	105	36	175	47	262	65	319	70	344	79	358	77	350	81	199	53	188	55	105	36	74	26	2611	59
MARQUETTE U	108	39	141	49	199	54	275	67	271	58	300	63	335	70	300	68	189	50	95	28	51	18	87	33	2352	53
SAULT STE MARIE	128	46	144	50	235	64	248	60	300	65	271	57	326	68	277	63	173	46	118	35	59	21	49	18	2325	52

SUNSHINE, AMOUNT AND PERCENT

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
MINNESOTA																										
DULUTH	130	46	138	48	200	54	270	66	241	52	246	52	303	63	296	67	231	61	110	33	64	23	71	27	2302	52
MINNEAPOLIS	150	52	143	49	192	52	285	70	318	69	313	67	378	80	340	78	241	64	158	47	96	33	67	24	2681	60
MISSISSIPPI																										
JACKSON	153	48	195	63	261	70	267	69	315	74	317	74	306	70	282	68	221	59	212	60	202	64	94	30	2824	64
MISSOURI																										
COLUMBIA REGIONAL	174	57	148	49	234	63	283	71	291	66	347	78	309	68	310	73	242	65	229	66	174	57	83	28	2824	63
KANSAS CITY	220	72	180	60	290	78	315	79	300	68	309	69	292	64	349	83	274	73	210	61	161	53	88	30	2987	67
ST LOUIS	184	61	166	55	235	63	294	74	255	58	297	67	278	62	272	64	279	75	228	66	183	60	95	32	2766	62
SPRINGFIELD	185	60	151	50	267	72	290	73	314	72	355	81	360	80	354	84	250	67	211	61	172	56	105	35	3015	68
MONTANA																										
BILLINGS	68	24	153	53	262	71	238	59	276	60	328	70	382	80	341	78	253	67	162	48	129	45	86	32	2679	60
GREAT FALLS	105	38	146	51	253	69	261	64	300	64	318	67	408	85	354	80	248	66	206	61	123	44	95	36	2818	63
HAVRE	100	37	191	67	288	78	282	69	357	76	382	79	428	88	385	87	295	78	238	71	110	40	135	52	3192	71
HELENA	68	24	115	40	252	68	255	62	268	57	285	60	398	83	332	76	278	74	216	64	123	44	83	31	2674	60
MISSOULA	63	22	116	40	193	52	268	66	315	68	297	63	419	87	384	87	261	69	181	54	70	25	56	21	2623	59
NEBRASKA																										
LINCOLN U	181	61	178	60	220	59	253	63	258	57	337	75	342	75	294	69	234	63	202	59	160	54	92	32	2783	62
NORTH PLATTE	169	57	166	56	230	62	253	63	249	55	337	74	371	81	320	75	252	67	253	73	156	52	160	56	2916	65
OMAHA	167	56	154	52	265	72	273	68	253	56	374	83	375	82	311	73	227	61	180	52	128	43	78	27	2784	62
VALENTINE	179	61	162	55	182	49	216	54	257	57	298	65	332	71	350	81	244	65	227	66	114	39	144	51	2704	61
NEVADA																										
ELY	208	69	215	71	330	89	302	76	307	69	383	86	367	81	320	75	338	91	249	72	208	69	177	60	3402	76
LAS VEGAS	284	91	272	89	344	93	360	91	362	83	429	98	422	95	326	78	361	97	306	87	230	75	189	63	3558	87
RENO	202	67	181	60	254	69	252	63	262	59	370	83	421	93	396	93	356	95	277	80	197	65	168	58	3335	75
WINNEMUCCA	189	63	244	82	284	77	316	79	332	74	397	88	421	92	358	84	323	86	237	69	147	49	120	42	3367	76
NEW HAMPSHIRE																										
CONCORD	192	66	172	58	254	68	236	59	236	52	336	73	332	71	300	69	188	50	175	51	141	48	141	50	2702	61
MT WASHINGTON OBS	93	32	108	36	136	36	108	26	190	41	198	42	172	36	151	34	112	29	149	43	87	29	100	35	1601	35
NEW JERSEY																										
ATLANTIC CITY	130	43	129	43	222	60	262	66	204	46	275	61	291	64	284	67	186	50	102	30	138	46	81	28	2304	52
TRENTON U	160	53	156	52	213	57	265	66	205	46	284	63	311	68	291	68	160	43	149	43	151	50	130	45	2473	56
NEW MEXICO																										
ALBUQUERQUE	272	87	251	82	312	84	320	82	368	85	358	82	349	79	308	74	292	79	274	78	238	77	173	57	3516	79
ROSWELL	238	75	235	76	333	90	337	86	358	83	352	82	332	76	300	73	262	70	258	73	208	66	194	63	3406	77
NEW YORK																										
ALBANY	173	59	116	39	203	55	220	55	228	50	320	70	298	64	269	63	156	42	145	42	111	38	128	45	2366	53
BINGHAMTON	139	47	114	39	160	43	197	49	244	54	345	76	302	65	270	63	144	38	138	40	87	29	74	26	2215	50
BUFFALO	105	36	77	26	174	47	236	59	271	60	338	74	335	72	295	68	187	50	194	57	91	31	77	27	2382	53
NEW YORK U	171	57	137	46	200	54	271	68	219	49	282	63	282	62	297	70	150	40	155	45	133	45	122	42	2419	54
ROCHESTER	132	45	93	32	169	46	236	59	293	64	293	64	321	69	280	65	162	43	184	54	93	32	94	33	2349	53
SYRACUSE	95	32	118	40	181	49	230	57	258	57	305	66	320	69	271	63	166	44	159	47	79	27	86	31	2268	51
NORTH CAROLINA																										
ASHEVILLE	156	50	198	65	275	74	344	88	316	73	308	71	280	63	276	66	211	57	187	53	235	76	189	62	2973	67
CAPE HATTERAS R	135	43	203	67	247	67	293	75	266	61	257	59	220	50	236	57	206	55	125	36	170	55	111	36	2469	56
CHARLOTTE	117	37	170	56	235	63	312	80	323	74	333	77	297	67	306	73	246	66	163	46	214	69	143	47	2859	64
GREENSBORO	148	48	193	63	259	70	312	79	273	62	272	62	240	54	255	61	214	58	154	44	197	64	150	49	2665	60
RALEIGH	117	38	208	68	244	66	302	77	261	60	267	61	230	52	240	57	199	53	121	35	247	80	182	60	2619	59
WILMINGTON	152	48	186	61	255	69	304	78	311	72	285	66	246	56	241	58	228	61	143	41	212	68	129	42	2693	61
NORTH DAKOTA																										
BISMARCK	183	65	182	63	242	65	274	67	329	71	287	61	403	84	382	87	246	65	182	54	106	37	79	30	2893	65
FARGO	140	50	163	56	162	44	289	71	315	68	277	58	368	77	394	90	289	77	158	47	76	27	106	40	2735	61
WILLISTON	165	60	206	72	193	52	195	48	351	74	291	61	364	75	360	81	218	58	181	54	87	31	123	47	2734	61
OHIO																										
CINCINNATI OBS	122	40	111	37	205	55	265	67	236	53	255	57	163	36	158	37	207	56	205	59	125	42	57	19	2110	47
CLEVELAND	125	42	108	36	161	43	243	61	320	71	296	69	305	66	293	68	178	48	208	60	77	26	96	34	2410	54
COLUMBUS	91	30	81	27	142	38	246	62	238	53	263	58	289	63	251	59	193	52	200	58	130	43	72	25	2197	49
DAYTON	131	44	106	35	170	46	292	73	287	64	348	78	319	70	301	71	211	56	207	60	138	46	67	23	2578	58
TOLEDO	108	36	99	33	188	51	291	73	313	69	313	69	317	69	323	75	181	48	198	58	116	39	76	26	2519	57
OKLAHOMA																										
OKLAHOMA CITY	227	73	196	64	309	83	264	67	291	67	330	76	334	75	282	68	259	70	201	57	184	59	119	39	2993	67
TULSA	208	67	159	52	292	79	258	65	305	70	326	75	309	70	299	72	237	64	184	53	172	56	97	32	2846	64
OREGON																										
PORTLAND	23	8	83	28	168	46	240	59	268	58	254	54	341	72	331	76	245	65	146	43	31	11	25	8	2155	48
PACIFIC AREA																										
GUAM TAGUAC R	119	34	187	57	178	54	165	44	155	39			143	36	210	54	147	40	125	34	64	19	243	69	1737	-
JOHNSTON	233	67	266	82	229	61	223	59	268	67	225	57	331	82	348	88	283	77	230	63	251	74	230	67	3115	70
KOROR R	214	59	160	48	200	53	274	74	233	60	208	55	235	61	223	58	199	54	109	29	166	47	176	49	2396	54
MAJURO	228	63	234	70	294	79	141	38	164	43	172	46	239	62	234	61	238	65	193	52	211	60	153	42	2501	57
PAGO PAGO	198	50	105	30	253	67	194	55	168	47	181	53	218	62	227	63	242	67	269	70	257	67	204	51	2515	57
PONAPE R	188	52	167	50	253	68	220	60	204	53	125	33	146	38	164	43	122	33	103	28	177	50	139	38	2008	45
TRUK MOEN ISLAND	258	71	226	68	275	73	267	72	246	64	243	65	257	66	281	73	247	68	261	70	258	73	246	68	3063	69
WAKE	267	78	206	64	290	78	267	71	323	80	298	75	302	74	256	65	203	55	254	70	211	62	165	49	3041	69
YAP R	309	86	270	82	330	88	321	87	340	87	329	86	218	56	261	68	246	67	211	57	218	62	243	68	3296	74
PENNSYLVANIA																										
HARRISBURG	148	49	117	39	178	48	241	61	220	49	291	66	280	61	272	64	152	41	137	40	96	32	121	42	2212	50
PHILADELPHIA	153	51	126	42	219	59	266	67	204	46	301	67	330	72	297	70	169	45	149	43	171	57	134	46	2518	56
PITTSBURGH	79	26	82	28	160	43	218	55	220	49	250	55	288	63	285	67	144	38	199	58	131	44	65	22	2121	48
PITTSBURGH U	74	25	84	28	137	37	190	48	205	46	226	50	245	54	256	60	133	36	192	56	122	41	65	22	1929	43
SCRANTON	179	60	128	43	172	46	225	56	219	49	301	66	310	68	288	67	160	43	142	41	76	26	109	38	2307	52
RHODE ISLAND																										
PROVIDENCE	185	62	154	52	210	57	209	52	195	43	311	68	312	68	315	74	184	49	192	56	116	39	135	47	2517	56
SOUTH CAROLINA																										
CHARLESTON	183	58	197	64	269	72	284	73	315	73	303	71	284	65	267	64	257	69	199	56	236	75	181	58	2974	67
COLUMBIA	133	42	164	53	261	70	303	77	314	73	285	66	260	59	243	59	204	55	139	40	209	67	121	39	2635	59
GNVLE-SPARTANBURG	120	38	170	55	241	65	293	75	261	60	204	47	184	42	227	54	184	49	160	46	203	65	128	42	2373	53

SUNSHINE, AMOUNT AND PERCENT

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible	Hours	Percent of possible
SOUTH DAKOTA																										
HURON	165	57	200	68	217	59	298	74	339	74	360	78	381	81	385	89	263	70	184	54	153	53	106	38	3052	68
RAPID CITY	141	49	166	57	206	56	222	55	292	64	314	68	358	76	357	82	231	61	190	56	185	64	193	70	2855	64
TENNESSEE																										
CHATTANOOGA	101	32	141	46	197	53	289	74	270	62	287	69	174	39	217	52	173	46	178	51	169	56	90	30	2256	51
KNOXVILLE	126	40	159	52	213	57	302	77	245	56	240	59	196	44	245	59	161	43	166	48	150	48	53	17	2273	51
MEMPHIS	157	50	184	60	254	69	301	77	318	73	343	79	301	68	329	79	269	72	248	71	200	65	140	46	3045	68
NASHVILLE	97	31	151	50	209	56	288	73	295	68	304	69	279	63	260	62	226	61	205	59	177	57	97	32	2587	58
TEXAS																										
ABILENE	269	84	226	73	318	86	284	73	325	76	346	81	347	80	252	61	251	68	176	50	204	65	168	54	3166	71
AMARILLO	232	74	225	74	317	85	328	84	368	85	372	86	375	85	346	83	276	74	263	74	210	68	171	56	3484	78
AUSTIN	188	58	190	61	261	70	225	58	204	48	230	55	327	76	206	50	176	48	156	44	196	61	106	33	2464	55
BROWNSVILLE	144	43	192	61	274	73	241	63	251	60	273	66	333	79	277	69	183	50	191	53	156	48	132	40	2647	60
CORPUS CHRISTI	173	52	199	63	253	68	235	61	246	59	294	71	380	90	229	56	169	46	213	60	184	57	125	39	2699	61
DALLAS	243	76	203	66	296	80	253	65	258	60	296	69	286	66	208	50	231	62	170	48	183	58	118	38	2745	62
EL PASO	277	86	294	95	367	99	370	95	404	94	399	94	384	88	347	84	321	87	258	73	258	82	215	69	3893	88
GALVESTON U	151	46	197	63	186	50	172	44	176	42	266	63	296	69	263	64	240	65	234	66	219	68	118	37	2517	57
HOUSTON INTERCON	179	55	181	58	204	55	222	57	217	51	273	65	319	74	231	56	185	50	196	55	187	58	87	27	2481	56
PORT ARTHUR	137	42	181	58	198	53	240	62	258	61	314	74	314	73	305	75	226	61	209	59	223	70	116	37	2722	61
SAN ANTONIO	204	63	206	64	300	81	242	62	252	60	246	58	351	82	225	55	200	54	172	48	189	59	123	38	2708	61
UTAH																										
SALT LAKE CITY	119	40	175	59	262	71	257	64	301	67	392	87	424	93	356	83	318	85	201	58	159	53	120	42	3083	69
VERMONT																										
BURLINGTON	164	57	172	59	241	65	217	54	302	66	360	78	354	75	291	67	208	55	184	54	63	22	66	24	2621	59
VIRGINIA																										
LYNCHBURG	131	49	170	56	255	69	315	80	221	50	229	52	251	56	251	60	148	40	138	40	179	58	129	43	2437	55
NORFOLK	103	33	186	61	232	63	323	82	311	71	321	73	297	66	287	68	247	66	97	28	183	60	161	54	2747	62
RICHMOND	103	34	163	54	236	64	310	78	253	57	258	58	289	65	284	67	192	52	104	30	186	61	131	44	2508	56
WASHINGTON																										
QUILLAYUTE	47	17	100	35	107	29	164	40	177	37	91	19	241	50	264	60	170	45	115	34	46	16	43	17	1565	35
SEATTLE-TACOMA	41	15	103	36	143	39	222	54	204	43	148	31	297	62	337	76	234	62	105	31	56	20	15	6	1904	43
SPOKANE	54	19	105	37	153	41	198	48	298	59	269	56	397	82	388	88	265	70	190	56	48	17	68	26	2393	54
WALLA WALLA U	60	21	92	32	136	37	218	54	277	60	249	55	410	86	372	85	272	72	179	53	59	20	26	10	2361	53
WEST INDIES																										
SAN JUAN P.R.	198	57	255	79	334	89	231	61	202	50	251	63	307	76	277	70	272	74	179	49	205	60	184	54	2895	65
WEST VIRGINIA																										
PARKERSBURG U	97	32	109	36	160	43	258	65	234	53	245	55	247	54	247	58	130	35	189	55	130	43	81	27	2126	48
WISCONSIN																										
GREEN BAY	148	51	125	43	189	51	252	62	267	58	294	63	293	62	292	67	174	46	110	32	82	28	83	30	2310	52
MADISON	157	54	112	38	191	52	254	63	284	63	313	68	277	59	295	68	231	61	183	53	112	38	86	31	2496	56
MILWAUKEE	157	54	122	41	194	52	260	65	301	66	333	72	365	79	333	77	254	68	198	58	135	46	99	35	2750	62
WYOMING																										
CHEYENNE	205	69	212	71	265	72	241	60	221	49	308	68	280	61	316	74	253	68	229	67	148	50	171	59	2848	64
LANDER	176	60	214	72	304	82	290	72	313	69	353	77	333	72	336	78	278	74	188	55	193	66	166	59	3144	71
SHERIDAN	98	34	143	49	246	67	251	62	290	63	319	68	369	78	371	85	247	66	157	46	121	42	152	55	2759	62

Data from airport unless otherwise specified.
"U" indicates Urban, "R" indicates Rural, sites.

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow*: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow * 1.0 inch or more	Thunderstorms	Heavy fog	Max temp: 90°F and above	32°F and below	Min temp: 32°F and below	0°F and below
	°F	°F	°F	°F		°F		Base 65 °F	Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			Tenths											
ALABAMA																																				
BIRMINGHAM	73.0	50.7	61.9	98	JUN 14	10	FEB 10	2765	1753	57.79	3.85	FEB 4-5	.8	.7	FEB 12-13	80	84	57	63	6.3	.3	33	38	SW	FEB 4	5.9	102	109	154	132	0	83	14	31	3	54	0
HUNTSVILLE	71.4	50.3	60.9	97	JUN 26	8	FEB 9	3026	1638	55.82	3.86	FEB 21-22	2.9	1.2	FEB 12 +	82	86	59	64	7.7	.2	18	30	28	FEB 4	6.0	106	98	161	127	2	64	22	27	5	56	0
MOBILE	78.9	59.5	69.2	98	JUN 14	21	FEB 10	1270	2918	55.17	2.90	SEP 4-5	T	T	MAR 3	85	88	59	70	9.4	.9	9	35	32	MAY 8	6.1	91	103	171	127	0	87	55	84	0	11	0
MONTGOMERY	76.1	53.8	65.0	97	JUL 14+	16	FEB 10	2106	2214	53.45	3.19	DEC 2-3	T	T	NOV 23 +	83	87	58	66	6.5	.6	27	38	W	FEB 26	5.7	118	98	149	122	0	74	31	71	0	34	0
ALASKA																																				
ANCHORAGE	38.9	25.6	32.3	75	JUL 10	-24	MAR 7	11879	1	14.88	.84	AUG 7-8	70.6	7.7	FEB 28	73	78	77	67	6.9	.1	11	61	3	JAN 15	7.5	64	53	248	131	24	1	13	6	128	198	54
ANNETTE	49.6	37.9	43.8	86	JUL 27	6	JAN 10	7680	53	98.03	3.24	OCT 4-5	136.4	14.0	APR 1	82	84	78	73	10.4	4.1	13	46	13	MAR 1	8.0	36	67	262	224	35	2	12	22	20	107	0
BARROW	12.8	2.5	7.7	63	JUL 19	-52	MAR 2	20836	0	3.07	.37	JUL 13-14	21.5	2.4	AUG 18-19	82	84	83	80	11.3	4.0	7	35	7	NOV 11+		V69	V57	V173	61	8	0	63	0	264	320	185
BARTER ISLAND	13.0	1.6	7.3	65	JUL 27	-48	FEB 4+	20966	0	7.43	1.64	JUL 28	59.1	8.9	OCT 2	80	80	79	78				67	27	DEC 19		X59	X70	X181	79	19	0	90	0	240	309	177
BETHEL	32.2	18.1	25.2	78	JUL 5	-37	JAN 31	14439	0	16.36	2.02	SEP 27-28	60.6	4.0	JAN 3-4	83	89	87	78	13.2	1.7	1	43	20	DEC 17	7.4	70	50	245	156	21	1	56	8	161	228	91
BETTLES	27.2	8.2	17.7	88	JUN 24	-68	JAN 24	17241	83	13.77	.79	JUL 20-21	108.6	6.2	JAN 4-5			66					29	8	MAR 24+	6.5	81	109	175	111	35	7	6	34	195	246	150
BIG DELTA	32.8	14.6	23.7	85	JUN 23	-58	JAN 25+	15032	22	10.23	.55	JUN 20-21	54.0	3.0	APR 18-19	71		73	65				40	11	DEC 12+	7.1	61	92	212	105	20	3	16	35	170	222	117
COLD BAY	39.5	29.7	34.6	71	AUG 5+	-13	MAR 12	10991	0	37.10	2.10	JUN 9-10	61.6	9.2	JAN 2-3	86	88	87	81	18.4	3.4	24	56	18	MAR 15	8.9	10	47	308	211	17	0	38	2	79	195	11
FAIRBANKS	32.8	14.7	23.8	89	JUN 24	-60	JAN 19+	15055	89	12.31	.85	DEC 17	96.5	11.4	DEC 17	57	64	61	53	6.4	.9	34	30	21	JUN 1+	7.5	46	84	235	119	32	2	28	45	178	218	129
GULKANA	34.4	14.0	24.2	85	JUN 23	-57	JAN 18	14830	12	13.54	2.01	AUG 13-14	62.5			65		72	57				52	4	JAN 15	7.0	61	92	212	109	20	5	19	26	150	239	111
HOMER	40.8	26.9	33.9	74	JUL 11	-21	MAR 5	11277	1	22.29	1.09	OCT 9-10	111.5	9.0	MAR 1-2	77	84	79	71				35	4	MAY 20	7.3	65	67	233	157	34	0	17	3	87	210	27
JUNEAU	44.8	31.3	38.1	81	JUL 9	-14	JAN 25	9729	0	48.63	1.78	AUG 2-3	188.7	16.7	MAR 5-6	86	91	84	77	8.2	5.1	10	37	19	NOV 17	8.4	40	37	288	215	51	1	19	21	72	181	21
KING SALMON	37.9	22.0	30.0	85	JUL 11	-42	MAR 13	12694	5	24.31	1.36	SEP 28	59.4	5.1	FEB 20-21	70	76	75	63	10.6	1.1	11	48	9	MAY 31+	7.7	55	59	251	160	23	4	21	11	104	205	70
KOTZEBUE	24.9	11.5	18.2	83	JUN 26	-45	MAR 10	16979	16	6.96	1.12	JUL 9-10	55.9	3.6	DEC 22-23	75	78	76	73	13.9	3.3	8	54	11	DEC 22	6.4	99	74	192	94	22	0	7	0	217	252	130
MC GRATH	32.5	13.1	22.8	88	JUN 24	-60	JAN 23+	15348	29	17.28	.96	OCT 15-16	146.6	10.5	OCT 7-8	72	83	79	64	5.0	.6	32	30	9	MAR 16	7.5	56	69	241	148	39	9	12	34	173	229	123
NOME	29.5	14.3	21.9	78	JUN 28+	-46	MAR 11	15620	4	8.94	.51	SEP 28-29	41.6	3.8	NOV 5	72	74	72	69	10.5	3.3	6	51	4	FEB 5	6.5	105	59	201	106	10	1	21	8	192	240	103
ST. PAUL ISLAND	35.2	26.0	30.6	59	AUG 2	-19	MAR 14	12439	0	21.13	1.07	AUG 20-21	77.0	3.3	MAY 8-9	90	91	90	87	19.2	3.4	36	72	6	MAR 15	8.5	25	63	277	216	24	0	90	0	121	232	26
SHEMYA	40.2	34.6	37.4	52	AUG 21+	7	FEB 21	9961	0	34.42	1.75	AUG 19	45.5	3.4	DEC 5-6 +	77	78	78	76	19.0	2.3	27	75	23	DEC 23	8.9	5	59	301	199	18	0	70	0	43	153	0
SUMMIT	29.7	14.3	22.0	81	JUN 25+	-46	JAN 18	15643	0	16.09	.95	JUN 29-30	181.2	12.5	NOV 17-18	75	80	76	69	11.4	4.7	6	48	10	MAR 6+	7.5	63	58	244	149	48	10	16	9	188	269	109
TALKEETNA	39.0	18.1	28.6	84	JUL 10+	-46	JAN 24	13221	3	31.22	1.58	AUG 8	173.4	12.3	FEB 5-6	77		74	63				24	4	JAN 15					153	48	7	4	29	139	237	88
UNALAKLEET	28.7	15.4	22.1	72	JUL 19	-50	MAR 11	15559	0	12.28	.66	SEP 28-29+	43.5	4.7	DEC 22-23				69				53	11	MAR 16					140	12	2	17	3	191	235	104
YAKUTAT	42.3	28.3	35.3	83	JUL 9	-17	JAN 17	10740	0	136.26	6.00	SEP 15-16	338.7	23.5	JAN 3	88	91	86	79	7.8	4.4	11	40	13	OCT 28	8.4	36	35	294	253	69	0	14	7	67	215	21
ARIZONA																																				
FLAGSTAFF	58.9	28.3	43.6	92	JUN 23	-22	JAN 4	7826	153	21.01	2.19	OCT 16-17	78.5	11.4	OCT 16-17	59	66	39	38	7.2	2.9	21	29	21	FEB 25	4.1	182	94	89	75	25	61	17	6	29	237	16
PHOENIX	84.4	56.6	70.5	114	JUL 11	19	JAN 7	1532	3651	3.59	.69	SEP 29	.0	.0		35	48	29	20	7.7	.9	17	52	SE	SEP 1	3.0	223	88	54	26	0	21	0	154	0	17	0
TUCSON	79.9	52.1	66.0	108	JUL 11	17	JAN 6	2035	2510	12.17	1.00	AUG 3	6.8	6.8	DEC 8	45	54	32	26	9.1	2.9	19	71	SE	JUL 16	3.3	221	78	66	50	1	45	1	113	0	32	0
WINSLOW	71.1	38.6	54.9	109	JUL 13	-15	JAN 6	4993	1416	6.23	1.17	SEP 29	12.9	4.2	DEC 7	46	56	35	27	8.2	3.9	22	63	29	FEB 25	3.8	190	102	73	48	4	33	0	82	12	140	6
YUMA	84.4	57.5	71.0	114	SEP 12	24	JAN 8	1317	3595	2.46	1.27	SEP 29	.0	.0		42	54	32	23	7.9	.9	25	42	W	APR 17	2.5	252	69	44	14	0	8	1	150	0	7	0
ARKANSAS																																				
FORT SMITH	72.7	49.1	60.9	103	JUL 14	9	FEB 9	3211	1835	42.26	5.78	DEC 9-10	6.7	2.8	NOV 22-23	78	83	55	55	7.6	1.1	7	45	SW	DEC 14	5.9	109	111	145	101	4	61	25	69	3	74	0
LITTLE ROCK	73.1	50.8	62.0	100	JUL 15	11	FEB 9	2933	1939	48.56	3.80	AUG 2-3	13.1	6.7	MAR 2-3	82	86	59	62	7.9	.8	21	57	SW	FEB 4	5.7	117	105	143	101	3	57	27	64	5	51	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow*: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 a.m. EST	7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow * 1.0 inch or more	Thunderstorms	Heavy fog	Max temp: 90°F and above	32°F and below	Min temp: 32°F and below	0°F and below
CALIFORNIA	°F	°F	°F	°F		°F		Base 65 °F	Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			Tenths										
BAKERSFIELD	76.4	52.9	64.7	109	AUG 11+	26	DEC 17	2432	2421	5.77	1.40	MAY 26-27	.0	.0		55	67	51	37	7.6	2.7	35	35	10	DEC 27	3.5	212	72	81	30	0	3	23	110	0	20	0
BISHOP	73.7	37.0	55.4	106	JUL 27	8	DEC 11+	4595	1199	3.67	1.29	DEC 22-23	2.0	1.8	DEC 27				28	19						3.6	193	115	57	26	1			97	0	157	0
BLUE CANYON	56.1	40.6	48.4	94	AUG 10	11	MAR 1	6466	502	54.57	4.46	MAR 25-26	257.7	24.4	DEC 24-25				50				39	27	MAR 25+	4.4	178	66	122	98	54			4	33	130	0
EUREKA U	55.9	45.6	50.8	74	SEP 16	31	JAN 3	5124	2	38.76	2.35	NOV 9-10	T	T	FEB 27 +								42	N	APR 24	7.0	76	82	207	130	0			0	0	4	0
FRESNO	75.5	47.2	61.4	108	AUG 2	22	JAN 5	2995	1770	6.99	.93	APR 17	T	T	JAN 12	67	82	58	40	7.4	2.9	30	35	NW	FEB 25	3.4	218	67	80	41	0	2	36	115	0	44	0
LONG BEACH	74.9	53.8	64.4	108	SEP 12	31	JAN 7	1575	1454	8.84	1.77	DEC 23-24	.0	.0		71	77	58	52	6.7	2.2	24	30	32	MAR 13+	4.3	171	110	84	32	0	2	30	47	0	3	0
LOS ANGELES	69.3	54.9	62.1	101	OCT 6+	35	JAN 5	1794	839	8.30	2.25	DEC 27	T	T	DEC 27	76	79	62	64	8.2	3.8	25	43	11	APR 17+	4.4	162	120	83	30	0	1	18	9	0	0	0
LOS ANGELES U	74.2	56.0	65.1	106	SEP 13	35	JAN 5	1424	1557	9.26	2.70	DEC 24-25	.0	.0									33	NW	FEB 25	3.4	214	98	53	25	0			41	0	0	0
MT SHASTA R	60.2	36.3	48.3	101	AUG 11	9	DEC 28	6365	347	27.12	2.40	JAN 14-15	103.8	15.5	DEC 21-22	68	77	59	50											94	25			24	11	156	0
OAKLAND	62.7	49.5	56.1	96	SEP 14	33	JAN 7+	3279	140	10.61	1.28	MAR 25-26	T	T	JAN 13	78	82	71	65	9.0	5.1	28	31	15	DEC 26	4.3	170	108	87	58	0	3	10	4	0	0	0
RED BLUFF	74.1	48.8	61.5	118	AUG 10	27	FEB 26+	3034	1847	13.10	1.98	JAN 15-16	T	T	DEC 25 +	56	65	49	36	9.1	1.0	33	47	S	OCT 19	4.3	182	71	112	59	0	3	16	97	0	30	0
SACRAMENTO	72.8	46.7	59.8	108	AUG 10	26	MAR 6+	3085	1274	9.78	1.06	DEC 24-25	.0	.0		70	79	61	43	7.8	2.9	21	38	N	JAN 2	4.0	196	75	94	47	0	1	43	87	0	28	0
SANDBERG R	62.6	44.0	53.3	95	SEP 15+	14	DEC 8+	5125	957	13.65	2.88	DEC 26-27	51.8	20.6	DEC 26-27	54		47	45				60	36	MAR 31	3.6	213	65	87	41	14			16	12	86	0
SAN DIEGO	69.1	56.0	62.6	101	OCT 6	33	JAN 5	1657	866	8.68	1.12	FEB 16-17	.0	.0		71	74	61	60	7.4	3.5	27	30	SE	DEC 27+	5.0	148	104	111	39	0	5	24	0	0	0	0
SAN FRANCISCO	63.8	47.5	55.7	103	SEP 14	31	JAN 5+	3468	153	9.80	1.48	MAR 11-12	T	T	JAN 13	78	84	68	62	10.7	7.4	28	40	28	MAY 20	4.2	183	97	85	52	0	0	10	5	0	2	0
SAN FRANCISCO U	61.2	49.9	55.6	101	SEP 14	39	JAN 4	3468	108	12.32	1.36	MAR 12	.0	.0				76					33	W	MAY 20					55	0			3	0	0	0
SANTA MARIA	66.3	42.9	54.6	98	SEP 13	22	FEB 27	3793	104	6.62	.86	DEC 26-27	.0	.0				60	61							3.7	206	97	63	40	0			5	0	47	0
STOCKTON	73.6	47.8	60.7	109	AUG 10	26	JAN 6+	3010	1568	10.61	1.40	DEC 24-25	T	T	FEB 27	65	73	56	42	8.2	4.4	29	36	34	OCT 28	4.1	188	72	105	56	0	1	40	96	0	26	0
COLORADO																																					
ALAMOSA	58.3	22.5	40.4	93	JUL 13	-40	JAN 6	8900	46	8.77	1.57	JUL 18-19	43.0	7.6	DEC 7-8	68	76	41	37							4.3	159	134	72	80	14			1	43	245	49
COLORADO SPRINGS	60.7	35.2	48.0	98	JUL 12	-16	JAN 6+	6553	464	11.86	1.12	MAY 29	42.7	8.9	SEP 17	60	65	39	39	10.0	2.3	4	52	27	MAY 28	4.8	145	115	105	83	8	40	14	13	28	161	6
DENVER	64.4	34.5	49.5	101	JUL 17+	-16	JAN 6	6221	453	10.96	1.39	APR 21-22	46.2	13.2	SEP 16-17	66	72	43	43	8.1	.9	16	47	SE	APR 18	5.3	115	136	114	78	19	29	19	38	24	170	10
GRAND JUNCTION	68.0	38.6	52.3	105	JUL 13	-15	JAN 7	5827	1313	6.00	.65	OCT 16-17	20.8	3.9	NOV 28	50	60	42	34	9.2	1.9	14	43	W	MAR 17	5.0	147	104	114	66	6	21	1	39	24	147	9
PUEBLO	69.0	36.4	52.7	105	JUL 12+	-17	JAN 7+	5361	998	8.28	1.00	SEP 16-17	41.6	7.5	SEP 17-18	55	66	37	32	9.7	1.1	34	63	NW	NOV 13	4.9	149	114	102	63	12	28	13	44	14	163	6
CONNECTICUT																																					
BRIDGEPORT	60.0	44.6	52.3	91	AUG 9	4	JAN 19	5338	829	57.28	5.95	JUL 19	16.5	3.8	JAN 1	74	73	58	65	12.3	5.5	29	55	12	AUG 28	6.0	101	116	158	109	7	21	28	4	20	94	0
HARTFORD	60.5	40.0	50.3	98	JUN 30	-13	JAN 20	6140	882	44.75	3.01	AUG 27-28	57.7	8.7	JAN 1	74	75	52	60	8.3	2.7	28	47	NW	MAR 4	6.5	81	111	173	126	15	28	33	24	36	194	12
DELAWARE																																					
WILMINGTON	64.0	46.0	55.0	95	JUL 8	3	FEB 1	4698	1173	52.24	4.11	AUG 27-28	9.0	5.9	JAN 31-1	77	77	55	66	9.3	2.5	30	46	36	AUG 28	6.5	81	103	181	112	3	33	37	14	19	89	0
DIST. OF COLUMBIA																																					
WASHINGTON DULLES	65.6	43.4	54.5	94	JUL 8	5	JAN 29	4764	1064	46.61	3.39	OCT 25	13.3	15.4	JAN 31-1	82	81	56	67	6.9	1.8	29	38	30	JAN 26	6.5	90	99	176	103	3	20	42	20	13	112	0
WASHINGTON NATIONAL	66.7	49.1	57.9	93	AUG 21+	11	FEB 7	3995	1523	46.02	3.79	AUG 27	9.0	9.3	JAN 31-1	72	74	54	59	9.6	1.9	29	47	NW	JAN 26	6.3	95	105	165	104	2	35	19	29	11	77	0
FLORIDA																																					
APALACHICOLA U	76.5	61.9	69.2	94	JUN 21	26	JAN 20	1168	2802	39.62	3.21	OCT 9-10	.0	.0									33	SW	MAR 19	5.2	132	138	115	109	3	13	47	23	1	5	0
DAYTONA BEACH	80.6	60.8	70.7	96	JUN 21+	23	JAN 21	775	2980	46.23	4.39	FEB 7-8	.0	.0		83	85	57	72	8.3	.6	10	39	24	FEB 13	5.5	93	154	118	112	0	20	14	47	1	1	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow*: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 a.m. EST	7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow * 1.0 inch or more	Thunderstorms	Heavy fog	Max temp: 90°F and above	32°F and below	Min temp: 32°F and below	0°F and below
	°F	°F	°F	°F		°F		Base 65 °F	Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			Tenths											
FLORIDA																																				
FORT MYERS	83.6	64.7	74.2	93	JUL 18+	32	JAN 21	277	3736	47.32	2.91	JUL 27-28	.0	.0		85	89	55	71	8.0	1.3	9	35	25	FEB 8	4.9	132	156	77	105	0	93	30	71	0	1	0
JACKSONVILLE	80.1	57.6	68.9	98	JUN 15	19	JAN 21	1198	2710	53.69	3.70	DEC 2-3	.0	.0		89	91	57	76	7.5	.7	27	47	NW	JUL 1	5.4	112	129	124	115	0	94	53	71	0	20	0
KEY WEST	82.7	73.6	78.2	91	AUG 9	46	JAN 21	49	4934	44.25	8.47	OCT 11-12	.0	.0		76	78	66	71	11.0	5.7	10	39	E	JUL 21	5.1	110	162	93	109	0	75	0	5	0	0	0
LAKELAND U	81.9	63.1	72.5	95	AUG 22	26	JAN 20	508	3382	42.91	3.92	FEB 7-8	.0	.0												4.7	125	183	57	126	0			73	0	3	0
MIAMI	82.9	69.9	76.4	96	APR 30	35	JAN 20	148	4418	50.72	3.94	JUN 11-12	.0	.0		80	85	61	69	9.7	3.5	8	37	19	SEP 12	5.5	93	174	98	123	0	66	9	28	0	0	0
ORLANDO	84.5	63.9	74.2	95	AUG 8+	28	JAN 20	427	3891	40.09	2.87	AUG 17-18	.0	.0		82	84	51	65	8.3	.1	10	31	24	SEP 11	5.4	110	154	101	117	0	88	33	137	0	3	0
PENSACOLA	77.4	59.9	68.7	96	JUL 14	23	FEB 10+	1304	2765	44.57	2.34	SEP 4	.0	.0		82	85	61	70	7.9	.8	7	26	20	MAY 12	5.8	103	109	153	114	0	73	36	45	0	13	0
TALLAHASSEE	79.6	53.9	66.8	99	JUN 15	11	JAN 21	1619	2372	58.27	3.58	JUL 28-29	.0	.0		87	88	53	69	6.6	.4	5	32	23	JUN 26	5.6	102	139	124	130	0	98	67	87	0	39	0
TAMPA	82.5	62.6	72.6	96	JUN 20	23	JAN 21	564	3413	46.33	4.38	SEP 9-10	.0	.0		82	86	55	69	8.7	.5	10	37	30	MAR 3	5.5	106	146	113	100	0	96	24	87	0	6	0
WEST PALM BEACH	84.0	66.2	75.1	99	APR 30	30	JAN 20	283	4072	51.31	5.44	NOV 4-5	.0	.0		80	81	58	70	9.3	2.9	10	40	1	AUG 9	5.7	94	162	109	135	0	76	17	96	0	1	0
GEORGIA																																				
ATHENS	72.0	51.3	61.7	96	JUN 26+	12	FEB 10	2807	1732	49.57	2.77	MAR 2-3	3.0	3.0	DEC 3	82	87	59	67	7.2	1.4	29	31	31	FEB 5	5.9	110	101	154	128	1	56	60	27	1	52	0
ATLANTA	71.2	51.4	61.3	93	JUN 26	12	FEB 10	2860	1634	49.18	3.06	MAR 2-3	2.0	1.0	DEC 3 +	78	82	57	64	8.6	1.2	31	65	SW	MAY 12	5.9	108	104	153	129	2	48	48	11	2	55	0
AUGUSTA	75.2	51.3	63.3	100	JUN 15	14	FEB 10	2477	1961	52.39	3.47	MAR 2-3	.4	.4	DEC 3	87	90	55	70	6.8	1.3	26	32	24	JUL 11	6.0	105	99	161	114	0	60	37	46	0	49	0
COLUMBUS	75.7	54.4	65.1	96	JUN 15+	15	FEB 10	2084	2223	64.47	4.25	SEP 16-17	T	T	APR 7 +		89	58	67	6.3	.9	35	55	29	JUN 25	5.7	122	89	154	123	0	66	28	54	0	28	0
MACON	77.5	53.9	65.7	99	JUN 6	16	FEB 10+	2080	2460	52.03	3.02	DEC 2-3	T	T	DEC 3 +	82	87	55	64	7.2	1.2	31	44	NW	JAN 15	5.9	99	97	169	133	0	71	37	92	0	39	0
ROME	72.4	48.5	60.5	98	JUN 26	7	FEB 10	3247	1704	48.17	2.44	MAR 25-26	2.7	1.8	MAR 25															134	1			42	4	79	0
SAVANNAH	78.0	56.9	67.0	102	JUN 15	17	JAN 21+	1703	2557	61.34	7.04	AUG 16	T	T	JAN 19	83	85	54	69	7.9	1.2	26	38	W	FEB 13	6.1	99	94	172	136	0	68	52	66	0	29	0
HAWAII																																				
HILO	81.6	65.1	73.4	91	AUG 14	54	MAR 18	0	3143	140.69	11.07	APR 23-24	.0	.0		85	88	80	69	6.2	1.4	17	29	S	JAN 28	7.2	39	130	196	273	0	17	0	2	0	0	0
HONOLULU	82.7	69.5	76.1	89	SEP 7+	56	JAN 7	0	4149	26.64	2.54	MAR 30-31	.0	.0		71	76	72	57	13.3	10.2	6	34	NE	FEB 22	5.8	77	177	111	110	0	8	0	0	0	0	0
KAHULUI	84.7	65.5	75.1	92	OCT 13+	52	JAN 8	2	3785	20.13	4.94	JAN 27-28	.0	.0		76	85	76	56	12.4	9.3	5	40	NE	FEB 22	4.7	169	107	89	83	0	13	0	15	0	0	0
LIHUE	81.6	71.2	76.4	87	SEP 23+	53	JAN 7	4	4267	49.62	4.60	DEC 18-19	.0	.0		76	79	75	67	11.5	8.2	7	36	SW	JAN 14	6.5	45	184	136	192	0	13	0	0	0	0	0
IDAHO																																				
BOISE	62.2	40.6	51.4	104	AUG 1	6	MAR 1+	5745	911	11.84	.88	NOV 26-27	25.6	3.1	DEC 12-13	58	64	50	40	9.4	.5	8	44	NW	MAR 30	5.9	110	86	169	100	11	12	20	50	16	117	0
LEWISTON	62.6	41.1	51.9	106	AUG 1	7	JAN 5	5514	847	15.44	.70	SEP 1-2	19.3	3.2	JAN 6-7			61	48							6.6	94	70	201	116	9			46	13	95	0
POCATELLO	56.7	32.2	44.5	98	AUG 14+	-13	JAN 5	7770	396	16.83	1.08	OCT 30-1	64.3	6.8	NOV 14-15	63	73	54	46	9.9	5.7	22	47	SW	MAR 30	6.3	94	95	176	115	17	16	21	36	54	178	9
ILLINOIS																																				
CAIRO U	68.0	51.0	59.5	99	JUN 25	7	FEB 9	3645	1774	41.29	2.67	JUL 14-15	10.9	4.0	FEB 12								63	SW	DEC 10	5.4	132	107	126	108	5			30	13	59	0
CHICAGO MIDWAY	60.9	42.6	51.8	101	JUN 28+	- 9	FEB 2	5851	1145	29.58	2.19	DEC 9-10	34.9	7.1	JAN 3	70	74	58	59	11.1	2.7	23	43	S	NOV 1	6.0	102	115	148	117	11	46	8	35	34	120	10
MOLINE	60.7	39.9	50.3	99	JUN 19	-19	JAN 7	6317	1080	38.44	5.08	JUL 10	34.3	16.4	JAN 3,	74	79	56	59	9.8	2.7	24	47	F	APR 27	5.9	107	106	152	96	7	43	24	30	42	131	17
PEORIA	61.6	40.9	51.3	100	JUN 19	- 7	FEB 9	5968	1073	26.38	2.82	JUL 9-10	15.8	4.1	JAN 3	75	80	57	60	10.3	2.2	22	46	SW	DEC 15+	6.3	91	108	166	93	3	47	30	29	37	130	11
ROCKFORD	59.1	39.3	49.2	98	JUN 28	-14	FEB 2	6562	920	27.80	2.24	DEC 14-15	33.6	6.9	JAN 3	78	83	58	61	10.5	2.0	25	43	28	JUL 8	6.1	104	96	165	103	9	39	21	27	46	130	19
SPRINGFIELD	64.4	43.7	54.1	100	JUN 26+	- 8	FEB 2	5188	1304	27.62	2.62	JUL 10	16.5	3.0	APR 5	74	78	54	58	11.2	2.7	22	54	SW	DEC 15	5.9	105	107	153	101	7	44	18	42	25	112	5

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow*: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 a.m. EST	7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-03	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow * 1.0 inch or more	Thunderstorms	Heavy fog	Max. temp: 90°F and above	32°F and below	Min temp: 32°F and below	0°F and below
	°F	°F	°F	°F		°F		Base 65 °F	Base 65 °F	In	In		In	In		%	%	%	%	M.p.h.	M.p.h.		M.p.h.			Tenths											
INDIANA																																				
EVANSVILLE	67.3	46.4	56.9	99	JUL 9+	0	FEB 9	4428	1576	40.25	3.26	JUN 19	25.4	8.6	APR 6	78	81	59	62	8.2	1.2	24	56	SW	DEC 10	5.8	114	110	141	114	10	36	20	44	20	98	1
FORT WAYNE	60.6	40.3	50.5	97	JUN 28	-11	JAN 19	6014	830	31.65	1.56	JUN 1-2	26.2	4.8	FEB 12-13	79	82	61	66	10.1	3.6	25	50	SW	DEC 10	6.7	71	116	178	124	7	23	23	11	35	131	11
INDIANAPOLIS	62.7	42.6	52.7	94	JUN 27	- 5	FEB 2	5397	1011	37.48	2.21	DEC 14-15	17.3	5.9	FEB 12	78	82	60	64	9.6	2.2	24	56	SW	DEC 10	6.3	98	100	167	118	6	26	19	7	29	126	6
SOUTH BEND	59.0	41.1	50.1	98	JUN 28	- 7	FEB 2	6101	769	29.80	1.78	JUL 28	72.4	4.4	JAN 26-27	80	83	63	66	10.6	3.2	24	39	21	DEC 15+	6.9	67	102	196	141	29	37	25	7	40	128	10
IOWA																																				
BURLINGTON	61.0	41.1	51.1	98	JUN 27	-12	FEB 6	6060	1105	26.88	2.29	NOV 14-15	20.5	9.0	JAN 3	73	78	60	61	10.2	2.1	25	35	22	DEC 15+	6.0	99	146	140	88	5	41	25	25	40	132	12
DES MOINES	59.8	40.7	50.3	98	JUN 27+	-17	JAN 8	6387	1144	28.32	2.05	DEC 1	48.5	13.6	JAN 3	73	79	60	58	10.3	1.4	25	45	NW	JUL 8	6.1	93	110	162	98	11	43	18	25	53	135	9
DUBUQUE	55.9	37.3	46.6	96	JUN 19	-17	FEB 2+	7243	657	37.69	2.65	NOV 1	53.3	11.8	JAN 3-4		79	61	64											116	17			3	73	146	29
SIOUX CITY	59.9	38.4	49.2	101	SEP 7	-15	JAN 6	6693	1043	19.63	2.15	FEB 18	20.3	4.4	DEC 29-30	74	79	57	57	11.0	.4	24	49	NW	MAR 18	5.9	108	99	159	89	5	30	21	28	59	142	14
WATERLOO	54.9	34.2	44.6	93	SEP 2+	-27	FEB 8	7873	536	29.36	1.81	MAY 17-18	56.0	14.8	JAN 3-4	81	85	62	64	11.5	1.4	27	44	28	FEB 27	6.2	100	98	167	96	12	33	29	8	85	170	29
KANSAS																																				
CONCORDIA	63.5	41.5	52.5	103	JUN 24	-14	FEB 8	5692	1261	35.28	3.94	JUL 22-23	50.7	8.7	FEB 21-22	77	84	61	59	12.6	2.6	17	48	NW	MAR 18	5.3	137	95	133	94	11	54	22	44	37	130	10
DODGE CITY	66.4	42.3	54.4	104	JUL 13	- 8	JAN 7+	5180	1431	25.28	2.42	NOV 16-17	30.9	10.3	FEB 21	69	77	52	50	12.9	2.7	18	63	NW	MAR 18	5.3	135	106	124	77	5	53	21	62	34	126	7
GOODLAND	64.6	37.4	51.0	107	JUN 26+	-11	JAN 6	5901	928	17.47	1.67	MAY 17-18	37.3	7.6	JAN 2-3	71	78	50	47	13.1	2.1	21	49	33	MAR 18	5.1	134	113	118	81	12	40	19	49	28	153	4
TOPEKA	65.2	43.2	54.2	99	SEP 10+	-20	FEB 8	5203	1416	28.75	2.33	FEB 21-22	35.6	15.2	FEB 21-22	77	82	59	59	9.2	1.5	20	49	NW	MAR 18	5.8	124	88	153	93	9	49	19	49	32	124	4
WICHITA	66.7	44.5	55.6	102	JUL 17+	- 6	FEB 8	4885	1588	29.61	2.60	OCT 29	21.4	11.9	FEB 21-22	74	80	57	56	12.3	2.6	17	57	NW	MAR 18	5.5	127	98	140	78	6	51	24	63	22	104	3
KENTUCKY																																				
COVINGTON	64.5	44.6	54.6	97	JUN 27	- 3	FEB 2	4819	1137	40.64	2.23	FEB 21-22	29.2	6.4	FEB 8	75	79	58	63	9.3	2.6	24	40	24	JUN 7+	6.7	72	108	185	118	11	33	41	14	23	102	4
LEXINGTON	65.8	45.4	55.6	93	JUN 27	- 2	FEB 2+	4468	1171	44.67	3.08	JUN 21-22	19.1	7.3	FEB 8	76	80	57	64	8.9	2.5	22	37	19	DEC 10	6.4	84	118	163	113	6	45	34	14	22	94	3
LOUISVILLE	66.4	46.6	56.5	97	JUN 27	1	FEB 9	4257	1287	42.28	3.39	JUL 18-19	25.8	7.8	FEB 7-8	75	79	57	60	8.6	1.8	25	55	W	JUL 13	6.3	87	120	158	112	9	31	17	16	20	78	2
LOUISIANA																																				
ALEXANDRIA	76.5	54.4	65.5	98	JUL 19+	18	FEB 10	1951	2237	57.17	6.16	DEC 5-6	2.0	2.0	JAN 7			61	71	6.6	.6	14	35	27	MAY 24	5.7	108	112	145	114	1	38	12	46	7	30	2
BATON ROUGE	78.5	57.9	68.2	97	AUG 27	23	FEB 10+	1458	2738	59.06	4.28	SEP 15-16	T	T	FEB 8	86	90	60	67	7.4	1.3	11	40	17	SEP 16	5.9	99	121	145	119	8	69	47	83	9	11	0
LAKE CHARLES	79.5	59.6	69.6	95	SEP 5+	29	FEB 10+	1206	2977	43.76	6.88	DEC 5-6	T	T	JAN 7 +	89	93	62	73	9.0	2.5	12	40	36	SEP 16+	6.2	84	124	155	93	8	34	59	98	9	6	0
NEW ORLEANS	78.6	58.6	68.6	95	JUN 14+	24	FEB 10	1318	2756	57.43	6.50	SEP 4-5	.0	.0		84	86	62	70	7.4	1.2	9	48	E	JUN 27	5.7	104	122	137	115	8	48	28	48	8	11	0
SHREVEPORT	77.6	55.3	66.5	104	JUL 16	21	FEB 10+	1879	2537	35.50	3.10	NOV 18	1.7	.8	JAN 7	79	87	58	60	8.1	1.9	15	30	32	APR 64	5.8	100	105	151	99	8	51	28	92	1	24	0
MAINE																																				
CARIBOU	48.2	28.4	38.3	87	JUN 20	-30	FEB 4	9739	125	31.86	1.43	NOV 25-26	128.9	11.7	MAR 4-5		79	62	70							7.0	65	89	211	168	40			0	154	190	45
PORTLAND	54.5	35.2	44.9	96	JUN 30	-26	JAN 19	7606	394	41.65	2.78	OCT 10-11	105.4	10.9	FEB 7-8	80	77	59	71	9.5	2.8	28	38	E	MAR 44	6.1	94	109	160	118	24	16	49	5	49	156	24
MARYLAND																																				
BALTIMORE	65.1	46.8	56.0	96	JUL 8	9	FEB 2	4401	1722	53.33	4.33	AUG 26-27	7.7	2.8	JAN 1	72	75	55	60	8.3	2.7	28	54	NW	MAR 4+	6.2	101	98	166	106	3	26	38	18	16	79	0
MASSACHUSETTS																																				
BLUE HILL OBS 8	57.2	40.2	48.7	93	JUN 30	- 7	JAN 19	6461	637	38.09	2.22	NOV 25	54.6	12.0	NOV 21-22	76	79	61	68				67	SSW	AUG 28					116	17			1	40	140	8
BOSTON	59.0	43.4	51.2	94	JUL 9+	2	JAN 28+	5738	849	35.67	2.59	NOV 25	40.1	4.9	JAN 1	74	73	58	66	11.8	4.0	28	55	SW	MAR 4	6.1	99	121	145	119	17	14	24	15	23	116	0
WORCESTER	55.5	38.1	46.8	92	JUN 30	- 9	JAN 28+	6985	471	43.83	3.11	SEP 12	78.2	14.8	NOV 25	74	74	56	64	9.4	4.8	28	37	29	MAR 5	6.2	88	123	154	110	20	19	81	3	62	154	13

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
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State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow*: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00a.m. EST	7:00a.m. EST	1:00p.m. EST	7:00p.m. EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow * 1.0 inch or more	Thunderstorms	Heavy fog	Max temp: 90°F and above	32°F and below	Min temp: 32°F and below	0°F and below
	°F	°F	°F	°F		°F		Base 65 °F	Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			Tenths											
MICHIGAN																																				
ALPENA	53.4	31.9	42.7	98	JUN 28	-18	FEB 1	8252	238	35.23	2.35	JUN 29-30	138.5	15.0	MAR 6-7	81	82	60	68	7.4	1.9	25	38	NW	JAN 27+	6.7	67	114	184	154	45	33	38	1	73	174	23
DETROIT	59.0	42.3	50.7	101	JUN 28	- 3	FEB 2+	5993	892		2.85	AUG 26-27	27.5			72	75	57	60	10.8	3.3	25	43	21	DEC 10					12	26	13	17	44	129	7	
DETROIT METRO.	59.2	39.0	49.1	99	JUN 28+	- 9	FEB 2	6387	702	22.79	1.37	DEC 29-30	30.7	3.2	JAN 3-4	79	82	57	64	10.3	3.2	26	50	W	JAN 30+	6.6	72	115	178	120	12	29	20	17	43	137	5
FLINT	56.6	38.6	47.6	96	JUN 28	- 5	FEB 2+	6778	555	26.52	1.77	DEC 14-15	51.1	7.7	MAR 6-7	79	82	61	65	10.4	3.8	25	39	24	FEB 27+	6.7	69	119	177	129	15	33	13	7	52	139	4
GRAND RAPIDS	57.4	37.8	47.6	96	JUN 28	-11	FEB 2+	6876	672	31.16	2.13	DEC 10	80.2	8.0	MAR 18-19	78	80	60	63	10.6	3.4	23	60	SW	DEC 10	7.0	61	109	195	132	21	29	29	11	56	147	10
HOUGHTON LAKE	53.4	32.9	43.2	93	JUN 29+	-17	FEB 1	8172	333	26.01	1.70	DEC 10	116.7	10.4	MAR 19-20	84	86	64	69	9.1	2.6	26	35	27	MAY 15	7.0	63	107	195	132	34	30	40	3	86	174	22
LANSING	57.7	37.6	47.7	95	JUN 28+	- 6	FEB 2	6773	572	34.68	1.93	SEP 5-6	52.3	6.7	MAR 6-7	81	82	63	69	10.2	3.7	24	56	SW	DEC 15+	6.7	69	117	179	132	15	36	25	8	50	142	6
MARQUETTE U	50.0	35.3	42.7	96	JUN 28	-10	FEB 2+	8320	294	33.63	1.44	JUN 5	134.3	13.3	JAN 3-4								42	SW	JAN 20	6.9	68	94	203	168	34			3	92	154	8
MUSKEGON	56.3	38.0	47.2	92	JUN 29	- 7	JAN 19	6903	505	23.12	1.82	DEC 10	116.5	8.6	NOV 29 +	77	80	62	66	11.1	2.8	24	44	24	JUN 6+	6.8	74	96	195	147	33	37	20	4	54	147	5
SAULT STE MARIE	48.4	29.5	39.0	89	JUN 28	-28	FEB 2	9459	93	39.23	1.67	NOV 1-2	148.2	7.7	MAR 27-28	83	84	67	73	8.5	.8	31	41	NW	DEC 24	7.2	67	84	214	175	44	34	42	0	99	181	39
MINNESOTA																																				
DULUTH	47.5	28.3	37.9	90	AUG 9	-25	FEB 2	9928	164	34.40	2.61	AUG 17-18	103.1	10.6	JAN 13	79	82	65	66	10.3	1.5	29	49	W	AUG 9	6.8	79	96	190	156	26	42	50	1	114	190	51
INTERNATIONAL FALLS	47.4	25.4	36.4	93	AUG 16	-38	JAN 12	10512	184	24.83	2.37	SEP 30	47.9	6.8	FEB 26-27	80	83	65	64	9.3	1.7	26	35	22	OCT 30	6.8	79	95	191	138	12	31	7	3	114	192	71
MINNEAPOLIS	53.5	34.7	44.1	97	AUG 22	-23	FEB 8	8158	643	29.44	2.39	JUL 7	68.9	6.4	NOV 25-26	71	76	58	58	10.0	1.3	28	42	SW	OCT 30+	6.3	96	94	175	120	25	37	11	10	96	156	34
ROCHESTER	53.5	33.8	43.7	93	SEP 7+	-24	FEB 8	8188	542	30.08	2.20	SEP 8-9	59.7	9.5	JAN 3-4	81	84	66	68	13.3	3.1	25	51	17	JUL 12	6.4	93	94	178	117	15	37	34	7	94	157	35
ST CLOUD	51.6	31.4	41.5	97	AUG 22	-28	FEB 8	8890	454	32.01	3.48	JUN 28-29	62.6	9.4	FEB 26-27		80	59	61							6.2	100	96	169	111	21			9	103	167	45
MISSISSIPPI																																				
JACKSON	77.1	53.3	65.2	98	JUL 14	13	FEB 10	2114	2312	62.06	4.67	SEP 15-16	T	T	NOV 22-23+	89	93	60	70	7.4	1.1	15	37	SE	FEB 21	5.8	109	109	147	120	0	86	34	90	1	42	0
MERIDIAN	76.3	52.7	64.5	100	JUN 14	13	FEB 10	2199	2150	62.80	4.88	JUL 15-16	T	T	NOV 22 +	89	90	57	68	6.0	.1	30	28	4	JUL 12+	6.2	88	116	161	115	0	72	37	73	0	43	0
MISSOURI																																				
COLUMBIA REGIONAL	65.6	45.2	55.4	101	SEP 14	- 2	FEB 8	4754	1387	28.84	1.61	JAN 2-3	16.7	6.2	NOV 28-29	71	77	56	56	11.1	1.9	20	58	SW	DEC 15	6.2	98	105	162	103	6	49	32	44	23	105	1
KANSAS CITY	66.6	47.0	56.8	100	AUG 23	- 4	FEB 8	4590	1726	26.59	2.45	OCT 20-21	18.1	5.1	FEB 21-22	71	78	56	56	10.1	1.4	20	42	NW	APR 27	5.6	121	106	138	89	5	40	3	51	25	94	1
ST JOSEPH	65.5	42.3	53.9	98	JUN 26+	-20	JAN 6	5151	1233	28.29						74	78	57	56	8.6	1.0	20	46	35	APR 26	5.6	123	96	146	93				40	27	121	7
ST LOUIS	67.0	45.3	56.2	100	SEP 14	1	FEB 9	4637	1526	33.73	2.57	DEC 9-10	9.8	6.1	APR 5-6	79	86	58	61	9.5	2.0	22	42	SW	DEC 15	6.1	98	107	160	97	2	44	16	46	19	107	0
SPRINGFIELD	68.9	44.6	56.8	102	JUL 17	-10	FEB 8	4353	1465	37.88	2.38	MAY 23-24	19.9	6.9	APR 4	74	79	54	57	10.7	3.1	18	60	SE	DEC 14	5.5	129	101	135	101	6	56	28	59	14	108	2
MONTANA																																				
BILLINGS	56.6	33.8	45.2	102	AUG 14	-19	JAN 14	7751	641	14.79	1.81	OCT 1-2	54.0	7.0	DEC 6-7	62	70	54	48	11.9	4.4	27	49	NW	DEC 9+	6.3	93	103	169	99	19	17	26	37	56	160	20
GLASGOW	53.3	29.9	41.6	106	AUG 14	-32	FEB 7	9034	634	6.90	.76	AUG 30	37.0	8.8	JAN 29-30	63	70	53	49	11.3	1.5	4	46	30	SEP 11	6.1	89	128	148	85	12	14	12	34	95	172	46
GREAT FALLS	56.5	32.7	44.6	101	AUG 14+	-30	JAN 14+	7883	557	11.48	.90	MAY 5-6	66.7	5.0	DEC 6	56	62	46	42	12.9	7.8	24	47	SW	DEC 31	6.6	81	96	188	97	25	20	15	35	51	159	28
HAVRE	54.9	28.8	41.9	105	AUG 6+	-30	FEB 7+	8882	541	8.05	.87	JUN 5-6	63.6	11.7	JAN 8-9	61	70	51	46	10.5	3.4	26	52	W	SEP 11	6.4	79	124	162	81	16	16	13	38	76	188	47
HELENA	54.2	29.5	41.9	94	AUG 14+	-30	JAN 13	8553	210	10.12	.69	AUG 29-30	42.8	9.3	JAN 9	60	69	51	44	8.2	4.0	28	43	W	MAR 11	6.8	73	88	204	97	10	27	5	19	56	190	24
KALISPELL	54.6	30.0	42.3	98	AUG 11+	-18	DEC 16	8386	227	16.47	1.35	JUN 28-29	88.7	9.1	DEC 8-9	75	80	59	50	7.1	1.2	18	38	32	OCT 13	7.0	74	78	213	132	27	22	24	27	50	199	22
MILES CITY	56.0	33.2	44.6	104	AUG 14+	-31	FEB 7	8203	874	18.72			48.7			68	75	56	53	11.1	2.3	32								111	19	20	15	41	75	163	36
MISSOULA	57.6	32.2	44.9	101	AUG 4+	-10	DEC 8	7603	381	13.12	.79	APR 23-24	53.6	4.3	NOV 28-29	73	84	61	51	6.8	1.9	31	40	SW	OCT 26	6.8	79	82	204	137	22	23	19	39	45	185	10

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Temperature: Averages: Daily minimum	Temperature: Averages: Annual	Temperature: Extremes: Highest	Temperature: Extremes: Date	Temperature: Extremes: Lowest	Temperature: Extremes: Date	Heating degree days	Cooling degree days	Precipitation: Total	Precipitation: Greatest in 24 hours	Precipitation: Date (s)	Precipitation: Snow*: Total	Precipitation: Snow*: Greatest in 24 hours	Precipitation: Snow*: Date (s)	Relative humidity: 1000m EST	Relative humidity: 700m EST	Relative humidity: 1000p.m. EST	Relative humidity: 700p.m. EST	Wind: Average speed	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-03	Number of days: Sunrise to sunset: Partly cloudy, 0.4-0.7	Number of days: Sunrise to sunset: Cloudy, 0.8-1.0	Number of days: Precipitation .01 inch or more	Number of days: Snow * 10 inch or more	Number of days: Thunderstorms	Number of days: Heavy fog	Number of days: Max temp: 90°F and above	Number of days: Max temp: 32°F and below	Number of days: Min temp: 32°F and below	Number of days: Min temp: 0°F and below
	°F	°F	°F	°F		°F		Base 65 °F	Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			Tenths										
NEBRASKA																																			
GRAND ISLAND	62.0	39.1	50.6	104	JUN 24	-16	JAN 6	6200	1079	25.57	3.25	JUN 29-30	41.7	9.8	FEB 21-22	68	73	53	51	11.6	1.3	22	55	34	MAR 18	5.7	114	108	143	94	11	40	19	41	47	148	13
LINCOLN (1)	61.9	42.5	52.2	102	JUL 7+	-14	FEB 8	5862	1336	27.77	1.74	JUN 21-22	53.7	12.4	JAN 2-3								57	C	MAY 21	5.8	119	85	162	96	12			39	45	128	0
NORFOLK	59.5	37.2	48.4	101	SEP 7+	-15	JAN 7	6833	894	23.23	2.41	JUN 18-19	21.9	3.1	FEB 2-3		81	56	56							5.8	119	91	155	95	7			29	63	157	16
NORTH PLATTE	60.7	34.1	47.4	100	SEP 7	-18	JAN 6	6926	634	24.25	2.42	APR 19-20	34.7	9.7	MAR 4-5	77	83	55	55	10.1	.8	6	57	NW	MAR 18	5.6	113	118	134	101	10	54	19	22	46	177	19
OMAHA	62.4	40.6	51.5	103	JUN 26+	-17	FEB 8	6058	1272	27.59	2.83	MAY 9-10	48.7	10.8	FEB 21-22	72	78	56	55	8.9	.3	34	56	NW	JUN 19	6.0	104	102	159	104	13	45	19	44	42	140	12
SCOTTSBLUFF	61.8	34.6	48.2	101	JUN 26	-14	JAN 7	6657	634	17.06	1.65	MAY 4-5	29.5	5.6	MAR 4-5	70	79	49	45	9.8	1.8	34	40	33	AUG 9+	5.8	119	90	156	84	11	44	14	32	31	161	8
VALENTINE	59.8	33.5	46.7	105	JUN 26	-25	FEB 7	7390	827	17.76	3.38	AUG 29-30	43.7	7.7	APR 26-27								65	SE	OCT 18	5.8	117	102	146	86	12			41	54	166	23
NEVADA																																			
ELKO	58.8	30.8	44.8	97	JUL 29	-18	JAN 4	7608	342	13.67	1.73	MAY 21	71.9	8.6	MAY 20-21	58	68	47	37	6.4	2.2	25	32	22	FEB 24	5.6	114	109	142	108	24	25	7	33	39	194	20
ELY	59.1	27.0	43.1	96	JUL 14	-26	JAN 5	8164	249	9.42	.70	MAY 4-5	71.5	6.5	JAN 12-13	60	69	46	40	10.1	3.8	21	43	SE	DEC 22+	5.2	129	118	118	84	26	37	6	20	38	232	23
LAS VEGAS	78.0	51.6	64.8	113	JUL 28+	12	JAN 6	2861	2906	2.54	.60	MAY 7	T	T	DEC 13 +	28	35	25	18	8.8	2.9	23	44	SW	JUL 14	3.2	212	94	59	22	0	16	1	122	0	51	0
RENO	65.2	30.7	48.0	102	JUL 28	-11	JAN 3	6541	440	10.58	1.39	DEC 24-25	63.8	14.0	DEC 24-25	55	72	47	34	5.9	1.8	28	40	SW	MAR 25	4.6	162	91	112	59	14	17	6	56	15	202	0
WINNEMUCCA	65.4	30.4	47.9	106	JUL 28	- 9	JAN 4	6785	666	9.17	1.00	JUN 26	44.8	7.2	APR 23-24	57	68	45	35	8.3	1.8	25	42	W	MAR 12	5.5	132	78	155	78	12	15	4	47	15	214	12
NEW HAMPSHIRE																																			
CONCORD	56.8	32.4	44.6	95	JUN 30	-29	JAN 19	7729	403	32.80	2.54	JUL 29-30	101.5	9.4	NOV 25-26	82	81	54	65	7.9	2.9	30	45	SW	JUL 1	6.2	90	121	154	117	24	17	45	5	60	180	27
MT WASHINGTON OBS	33.6	19.9	26.8	66	AUG 19	-36	JAN 28+	13850	0	100.29	4.53	NOV 25-26	393.1	23.1	APR 7	85	85	84	84	33.7			125	/	MAR 4+	8.0	42	68	255	206	81	14	200	C	149	306	71
NEW JERSEY																																			
ATLANTIC CITY	62.3	43.7	52.9	91	JUL 8+	- 1	FEB 1	5065	761	43.17	3.48	AUG 4-5	10.1	3.0	JAN 1	80	79	57	71	10.1	2.7	27	47	29	JAN 26	6.4	87	102	176	110	4	23	63	4	13	156	1
NEWARK	63.2	47.9	55.6	96	JUL 9+	7	FEB 2+	4684	1365	50.77	7.84	AUG 27-28	21.1	7.4	JAN 1	72	73	54	62	10.0	3.3	29	35	24	MAR 4	6.5	79	110	176	113	5	23	14	22	10	60	0
TRENTON (1)	62.0	47.1	54.6	94	JUL 8	7	FEB 2	4779	1076	48.51	7.55	AUG 27-28	20.5	6.0	JAN 1								43	NE	AUG 28	6.7	91	120	154	115	4			10	19	73	0
NEW MEXICO																																			
ALBUQUERQUE	69.1	40.5	54.9	104	JUL 13	-17	JAN 7	4747	1153	8.05	.89	OCT 24-25	12.6	5.2	DEC 13-14	46	57	36	29	10.1	.2	23	58	C	OCT 29	3.9	188	97	80	40	4	33	0	57	11	121	5
CLAYTON	66.1	38.0	52.1	98	JUL 12	- 9	JAN 7+	5286	691	16.18	1.71	MAY 29	22.0	6.6	DEC 1-2		71	40	40							4.4	167	97	101	74	11			29	14	145	4
ROSWELL	75.7	43.4	59.6	106	JUL 5	- 4	JAN 5	3464	1594	10.04	1.27	AUG 24-25	10.9	2.4	DEC 1-2 +								47	SW	MAR C			50	7				27	4	108	2
NEW YORK																																			
ALBANY	67.2	35.3	46.3	91	JUN 30	-28	JAN 19	7183	456	39.57	4.52	AUG 27-28	102.9	21.0	NOV 24-25	82	82	58	69	8.3	2.8	27	57	NW	JUN 8	6.3	68	108	189	137	21	25	24	1	40	163	20
BINGHAMTON	63.3	37.3	45.3	86	JUL 8+	- 9	JAN 19	7419	346	33.45	2.16	JUL 30-31	96.2	15.8	MAR 3-4	80	84	65	70	9.8	3.5	25	56	SW	JAN 26	7.2	43	117	205	145	29	28	45	0	71	150	13
BUFFALO	65.9	39.8	47.9	89	JUN 29+	- 7	JAN 1	6628	508	32.91	2.33	JUL 24	93.7	7.6	FEB 8-9	80	81	62	70	11.4	5.2	25	56	SW	MAR 15	7.3	48	109	208	148	29	36	8	0	64	134	4
NEW YORK (1)	62.3	48.1	55.2	96	JUL 8	4	JAN 19	4789	1335	56.77	5.78	AUG 27-28	13.1	6.4	JAN 1	71	74	56	63	8.7	2.4	29	44	NE	NOV 25				110	4	16		18	18	70	0
NEW YORK KENNEDY	61.9	48.1	55.0	97	JUL 8	7	FEB 2+	4813	1270	37.53	3.39	AUG 27-28	17.9	6.0	JAN 1	72	72	56	66	12.3	3.2	28	44	28	MAR 4	6.3	86	124	155	123	5	18	25	18	18	76	0
NEW YORK LA GUARDIA	61.0	48.0	54.6	93	JUL 8	7	JAN 19	4849	1138	46.19	5.49	AUG 27-28	14.0	5.7	JAN 1	69	70	55	60	11.9	3.1	30	56	NE	NOV 25	6.3	84	115	166	108	5	27	14	9	20	65	0
ROCHESTER	67.2	37.9	47.6	93	SEP 6+	- 5	JAN 19+	6842	615	34.16	2.25	JUL 13	119.7	12.2	FEB 13-14	84	85	64	72	9.8	4.7	25	48	SW	DEC 11	6.9	63	111	191	157	27	29	12	10	43	145	5
SYRACUSE	66.8	38.3	47.6	94	JUN 30	- 8	JAN 19+	6785	552	39.18	2.11	JUL 24	132.5	14.7	MAR 3-4	80	79	62	71	9.5	3.0	25	47	W	JAN 30	7.1	67	96	202	161	34	33	9	6	62	141	0
NORTH CAROLINA																																			
ASHEVILLE	67.7	45.2	56.5	91	JUN 27	8	FEB 10	3922	923	48.05	2.20	OCT 15-16	26.2	16.3	DEC 3-4	87	90	60	71	7.7	2.4	35	40	34	MAY 2+	6.2	91	112	162	143	4	47	94	6	5	93	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow*: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00a.m. EST	7:00a.m. EST	1:00p.m. EST	7:00p.m. EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow * .10 inch or more	Thunderstorms	Heavy fog	Max temp: 90°F and above	32°F and below	Min temp: 32°F and below	0°F and below
	°F	°F	°F	°F		°F		Base 65 °F	Base 65 °F	In	In		In	In.		%	%	%	%	M.p.h	M.p.h		M.p.h			Tenths											
NORTH CAROLINA																																				
CAPE HATTERAS R	69.7	54.9	62.3	90	AUG 21	21	FEB 2	2590	1738	64.34	5.28	SEP 29-30	T	T	JAN 31 +	84	83	66	80	12.4	.8	30	44	12	SEP 30	6.1	101	98	166	138	0	38	23	1	2	28	0
CHARLOTTE	69.7	49.7	59.7	94	JUN 6	10	FEB 10	3290	1485	48.45	2.11	MAY 12-13	14.1	7.5	DEC 3	78	84	58	65	7.9	.8	29	47	SW	MAR 15	6.2	96	97	172	136	2	50	32	12	4	68	0
GREENSBORO	67.7	46.9	57.3	93	JUN 28	6	FEB 2	3863	1190	42.19	1.92	MAY 12-13	9.7	4.2	DEC 3-4	82	85	58	68	7.4	1.5	28	43	NW	JAN 26	6.4	90	98	177	128	2	45	43	7	12	87	0
RALEIGH	69.8	48.1	59.0	94	JUL 18+	5	FEB 2	3471	1402	45.64	2.66	OCT 1-2	9.0	5.3	MAR 25-26	80	84	56	69	9.4	1.3	28	41	27	JAN 26	6.0	105	97	163	107	2	55	43	18	7	70	0
WILMINGTON	73.9	53.9	63.9	95	JUN 5	21	FEB 2+	2331	2047	57.70	3.52	AUG 16-17	T	T	DEC 3	86	86	59	75	8.2	1.1	28	40	NW	DEC 18	6.0	106	93	166	132	0	57	29	37	0	33	0
NORTH DAKOTA																																				
BISMARCK	52.0	28.8	40.4	102	AUG 21	-37	FEB 8	9280	423	15.25	1.62	OCT 17-18	42.1	4.9	FEB 3	77	82	59	57	10.3	1.6	33	45	S	OCT 18+	6.4	92	99	174	102	12	37	13	18	93	181	57
FARGO	51.1	30.0	40.6	96	AUG 16+	-30	JAN 15	9172	375	22.86	2.29	SEP 3-4	38.8	4.7	JAN 25	80	84	66	65	11.1	.7	28	48	SE	OCT 18	6.3	90	104	171	105	13	32	12	10	101	173	53
WILLISTON	52.1	28.6	40.4	101	AUG 7	-31	JAN 15	9300	440	17.31	2.24	SEP 4-5	28.7	4.1	NOV 16-17	75	81	59	56	10.4	2.3	31	50	SE	JUL 10	6.3	90	107	168	93	11	28	8	20	96	183	52
OHIO																																				
AKRON	60.1	40.1	50.1	97	JUN 28	- 5	FEB 2+	6001	694	32.20	2.40	AUG 26-27	52.7	7.5	FEB 8	76	79	58	65	9.6	3.2	25	39	21	DEC 15+	6.9	60	107	198	154	16	34	33	4	38	130	7
CINCINNATI ABBE OB.	64.3	45.4	54.9	98	JUN 27	- 1	FEB 2	4759	1174	39.51	3.51	SEP 1-2	24.1	7.6	FEB 8								35	NW	JAN 26					117	6			16	29	98	2
CLEVELAND	58.9	40.6	49.8	95	JUN 28	- 7	FEB 2	6135	692	31.80	2.02	SEP 12-13	47.4	7.2	FEB 8-9	74	76	59	64	10.2	3.8	23	49	SW	DEC 15	6.9	68	93	204	148	16	35	11	8	44	133	8
COLUMBUS	61.6	41.4	51.5	94	JUN 28	- 4	JAN 18	5575	771	33.69	2.29	JUL 23-24	36.7	8.9	FEB 8	78	80	58	63	9.3	2.3	24	47	SW	DEC 15	6.6	81	96	188	125	12	33	23	7	32	127	5
DAYTON	62.0	43.5	52.8	98	JUN 27	- 4	FEB 2	5287	964	33.23	1.70	JUN 25-26	29.8	4.8	FEB 8	75	78	60	64	9.8	3.0	24	56	W	JAN 26	6.4	87	101	177	120	9	34	28	8	30	117	5
MANSFIELD	60.2	40.5	50.4	97	JUN 28	- 6	FEB 2+	5930	705	26.10	2.05	MAY 5-6	41.1	8.4	FEB 8	81	82	61	69	11.4	4.7	23	46	18	DEC 15+	6.7	76	106	183	128	14	33	44	5	34	133	8
TOLEDO	60.0	38.2	49.1	99	JUN 28	- 9	FEB 2	6340	680	23.18	1.39	JUL 10-11	28.8	4.1	FEB 12-13	79	81	57	65	9.7	3.4	25	47	W	JAN 29	6.7	71	110	184	127	9	34	26	15	44	141	8
YOUNGSTOWN	57.9	38.7	48.3	95	JUN 28	- 8	FEB 2	6491	532	32.50	1.58	AUG 20	83.7	10.2	NOV 21-22	80	82	62	67	9.8	3.1	25	41	27	MAR 15	7.0	69	91	205	168	21	30	33	3	51	138	5
OKLAHOMA																																				
OKLAHOMA CITY	71.2	48.3	59.8	105	JUL 18	3	FEB 8	3599	1810	27.43	2.50	JUN 2-3	11.5	4.9	DEC 2 +	72	79	53	53	12.1	3.1	16	52	N	JUN 2	5.2	138	107	120	91	2	52	37	67	7	75	0
TULSA	70.8	49.6	60.2	102	JUL 14	2	FEB 8	3487	1867	56.41	6.03	SEP 15-16	9.5	3.8	FEB 6-7	76	82	57	55	10.7	3.2	18	52	NW	MAY 26	5.5	126	98	141	99	5	57	20	67	9	75	0
OREGON																																				
ASTORIA	56.8	42.6	49.7	83	AUG 8	21	JAN 12	5503	19	79.27	2.99	JAN 24-25	21.4	10.8	JAN 12	87	89	79	74	8.9	3.2	21	55	17	JAN 15+	7.8	52	61	252	209	5	11	38	0	1	44	0
BURNS U	58.3	32.0	45.2	97	AUG 12+	-11	JAN 4	7536	414	13.48	1.00	JUL 21 +	49.2	5.3	DEC 11-12	64	72	58	46	7.2	3.2	29				5.8	113	96	156	103	20			29	29	199	3
EUGENE	61.3	40.4	50.9	101	AUG 11	18	JAN 13	5303	253	60.67	2.82	NOV 25-26	25.4	8.8	JAN 12-13	84	90	75	62	8.4	2.6	20	44	21	MAR 11	7.2	67	73	225	151	5	1	53	14	0	64	0
MEACHAM	50.8	34.2	42.5	95	JUL 31	2	DEC 29	8420	333	41.75			188.6										31	25	JAN 21					146				9	63	185	0
MEDFORD	64.1	40.2	52.2	109	AUG 11	17	JAN 3	5218	641	19.35	1.61	JAN 16-17	20.6	9.3	JAN 13-14	71	83	68	49	5.1	1.8	31	30	13	DEC 21+	6.2	108	63	194	113	4	4	54	46	4	95	0
PENDLETON	64.2	42.0	53.1	108	JUL 31	12	JAN 4+	5075	853	14.44	1.35	NOV 26	23.2	5.1	DEC 28-29	60	68	53	45	9.5	3.9	25	43	31	APR 9	6.2	99	83	183	103	10	9	17	39	10	86	0
PORTLAND	61.6	43.9	52.8	101	AUG 10	20	JAN 5	4764	416	41.72	1.50	NOV 25-26	13.2	4.2	JAN 12-13	75	82	71	58	7.5	1.7	21	48	S	MAR 26	7.3	70	58	237	168	5	10	32	15	0	44	0
SALEM	61.3	40.2	50.8	101	AUG 11	12	MAR 1	5375	299	49.19	2.22	APR 8-9	22.8	5.9	JAN 13-14	80	87	73	60	7.5	3.3	21	40	19	MAR 26	7.2	71	61	233	164	8	3	32	14	0	78	0
SEXTON SUMMIT R	53.8	38.1	46.0	97	AUG 11	13	JAN 2	7148	314	50.81	3.65	NOV 9-10	223.2	21.5	DEC 9-10			74	65				59	19	MAR 11					135				3	35	147	0
PACIFIC AREA																																				
GUAM TAGUAC R	85.4	72.3	78.9	90	OCT 18+	65	SEP 6+	0	5147	129.16	9.92	MAY 2-3	.0	.0		79			80				47	E	MAY 3					302	0	25	0	3	0	0	0
JOHNSTON	81.6	75.2	78.4	85	OCT 13+	67	MAR 27+	0	4982	24.19	2.19	SEP 2	.0	.0		76	78	77	72	16.6	14.4	9	40	NE	MAR 5	5.8	95	148	122	155	0	5	0	0	0	0	0
KOROR R	87.7	75.6	81.7	92	MAY 3+	71	JUL 30+	0	6167	159.33	7.99	MAY 27-28	.0	.0		77	89	91	81	7.5	1.6	9	30	N	OCT 7	9.2	0	44	321	263	0	36	0	60	0	0	0

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days									
	Averages			Extremes									Snow*									Fastest mile					Sunrise to sunset						Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date			Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00a.m. EST	7:00a.m. EST	1:00p.m. EST	7:00p.m. EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date		Clear, 0-03	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 0.1 inch or more	Snow * 1.0 inch or more	Thunderstorms	Heavy fog	90°F and above	32°F and below	32°F and below	0°F and below
PACIFIC AREA	°F	°F	°F	°F		°F		Base 65 °F	Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			Tenths										
KWAJALEIN	85.8	76.5	81.2	90	JAN 18	71	AUG 6	0	5995	126.30	5.41	APR 24-25	.0	.0		79	83	84	77	13.5	11.9	8	33	10	MAY 3+	8.2	24	79	262	251	0	7	0	1	0	0	0
MAJURO	84.7	76.2	80.5	88	SEP 11	72	AUG 23	0	5736	162.39	5.39	JUL 22	.0	.0		80	82	83	77	11.0	10.0	7	32	E	OCT 19+	8.1	16	107	242	268	0	0	0	0	0	0	0
PAGO PAGO	85.0	73.3	79.2	89	NOV 15+	64	SEP 28+	0	5266	96.17	5.03	NOV 12-13	.0	.0		83	87	88	74	7.8	5.2	9	29	E	JUN 1	6.5	45	176	144	241	0	25	0	0	0	0	0
PONAPE R	86.8	73.1	80.0	91	NOV 12+	68	FEB 27	0	5836	204.37	5.81	JUL 16-17	.0	.0		79	89	90	77	6.8	4.2	10	24	NE	DEC 8	8.6	6	79	280	302	0	30	0	21	0	0	0
TRUK MOEN ISLAND	86.3	76.3	81.3	89	NOV 13+	72	FEB 11+	0	6041	134.17	5.60	MAY 1	.0	.0		77	84	85	77	8.8	5.7	8	28	S	MAY 1	9.2	2	44	319	279	0	16	0	0	0	0	0
WAKE	85.0	75.0	80.0	90	SEP 1+	67	FEB 24	0	5575	52.64	6.30	SEP 5-6	.0	.0		70	78	80	65	14.0	10.8	8	48	SW	SEP 5	5.6	109	149	107	192	0	7	0	18	0	0	0
YAP R	86.3	74.9	80.6	90	AUG 27	69	OCT 10	0	5775	148.30	3.72	NOV 9-10	.0	.0		77	87		79				31	W	NOV 10	8.6	1	85	279	291	0	26	0	1	0	0	0
PENNSYLVANIA																																					
ALLENTOWN	60.0	41.6	50.8	95	JUL 8	1	FEB 2	5828	775	48.50	5.88	AUG 27-28	30.4	7.8	JAN 1	82	84	61	68	9.0	3.0	29	40	28	MAR 4	6.4	88	112	165	112	8	31	31	7	24	127	0
ERIE	55.0	39.3	47.2	91	JUN 28	- 7	FEB 2	6724	341	34.06	2.15	JUL 24	101.7	12.4	FEB 8-9	73	75	64	66	10.9	4.1	23	40	29	JAN 29	7.0	66	95	205	147	29	40	7	1	50	131	4
HARRISBURG	62.3	44.9	53.6	96	JUL 8	6	FEB 3+	5088	1043	41.42	2.75	AUG 2-3	30.8	11.1	JAN 31-1		75	58	63	7.0	2.8	29	46	W	JAN 26	6.4	83	115	167	132	9	27	24	15	19	97	0
PHILADELPHIA	63.7	47.4	55.6	96	JUL 8	6	FEB 2	4621	1305	47.79	5.68	AUG 27-28	17.3	5.5	JAN 31-1	74	75	54	63	10.0	2.5	28	43	W	MAR 4	6.5	81	106	178	106	4	25	22	20	18	80	0
PITTSBURGH	60.2	41.4	50.8	96	JUN 28	- 6	FEB 2	5787	714	33.22	2.97	JUL 10-11	60.9	9.2	FEB 8-9	74	77	57	61	9.5	3.9	27	48	27	JAN 30	7.1	67	88	210	151	17	31	27	4	33	120	5
PITTSBURGH I	61.8	43.6	52.7	96	JUL 29+	- 3	FEB 2+	5291	927	32.71	2.84	MAY 5-6	31.7	6.3	MAR 1															134	8		11	28	104	3
SCRANTON	57.2	39.8	48.5	91	JUL 8	- 4	FEB 3+	6471	573	35.67	1.74	MAY 12-13	71.1	20.5	NOV 24-25	81	84	63	68	8.3	2.4	25	38	W	MAR 4	6.9	74	91	200	141	16	28	29	3	43	133	5
WILLIAMSPORT	60.0	41.9	51.0	94	JUL 9	-13	FEB 1	5796	785	39.09	2.72	FEB 13	57.3	11.1	MAR 3-4	81	82	59	65	7.7	2.2	28	35	30	JAN 27	6.9	77	89	199	142	16	27	52	4	28	117	4
RHODE ISLAND																																					
BLOCK ISLAND	58.6	44.2	51.4	87	JUL 8	3	JAN 20	5708	513	35.17	2.55	FEB 7-8	5.0	1.2	JAN 1															107	2		0	19	94	2
PROVIDENCE	60.0	42.3	51.2	92	AUG 9+	- 5	JAN 20	5815	890	38.42	2.65	JUL 19	28.7	6.5	JAN 1	77	76	55	67	10.3	3.1	29	44	26	MAR 4	6.1	100	103	162	110	10	15	21	10	22	126	1
SOUTH CAROLINA																																					
CHARLESTON	76.1	55.4	65.8	97	JUN 15	22	FEB 14+	1930	2329	60.54	4.67	AUG 25-26	T	T	MAR 26 +	83	84	57	72	8.4	1.3	26	71	NW	APR 23	5.2	102	95	161	124	2	69	23	46	0	78	0
COLUMBIA	78.7	52.6	64.2	99	JUN 15+	14	JAN 20	2424	2246	69.32	4.82	AUG 16-17	2.5	1.7	MAR 25	84	87	54	67	7.6	1.2	28	35	1	MAR 26+	6.0	111	95	169	119	1	67	39	63	0	54	0
GREENVILLE-SPARTNBRG	70.6	49.0	59.8	95	JUN 26	10	FEB 1	3275	1505	56.16	2.87	OCT 15-16	19.0	11.4	DEC 3	79	82	57	67	6.9	1.1	31	36	NE	DEC 3	5.0	100	109	156	131	3	44	47	28	2	73	0
SOUTH DAKOTA																																					
ABERDEEN	55.6	31.1	43.4	105	AUG 23+	-37	FEB 8	8460	668	20.75	1.82	SEP 4-5	43.1	4.8	FEB 3-4	76	81	60	59	10.9	1.0	34	39	33	APR 1	5.9	116	100	149	99	14	41	23	29	86	174	44
HURON	55.8	31.8	43.8	104	AUG 22	-30	FEB 9	8360	755	18.55	1.21	AUG 30	48.5	10.9	FEB 19-19	78	84	59	58	11.8	.7	22	45	S	OCT 18	6.0	106	114	155	97	14	44	17	31	82	180	34
RAPID CITY	57.4	32.9	45.2	101	SEP 24	-22	FEB 7	7666	550	19.17	1.91	MAY 22-23	67.1	8.1	JAN 30-31	69	73	53	53	11.3	3.4	34	59	NW	OCT 13	6.0	102	108	156	111	14	33	17	38	62	176	18
SIOUX FALLS	56.5	33.2	44.9	103	AUG 22	-27	FEB 8	7950	732	23.64	2.23	JUL 9-10	23.6	4.7	MAR 18	77	82	59	60	11.9	1.4	27	39	33	APR 1	6.0	121	99	154	86	9	41	28	28	83	172	35
TENNESSEE																																					
BRISTOL	67.8	46.1	57.0	93	SEP 9	0	FEB 2	3974	1156	43.24	1.82	MAY 6-7	25.7	9.1	FEB 13	79	93	57	63	5.4	1.5	28	31	30	JUN 21+	6.3	89	102	174	145	7	41	41	0	19	90	1
CHATTANOOGA	70.7	49.5	60.1	97	JUN 26	9	FEB 10	3409	1747	51.01	3.05	SEP 16-17	6.7	4.5	MAR 25	82	84	57	61	6.4	.8	27	33	SW	FEB 22	6.1	100	98	167	132	5	44	40	13	3	71	0
KNOXVILLE	68.8	49.6	59.2	93	JUN 26	3	FEB 10	3403	1418	50.44	2.73	JUL 18-19	19.3	7.0	APR 6-7	78	83	59	63	7.2	1.9	29	35	W	MAR 19	6.5	82	102	181	143	6	55	59	11	2	96	0
MEMPHIS	72.0	52.2	62.1	100	JUL 15	11	FEB 9	2993	2062	44.19	3.24	FEB 21	9.1	4.0	FEB 7-8	69	75	55	56	9.1	1.4	30	46	W	APR 23	5.7	114	112	139	112	6	59	33	56	5	47	0
NASHVILLE	70.0	48.5	59.3	98	JUN 26	- 5	FEB 9	3571	1603	40.65	1.95	JUN 27-28	11.9	4.4	FEB 8	81	85	59	64	8.2	1.7	24	42	C	DEC 20	6.0	103	114	148	116	5	43	33	28	33	74	2
OAK RIDGE R	68.5	47.8	58.2	94	JUN 26	7	FEB 1	3690	1301	53.33	3.99	MAY 12-13	7.4	1.1	FEB 13								47		AUG 11	6.4	84	94	185	139	2			15	8	68	2

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

State and Station	Temperature: Averages: Daily maximum	Temperature: Averages: Daily minimum	Temperature: Averages: Annual	Temperature: Extremes: Highest	Temperature: Extremes: Date	Temperature: Extremes: Lowest	Temperature: Extremes: Date	Heating degree days	Cooling degree days	Precipitation: Total	Precipitation: Greatest in 24 hours	Precipitation: Date (s)	Precipitation: Snow*: Total	Precipitation: Snow*: Greatest in 24 hours	Precipitation: Snow*: Date (s)	Relative humidity: 1:00 a.m. EST	Relative humidity: 7:00 a.m. EST	Relative humidity: 1:00 p.m. EST	Relative humidity: 7:00 p.m. EST	Wind: Average speed	Wind: Resultant speed	Wind: Resultant direction	Wind: Fastest mile: Speed	Wind: Fastest mile: Direction	Wind: Fastest mile: Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Number of days: Sunrise to sunset: Partly cloudy, 0.4-0.7	Number of days: Sunrise to sunset: Cloudy, 0.8-1.0	Number of days: Precipitation .01 inch or more	Number of days: Snow* 1.0 inch or more	Number of days: Thunderstorms	Number of days: Heavy fog	Number of days: Max temp: 90°F and above	Number of days: Max temp: 32°F and below	Number of days: Min temp: 32°F and below	Number of days: Min temp: 0°F and below
	°F	°F	°F	°F		°F		Base 65 °F	Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			Tenths									
TEXAS																																			
ABILENE	76.0	52.6	64.3	103	JUL 5+	3	FEB 9	2360	2226	26.11	2.50	SEP 22-23	1.6	1.2	FEB 7	63	72	49	44	12.3	4.9	19	58	NE	OCT 22	5.1	140	97	128	66	1	40	12	76	3	41	0
AMARILLO	69.6	43.3	56.5	100	JUL 6	- 4	JAN 5	4250	1271	23.04	2.52	SEP 21-22	27.0	13.5	JAN 20-21	58	68	42	38	14.7	5.3	20	54	SW	JUN 5	4.4	180	76	110	69	7	53	32	53	17	108	4
AUSTIN	80.2	59.0	69.6	101	JUL 20+	20	FEB 9	1309	3100	24.95	2.89	AUG 3-4	T	T	DEC 2 +	73	83	55	51	9.6	2.6	15	43	NW	FEB 21	5.7	100	117	148	70	0	34	29	110	0	17	0
BROWNSVILLE	84.3	66.3	75.3	99	SEP 7	35	FEB 9+	333	4200	27.68	3.54	SEP 17-18	.0	.0		83	86	59	68	11.6	6.3	14	45	N	MAR 2	5.8	90	153	122	64	0	21	33	117	0	0	0
CORPUS CHRISTI	82.9	64.1	73.5	98	SEP 7+	28	FEB 9	578	3805	36.95	4.67	SEP 10-11	.0	.0		87	90	63	69	12.4	6.8	12	66	NW	SEP 10	5.8	95	133	137	64	0	21	31	107	0	3	0
DALLAS	77.3	57.3	67.3	104	JUL 19	15	FEB 8	1905	2877	40.75	4.06	OCT 3-4	1.3	.8	MAR 2 +	65	75	53	48	11.2	4.0	15	38	SW	DEC 14	5.4	125	100	140	76	0	35	19	94	1	22	0
DEL RIO	81.1	58.0	69.6	101	MAR 28	21	FEB 8+	1072	2859	18.40	2.76	AUG 11	.0	.0		64	77	55	45	10.3	5.6	11	39	33	MAR 2	5.7	116	91	158	70	0	36	17	105	0	13	0
EL PASO	76.9	49.5	63.2	101	JUN 28+	3	JAN 8	2600	2071	7.24	1.65	JUL 2-3	4.8	1.5	JAN 3-4	40	51	32	26	8.9	1.9	26	56	SW	DEC 14+	3.7	193	118	54	52	3	33	1	100	4	55	0
FORT WORTH	76.8	54.7	65.8	103	JUL 19+	12	FEB 8	2105	2491	36.26	3.10	DEC 8-9	1.6	1.6	MAR 2-3	74	84	56	54	10.4	3.3	17	35	1	MAY 27+	5.6	119	97	149	67	1	44	15	80	1	33	0
GALVESTON 11	75.2	66.1	70.7	93	SEP 6+	29	JAN 7	868	3037	35.97	5.21	SEP 9-10	T	T	JAN 7	81	83	77	75				43	F	SEP 9					84	0			6	0	3	0
HOUSTON INTERCON	79.7	58.1	68.9	100	JUL 7	25	MAR 4+	1262	2818	37.83	3.43	DEC 1-2	T	T	JAN 6-7	87	89	60	66	7.5	2.6	12	29	30	APR 16+	6.3	84	114	167	87	0	64	49	83	0	19	0
LUBBOCK	73.7	46.6	60.2	104	JUL 5+	- 4	JAN 5	3279	1649	20.23	2.29	SEP 23-24	13.8	5.1	FEB 20-21	61	71	45	38	11.7	2.9	19	40	32	JUN 10+	4.7	161	91	113	58	4	38	16	65	7	81	2
MIDLAND	76.4	49.5	63.0	104	JUL 5	2	JAN 5	2464	1831	12.60	2.54	MAY 28-29	.1	.1	FEB 22	59	70	41	36	12.0	4.3	16	36	5	APR 5+	4.5	171	84	110	48	0	27	10	69	2	55	0
PORT ARTHUR	78.6	59.8	69.2	97	JUL 5	28	FEB 10+	1146	2791	45.42	6.08	AUG 3-4	.0	.0		88	92	66	75	9.7	2.8	13	74	SW	MAY 9	5.0	97	129	139	104	0	72	46	71	0	8	0
SAN ANGELO	78.9	52.7	65.8	104	JUL 5	12	FEB 8	1908	2318	24.25	3.32	APR 15-16	T	T	MAR 2	63	73	46	42	11.3	4.3	18	36	28	FEB 21	5.2	137	98	130	54	0	37	13	93	0	36	0
SAN ANTONIO	82.3	59.4	70.9	100	JUL 16+	23	FEB 8	1104	3366	31.80	2.90	AUG 2-3	.0	.0		71	79	53	48	9.2	2.6	12	43	NW	MAY 24	6.0	101	110	154	85	0	33	21	125	0	22	0
VICTORIA	81.8	61.3	71.6	98	JUL 21+	22	FEB 8	865	3370	36.06	5.66	SEP 10-11	.0	.0		84	88	57	63	10.6	4.1	13	62	S	JUN 15	6.3	80	125	160	77	0	43	47	105	0	10	0
WACO	79.0	57.8	68.4	103	JUL 16+	19	FEB 8	1604	2962	27.21	3.51	JUL 23-24	T	T	MAR 3 +	71	80	55	52	11.3	4.0	16	53	16	MAY 24	5.2	136	100	129	71	0	53	10	104	0	19	0
WICHITA FALLS	76.7	50.7	63.7	108	JUL 16+	6	FEB 8	2854	2525	27.52	4.62	AUG 14-15	7.2	4.2	DEC 2	73	83	51	50	12.7	3.6	14	49	31	SEP 4	5.2	128	119	118	71	2	63	9	111	4	73	0
UTAH																																			
MILFORD	63.8	32.5	48.2	103	JUL 14	-25	JAN 6+	6818	786	10.54	.86	OCT 24	65.3	9.2	FEB 17			42								4.5	160	108	97	73	19			44	29	188	10
SALT LAKE CITY	62.4	38.4	50.4	100	AUG 14+	- 6	JAN 6	6133	926	18.79	1.44	OCT 30-1	78.0	8.5	OCT 31	64	67	47	43	9.7	2.0	17	41	NW	FEB 25+	5.6	117	98	150	109	25	37	8	60	23	134	3
WENDOVER	61.1	40.8	51.0	99	AUG 11+	- 8	JAN 6	6169	1183	6.71	.73	APR 23-24	6.8	2.2	JAN 12-13		55	43								5.1	142	103	120	67	1			50	23	134	2
VERMONT																																			
BURLINGTON	53.0	33.9	43.5	92	JUN 30	-25	FEB 3	8198	454	31.99	2.54	AUG 27-28	124.4	15.6	MAR 3-4	81	79	61	69	7.2	1.6	23	45	SW	MAR 15	7.2	56	99	210	158	34	15	15	4	79	160	32
VIRGINIA																																			
LYNCHBURG	66.5	46.4	56.5	94	JUN 28	8	FEB 2+	4077	1083	44.27	2.67	OCT 9-10	22.5	8.8	JAN 31-1		81	55	66				45	W	JAN 26	5.8	116	101	148	127	5			5	12	85	0
NORFOLK	68.8	51.9	60.4	96	JUN 7	14	JAN 29	3083	1518	47.73	4.38	OCT 31-1	6.6	4.2	MAR 26-	77	77	59	67	11.1	.6	29	52	NE	AUG 27	6.1	97	108	160	114	3	40	28	20	3	38	0
RICHMOND	68.4	47.4	57.9	93	JUN 7	3	FEB 2	3816	1345	44.95	3.26	OCT 22-23	14.3	8.4	MAR 26	82	84	56	69	7.7	1.0	27	43	NW	JAN 26	6.2	94	118	153	113	3	33	36	14	12	81	0
ROANOKE	66.9	45.6	56.3	93	JUN 28	6	FEB 1	4094	1010	46.83	2.38	OCT 23	29.7	9.1	JAN 31-1	74	77	53	61	8.5	3.0	29	52	30	JAN 26	5.9	109	106	150	133	8	33	25	9	11	86	0
WASHINGTON																																			
OLYMPIA	58.7	38.7	48.7	99	AUG 10	14	JAN 5	5983	141	57.70	2.43	JAN 25-26	43.9	6.5	JAN 10-11		94	80	67				38	20	JAN 16	7.5	50	81	234	180	15			9	4	81	0
QUILLAYUTE	55.8	39.5	47.7	96	AUG 9	15	FEB 28	6256	26	119.58	6.63	JAN 25-26	58.3	8.4	FEB 26-27	88	91	80	73	6.6	1.7	20	32	SE	DEC 1+	7.7	50	69	246	235	17	6	55	1	0	78	0
SEATTLE-TACOMA	57.3	43.9	50.6	95	JUL 29	23	MAR 1	5349	219	43.21	1.64	DEC 7-8	25.8	4.8	DEC 28-29	74	82	73	63	8.6	2.9	19	45	SW	JAN 16	7.5	56	68	241	180	12	4	36	6	3	42	0
SPOKANE	56.7	37.3	47.0	101	AUG 11+	- 3	DEC 7	6993	558	18.48	1.10	JUN 10	54.4	7.8	DEC 8	65	73	60	50	9.5	4.4	20	54	SW	MAR 26	6.4	97	85	183	126	19	6	40	31	33	140	2

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA

ENGLISH UNITS

YEAR 1971

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	B	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow • Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 a.m. EST	7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile: Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .01 inch or more	Snow • 1.0 inch or more	Thunderstorms	Heavy fog	Max. temp: 90°F and above	32°F and below	Min. temp: 32°F and below	0°F and below
	°F	°F	°F	°F		°F			Base 65 °F	Base 65 °F	In	In		In	In		%	%	%	%	M.p.h	M.p.h		M.p.h			Tenths										
WASHINGTON					JUL		DEC						JAN			JAN																					
STAMPEDE PASS R	44.3	33.4	38.9	88	31	7	28		9567	130	102.68	3.61	23-24	579.1	31.9	23-24		90	82	79							7.8	60	48	257	211	99			0	110	194	0
WALLA WALLA A	63.9	44.8	54.4	106	JUL 31	12	DEC 30		4698	931	21.23	1.91	MAY 26	22.3	4.4	DEC 28-29								42	W	MAR 10	6.4	102	71	192	118	9			39	9	57	0
YAKIMA	63.8	34.9	49.4	110	AUG 10	2	DEC 30		6145	564	7.85	.69	JAN 14-15	37.4	10.3	JAN 14-15	63	74	49	40	7.6	3.6	28	39	30	JAN 23+	5.8	120	86	159	63	15	2	10	42	17	169	0
WEST INDIES																																							
SAN JUAN P.R.	86.6	74.3	80.8	94	SEP 26+	68	JAN 24+		0	5844	35.58	1.85	MAY 23	.0	.0		75	72	69	69	9.5	7.3	9	37	NE	DEC 7	5.5	69	224	72	301	0	38	0	74	0	0	0
WEST VIRGINIA																																							
BECKLEY	60.7	42.8	51.3	87	JUN 28	-5	FEB 1		5347	458	41.41	1.87	MAY 29-30	63.9	9.5	JAN 31-1	82	84	61	69	9.9	3.3	24	37	28	JAN 26	6.9	73	94	198	174	23	45	47	0	31	110	4
CHARLESTON	65.4	44.7	55.2	95	JUN 28	1	FEB 1		4489	1008	38.82	2.27	SEP 12-13	38.8	11.1	JAN 31-1	78	82	58	62	6.4	2.2	25	37	31	JAN 26	6.9	56	117	192	149	12	33	118	0	21	93	0
ELKINS	62.1	37.8	50.0	91	JUN 28	-9	JAN 2		5799	440	38.50	2.18	SEP 12-13	90.2	18.7	JAN 31-1		82	56	66							7.5	41	107	217	172	29			1	27	146	8
HUNTINGTON	65.1	45.8	55.5	92	JUN 28	1	FEB 2+		4358	995	35.45	2.42	JUL 17-18	32.1	7.9	MAR 3	72	83	59	63	6.5	2.1	23	38	27	JAN 26	7.1	52	116	197	137	8	47	70	3	20	85	0
PARKERSBURG	64.4	44.6	54.5	97	JUN 28	1	FEB 2		4712	1006	34.69	2.91	SEP 12-13	25.3	5.0	NOV 24 +								49	W	JAN 26					120	7			10	82	98	0
WISCONSIN																																							
GREEN BAY	53.7	33.4	43.6	97	JUN 28+	-26	FEB 2		8194	484	28.42	1.35	SEP 27	72.6	8.6	JAN 3-4	79	82	64	68	10.1	2.4	26	50	SW	FEB 27	6.5	89	107	169	126	17	33	88	7	85	159	35
LA CROSSE	55.6	35.1	45.4	95	SEP 2+	-36	FEB 9		7678	643	30.20			68.8			84	86	65	66	7.9	1.2	23					123	14	40	88	14	89	159	26
MADISON	57.4	34.3	45.9	95	JUN 28+	-26	JAN 18		7553	677	27.16	2.32	NOV 1-2	64.1	13.6	MAR 18-19	80	83	61	64	10.1	2.6	25	40	SW	FEB 27	6.3	97	96	172	113	15	45	88	10	63	159	26
MILWAUKEE	54.0	36.8	45.4	94	JUN 28	-15	FEB 2		7555	516	26.45	1.80	JUL 8	45.9	10.5	MAR 18-19	78	81	64	68	11.8	3.5	26	62	W	JUN 19	6.2	97	107	161	115	14	38	87	7	68	153	18
WYOMING																																							
CASPER	57.0	30.7	43.9	96	JUL 16	-16	FEB 7		7970	395	14.96	1.87	MAY 4-5	86.4	11.4	APR 19	69	75	51	46	12.5	5.7	24	43	21	DEC 9	5.9	111	102	152	93	28	20	14	28	54	144	10
CHEYENNE	56.9	32.7	44.8	95	JUL 12	-15	JAN 6		7510	276	13.90	.85	MAY 4-5	65.1	8.9	MAR 23-24	60	62	40	42	13.3	6.0	29	60	NW	NOV 20	5.7	106	123	136	88	21	47	23	2	41	175	9
LANDER	56.2	31.2	43.7	93	AUG 15+	-14	JAN 5		8094	440	18.99	2.16	APR 25-26	148.3	16.2	APR 25-26	55	63	48	43	7.6	2.6	25	61	SW	MAR 13	5.9	100	120	145	72	31	28	7	17	54	203	11
SHERIDAN	57.8	29.4	43.6	100	AUG 14	-22	DEC 8		8132	442	15.80	1.95	APR 24-25	77.3	6.4	OCT 27 +	63	66	47	45	7.8	3.3	31	45	SW	JUN 18	6.2	103	80	182	115	28	10	6	38	53	188	28

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed 'Greatest in 24 hours' are computed on a 24 hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column 'Fastest Mile' is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which 'Fastest Mile' data can be evaluated.

• And also on an earlier date or dates.

• Includes all forms of frozen precipitation, except hail occurring alone.

B Number of days maximum 70 F or above for Alaskan Stations.

Y Peak gust.

V Sun below horizon November 19 - January 23, inclusive.

X Sun below horizon November 24 - January 17, inclusive.

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State and Station	Temperature							Heating degree days	Cooling degree days	Precipitation						Relative humidity				Wind						Average sky cover sunrise to sunset	Number of days									
	Averages			Extremes									Snow†									Fastest mile (1.6 kilometers)				Sunrise to sunset						Max temp		Min temp	
	Daily maximum	Daily minimum	Annual	Highest	Date	Lowest	Date			Total	Greatest in 24 hours	Date (s)	Total	Greatest in 24 hours	Date (s)	1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Average speed	Resultant speed	Resultant direction	Speed	Direction	Date		Clear, 0–0.3	Partly cloudy, 0.4–0.7	Cloudy, 0.8–1.0	Precipitation 25mm or more	Snow† 25.4mm or more	Thunderstorms	Heavy fog	32.2°C and above	0°C and below	0°C and below	−17.8°C and below
	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			Tenths										
ALABAMA																																		
BIRMINGHAM	22.8	10.4	16.6	36.7	JUN 14	− 12.2	FEB 10	1536	974	1469	98	FEB 4–5	20	18	FEB 12–13	80	84	57	63	2.8	.1	33	17.0	SW	FEB 4	5.9	102	109	154	132	0	83	14	31	3	54	0
HUNTSVILLE	21.9	10.2	16.1	36.1	JUN 26	− 13.3	FEB 9	1681	910	1418	98	FEB 21–22	74	30	FEB 12 +	82	86	59	64	3.4	.1	18	17.4	28	FEB 4	6.0	106	98	161	127	2	64	22	37	5	58	0
MOBILE	26.1	15.3	20.7	36.7	JUN 14	− 6.1	FEB 10	706	1621	1401	74	SEP 4–5	T	T	MAR 3	86	88	59	70	4.2	.4	9	15.6	32	MAY 8	6.1	91	103	171	127	0	87	55	84	0	11	0
MONTGOMERY	24.5	12.1	18.3	36.1	JUL 14+	− 8.9	FEB 10	1170	1230	1358	81	DEC 2–3	T	T	NOV 23 +	83	87	58	66	2.9	.3	27	17.0	W	FEB 26	5.7	118	98	149	122	0	74	31	71	0	34	0
ALASKA																																		
ANCHORAGE	3.8	− 3.6	.2	23.9	JUL 10	− 31.1	MAR 7	6599	1	378	21	AUG 7–8	1793	196	FEB 28	73	78	77	67	3.1		11	27.3	3	JAN 15	7.5	64	83	248	131	24	1	12	6	128	198	54
ANNETTE	9.8	3.3	6.6	30.0	JUL 27	− 14.4	JAN 10	4267	29	2490	82	OCT 4–5	3465	356	APR 1	82	84	78	73	4.6	1.9	13	20.6	13	MAR 1	8.0	36	67	262	224	35	2	12	22	20	107	0
BARROW	−10.7	−16.4	−13.5	17.2	JUL 19	− 46.7	MAR 2	11575	0	78	9	JUL 13–14	546	61	AUG 18–19	82	84	83	80	5.1	1.8	7	15.6	7	NOV 11+		V69	V57	V173	61	8	0	63	0	264	320	185
BARTER ISLAND	−10.6	−16.9	−13.7	18.3	JUL 27	− 44.4	FEB 4+	11648	0	189	42	JUL 28	1501	226	OCT 2	80	80	79	78				29.9	27	DEC 19		X59	X70	X181	79	19	0	90	0	240	309	177
BETHEL	.1	− 7.7	− 3.8	25.6	JUL 5	− 38.3	JAN 31	8022	0	416	51	SEP 27–28	1539	102	JAN 3–4	83	89	87	78	5.9	.8	1	19.2	20	DEC 17	7.4	70	50	245	156	21	1	56	8	161	228	91
BETTLES	− 2.7	−13.2	− 7.9	31.1	JUN 24	− 55.6	JAN 24	9578	46	350	20	JUL 20–21	2758	157	JAN 4–5			66					13.0	8	MAR 24+	6.5	81	109	175	111	35	7	8	94	199	246	150
BIG DELTA	.4	− 9.7	− 4.6	29.4	JUN 23	− 50.0	JAN 25+	8351	12	260	14	JUN 20–21	1372	76	APR 18–19	71		73	65				17.9	11	DEC 12+	7.1	61	92	212	105	20	3	16	35	170	222	117
COLD BAY	4.2	− 1.3	1.4	21.7	AUG 5+	− 25.0	MAR 12	6106	0	942	53	JUN 9–10	1565	234	JAN 2–3	86	88	87	81	8.2	1.5	24	25.0	15	MAR 15	8.9	10	47	308	211	17	0	38	2	79	195	11
FAIRBANKS	.4	− 9.6	− 4.6	31.7	JUN 24	− 51.1	JAN 19+	8364	49	313	22	DEC 17	2451	290	DEC 17	57	64	61	53	2.9	.4	34	13.4	21	JUN 1+	7.5	46	84	235	119	32	2	28	45	178	218	129
GULKANA	1.3	−10.0	− 4.3	29.4	JUN 23	− 49.4	JAN 18	9239	7	344	51	AUG 13–14	1598			65		72	57				23.2	4	JAN 15	7.0	61	92	212	109	20	5	19	26	150	239	111
HOMER	4.9	− 2.8	1.1	23.3	JUL 11	− 29.4	MAR 5	6265	1	566	28	OCT 9–10	2832	229	MAR 1–2	77	84	79	71				15.6	4	MAY 20	7.3	65	67	233	157	34	0	17	3	87	210	27
JUNEAU	7.1	− .4	3.4	27.2	JUL 9	− 25.6	JAN 25	5405	0	1235	45	AUG 2–3	4793	424	MAR 5–6	86	91	84	77	3.7	2.3	10	16.5	12	NOV 17	8.4	40	37	288	215	51	1	19	21	72	181	21
KING SALMON	3.3	− 5.6	− 1.1	29.4	JUL 11	− 41.1	MAR 13	7052	3	617	35	SEP 28	1509	130	FEB 20–21	76	76	75	63	4.7	.5	11	21.5	9	MAY 31+	7.7	55	59	251	160	23	4	21	11	104	205	70
KOTZEBUE	− 3.9	−11.4	− 7.7	28.3	JUN 26	− 42.8	MAR 10	9433	9	177	28	JUL 9–10	1420	91	DEC 22–23	75	78	76	73	6.2	1.5	8	24.1	11	DEC 22	6.4	99	74	192	94	22	0	7	9	217	252	130
MC GRATH	.3	−10.5	− 5.1	31.1	JUN 24	− 51.1	JAN 23+	8527	16	439	24	OCT 15–16	3724	267	OCT 7–8	72	83	79	64	2.2	.3	32	13.4	9	MAR 16	7.5	55	69	241	148	39	9	12	34	173	229	123
NOME	− 1.4	− 9.8	− 5.6	25.6	JUN 28+	− 43.3	MAR 11	8678	2	227	13	SEP 28–29	1057	97	NOV 9	72	74	72	69	4.7	1.5	6	22.8	4	FEB 5	6.5	105	59	201	106	10	1	21	8	192	240	103
ST. PAUL ISLAND	1.8	− 3.3	− .8	15.0	AUG 2	− 28.3	MAR 14	6910	0	537	27	AUG 20–21	1956	84	MAY 8–9	90	91	90	87	8.6	1.5	36	32.2	5	MAR 15	8.5	25	63	277	216	24	0	90	0	121	232	26
SHEMYA	4.6	1.4	3.0	11.1	FEB 21+	− 13.9	FEB 21	5534	0	874	44	AUG 19	1156	86	DEC 5–6 +	77	78	78	76	8.5	1.0	27	33.5	23	DEC 23	8.9	5	59	301	199	18	0	70	0	43	153	0
SUMMIT	− 1.3	− 9.8	− 5.6	27.2	JUN 25+	− 42.8	JAN 18	8690	0	409	24	JUN 29–30	4602	318	NOV 17–18	75	80	76	69	5.1	2.1	6	21.5	10	MAR 6+	7.5	63	58	244	149	48	10	16	9	188	269	109
TALKEETNA	3.9	− 7.7	− 1.9	28.9	JUL 10+	− 43.3	JAN 24	7345	2	793	40	AUG 8	4404	312	FEB 5–6	77		74	63				10.7	4	JAN 15					153	48	2	4	29	139	237	88
UNALAKLEET	− 1.8	− 9.2	− 5.5	22.2	JUL 19	− 45.6	MAR 11	8644	0	312	17	SEP 28–29	1105	119	DEC 22–23				69				23.7	11	MAR 16					140	12	2	17	3	191	235	104
YAKUTAT	5.7	− 2.1	1.8	28.3	JUL 9	− 27.2	JAN 17	5967	0	3461	152	SEP 15–16	8603	597	JAN 3	88	91	86	79	3.5	2.0	11	17.9	13	OCT 28	8.4	36	35	294	253	69	0	14	7	67	215	21
ARIZONA																																		
FLAGSTAFF	14.9	− 2.1	6.4	33.3	JUN 23	− 30.0	JAN 4	4348	85	534	56	OCT 16–17	1994	290	OCT 16–17	59	66	39	38	3.2	1.3	21	13.0	21	FEB 25	4.1	182	94	89	75	25	61	17	6	29	237	16
PHOENIX	29.1	13.7	21.4	45.6	JUL 11	− 7.2	JAN 7	851	2028	91	18	SEP 29	0	0		34	48	29	20	3.4	.4	17	23.2	SE	SEP 1	3.0	223	88	54	26	0	21	0	154	0	17	0
TUCSON	26.6	11.2	18.9	42.2	JUL 11	− 8.3	JAN 6	1131	1394	309	25	AUG 9	173	173	DEC 8	48	54	32	26	4.1	1.3	19	31.7	SE	JUL 16	3.3	221	78	66	50	1	45	1	113	0	32	0
WINSLOW	21.7	3.7	12.7	42.8	JUL 13	− 26.1	JAN 6	2774	787	158	30	SEP 29	328	107	DEC 7	46	56	35	27	3.7	1.7	22	28.2	22	FEB 25	3.8	190	102	73	48	4	33	0	82	12	140	6
YUMA	29.1	14.2	21.7	45.6	SEP 12	− 4.4	JAN 8	732	1997	62	32	SEP 29	0	0		42	54	32	23	3.5	.4	25	18.8	W	APR 17	2.5	252	69	44	14	0	8	1	150	0	7	0
ARKANSAS																																		
FORT SMITH	22.6	9.5	16.1	39.4	JUL 14	− 12.8	FEB 9	1784	1019	1073	147	DEC 9–10	170	71	NOV 22–23	78	83	55	55	3.4	.5	7	20.1	SW	DEC 14	5.9	109	111	145	101	4	61	25	69	3	74	0
LITTLE ROCK	22.8	10.4	16.7	37.8	JUL 15	− 11.7	FEB 9	1629	1077	1233	97	AUG 2–3	333	170	MAR 2–3	82	86	59	62	3.5	.4	21	25.5	SW	FEB 4	5.7	117	105	143	101	3	57	27	64	5	91	0

See reference notes at end of table.

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State and Station	Temperature: Averages: Daily maximum °C	Daily minimum °C	Annual °C	Extremes: Highest °C	Date	Lowest °C	Date	Heating degree days Base 18.3°C	Cooling degree days Base 18.3°C	Precipitation: Total Mm.	Greatest in 24 hours Mm.	Date (s)	Snow † Total Mm.	Greatest in 24 hours Mm.	Date (s)	Relative humidity: 1:00 am EST %	7:00 am EST %	1:00 pm EST %	7:00 pm EST %	Wind: Average speed M.p.s	Resultant speed M.p.s	Resultant direction	Fastest mile (1.6 kilometers): Speed M.p.s	Direction	Date	Average sky cover sunrise to sunset Tenths	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .25mm or more	Snow † .254mm or more	Thunderstorms	Heavy fog	Max. temp.: 32.2°C and above	0°C and below	Min. temp: 0°C and below	-17.8°C and below
CALIFORNIA																																					
BAKERSFIELD	24.7	11.6	18.2	42.8	AUG 11+	- 3.3	DEC 17	1351	1345	147	36	MAY 26-27	0	0		55	67	51	37	3.4	1.2	35	15.6	18	DEC 27	3.5	212	72	81	30	0	1	27	110	0	20	0
BISHOP	23.2	2.8	13.0	41.1	JUL 27	- 13.3	DEC 11+	2553	666	93	33	DEC 22-23	51	46	DEC 27			28	19							3.6	193	115	57	26	1			97	0	167	0
BLUE CANYON	13.4	4.8	9.1	34.4	AUG 10	- 11.7	MAR 1	3592	279	1386	113	MAR 25-26	6546	671	DEC 24-25			50					17.4	22	MAR 25+	4.4	178	65	122	98	54			4	33	130	5
EUREKA U	13.3	7.6	10.4	23.3	SEP 16	- .6	JAN 3	2847	1	986	60	NOV 9-10	T	T	FEB 27 +								18.8	N	APR 24	7.0	76	82	207	132	0			0	0	1	0
FRESNO	24.2	8.4	16.3	42.2	AUG 2	- 5.6	JAN 5	1664	984	178	24	APR 17	T	T	JAN 12	67	82	58	40	3.3	1.3	30	15.6	NW	FEB 25	3.4	218	67	80	41	0	1	24	115	0	44	0
LONG BEACH	23.8	12.1	18.0	42.2	SEP 12	- .6	JAN 7	875	908	225	45	DEC 23-24	0	0		71	77	58	52	3.0	1.0	24	13.4	32	MAR 13+	4.3	171	110	84	32	0	2	20	47	0	3	0
LOS ANGELES	20.7	12.7	16.7	38.3	OCT 6+	1.7	JAN 5	997	466	211	57	DEC 27	T	T	DEC 27	76	79	62	64	3.7	1.7	25	19.2	W	APR 17+	4.4	162	120	83	30	0	1	18	9	0	0	0
LOS ANGELES U	23.4	13.3	18.4	41.1	SEP 13	1.7	JAN 5	791	865	235	69	DEC 24-25	0	0									14.8	NW	FEB 25	3.4	214	98	53	26	0			41	0	0	0
MT SHASTA R	15.7	2.4	9.1	38.3	AUG 11	- 12.8	DEC 28	3536	194	689	61	JAN 14-15	2637	394	DEC 21-22	68	77	59	50											94	25			56	11	154	0
OAKLAND	17.1	9.7	13.4	35.6	SEP 14	.6	JAN 7+	1822	78	269	33	MAR 25-26	T	T	JAN 13	78	82	71	65	4.0	2.3	28	13.9	16	DEC 26	4.3	170	108	87	58	0	2	19	4	0	0	0
RED BLUFF	23.4	9.3	16.4	47.8	AUG 10	- 2.8	FEB 26+	1486	1026	333	50	JAN 15-16	T	T	DEC 25 +	56	65	49	36	4.1	.4	33	21.0	S	OCT 19	4.3	192	71	112	59	0	3	16	97	0	30	0
SACRAMENTO	22.7	8.2	15.4	42.2	AUG 10	- 3.3	MAR 5+	1716	709	248	27	DEC 24-25	0	0		70	79	61	43	3.5	1.3	21	17.0	N	JAN 2	4.0	196	76	94	57	0	3	43	87	0	22	0
SANDBERG R	17.0	6.7	11.8	35.0	SEP 15+	- 10.0	DEC 8+	2847	532	347	73	DEC 26-27	1316	521	DEC 26-27	54		47	45				26.8	36	MAR 31	3.6	213	65	87	41	14			16	12	86	0
SAN DIEGO	20.6	13.3	17.0	38.3	OCT 6	.6	JAN 5	921	681	220	29	FEB 16-17	0	0		71	74	61	60	3.3	1.6	27	13.4	SE	DEC 27+	5.0	148	104	113	39	0	5	24	7	0	0	0
SAN FRANCISCO	17.7	8.6	13.2	39.4	SEP 14	- .6	JAN 5+	1927	98	249	38	MAR 11-12	T	T	JAN 13	79	84	68	62	4.8	3.3	28	17.9	28	MAY 20	4.2	183	97	85	52	0	0	13	6	0	2	0
SAN FRANCISCO U	16.2	9.9	13.1	38.3	SEP 14	3.9	JAN 4	1927	60	313	34	MAR 12	0	0				76					14.8	W	MAY 20					55	0			3	0	0	0
SANTA MARIA	19.1	6.1	12.6	36.7	SEP 13	- 5.6	FEB 27	2107	58	168	22	DEC 26-27	0	0				60	61							3.7	205	97	63	40	0			6	0	47	0
STOCKTON	23.1	8.8	15.9	42.8	AUG 10	- 3.3	JAN 6+	1672	860	269	36	DEC 24-25	T	T	FEB 27	65	73	56	42	3.7	2.0	29	16.1	34	OCT 28	4.1	188	78	105	56	0	1	42	96	0	26	0
COLORADO																																					
ALAMOSA	14.6	- 5.3	4.7	33.9	JUL 13	- 40.0	JAN 6	4944	26	223	40	JUL 18-19	1092	193	DEC 7-8	68	76	41	37							4.3	139	134	93	80	14			3	45	245	49
COLORADO SPRINGS	15.9	1.8	8.9	36.7	JUL 12	- 26.7	JAN 6+	3641	258	301	28	MAY 29	1085	226	SEP 17	60	65	39	39	4.5	1.0	4	23.2	27	MAY 29	4.8	145	115	105	80	8	40	34	33	28	161	6
DENVER	18.0	1.4	9.7	38.3	JUL 17+	- 26.7	JAN 6	3486	363	278	35	APR 21-22	1681	335	SEP 16-17	66	72	43	43	3.6	.4	16	21.0	SE	SEP 18	5.3	115	134	154	78	19	19	19	38	24	120	10
GRAND JUNCTION	18.9	3.7	11.3	40.6	JUL 13	- 26.1	JAN 7	3237	729	152	17	OCT 16-17	528	99	NOV 28	50	60	42	34	4.1	.8	14	19.2	W	MAR 17	5.0	147	104	114	64	4	21	7	72	26	147	9
PUEBLO	20.6	2.4	11.5	40.6	JUL 12+	- 27.2	JAN 7+	2978	554	210	25	SEP 16-17	1057	191	SEP 17-18	56	66	37	32	4.3	.5	34	28.2	NW	NOV 13	4.9	149	114	102	63	22	20	13	44	14	143	5
CONNECTICUT																																					
BRIDGEPORT	15.6	7.0	11.3	32.8	AUG 9	- 15.6	JAN 10	2966	461	1455	151	JUL 19	419	97	JAN 1	74	73	58	65	5.5	1.6	29	24.6	12	AUG 28	6.0	101	154	160	100	7	31	28	4	10	84	0
HARTFORD	15.8	4.4	10.2	36.7	JUN 30	- 25.0	JAN 20	3411	490	1137	76	AUG 27-28	1466	221	JAN 1	74	75	52	60	3.7	1.2	28	21.0	NW	MAR 4	6.5	81	111	173	104	15	29	33	26	34	134	17
DELAWARE																																					
WILMINGTON	17.8	7.8	12.8	35.0	JUL 8	- 16.1	FEB 1	2610	652	1327	104	AUG 27-28	229	150	JAN 31-1	77	77	55	66	4.2	1.1	30	20.6	35	AUG 29	6.5	81	103	181	112	6	33	37	14	18	86	0
DIST. OF COLUMBIA																																					
WASHINGTON DULLES	18.7	6.3	12.5	34.4	JUL 8	- 15.0	JAN 29	2647	591	1184	86	OCT 25	338	391	JAN 31-1	82	81	56	67	3.1	.8	29	17.0	30	JAN 24	6.5	90	99	176	101	7	29	40	22	33	110	0
WASHINGTON NATIONAL	19.3	9.5	14.4	33.9	AUG 21+	- 11.7	FEB 2	2219	846	1169	96	AUG 27	203	236	JAN 31-1	72	74	54	59	4.3	.8	29	21.0	NW	JAN 24	6.3	95	105	165	104	7	26	38	30	31	70	0
FLORIDA																																					
APALACHICOLA U	24.7	16.6	20.7	34.4	JUN 21	- 3.3	JAN 20	649	1557	981	82	OCT 9-10	0	0									14.8	SW	MAR 19	5.2	112	138	115	100	0	62	47	23	0	5	0
DAYTONA BEACH	27.0	16.0	21.5	35.6	JUN 21+	- 5.0	JAN 21	431	1656	1174	112	FEB 7-8	0	0		83	85	57	72	3.7	.3	10	17.4	24	FEB 13	5.5	92	154	119	112	0	78	34	42	0	7	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow † : Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm. or more	Snow † 25.4mm. or more	Thunderstorms	Heavy fog	Max. temp.: 32.2 °C and above	0°C and below	Min. temp.: 0°C and below	-17.8 °C. and below
FLORIDA	°C.	°C.	°C	°C		°C.		Base 18.3 °C.	Base 18.3 °C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			Tenths											
FORT MYERS	28.7	18.2	23.4	33.9	JUL 18+	.0	JAN 21	154	2076	1202	74	JUL 27-28	0	0		85	89	55	71	3.6	.6	9	15.6	25	FEB 8	4.9	132	156	77	105	0	93	30	71	0	1	0
JACKSONVILLE	26.7	14.2	20.5	36.7	JUN 15	- 7.2	JAN 21	666	1506	1364	94	DEC 2-3	0	0		89	91	57	76	3.4	.3	27	21.0	NW	JUL 1	5.4	112	129	124	115	0	94	53	71	0	20	0
KEY WEST	28.2	23.1	25.7	32.8	AUG 9	7.8	JAN 21	27	2741	1124	215	OCT 11-12	0	0		76	78	66	71	4.9	2.5	10	17.4	E	JUL 21	5.1	110	162	93	109	0	75	0	5	0	0	0
LAKELAND U	27.7	17.3	22.5	35.0	AUG 22	- 3.3	JAN 20	282	1879	1090	100	FEB 7-8	0	0												4.7	125	183	57	126	0			73	0	3	0
MIAMI	28.3	21.1	24.7	35.6	APR 30	1.7	JAN 20	82	2454	1288	100	JUN 11-12	0	0		80	85	61	69	4.3	1.6	8	16.5	19	SEP 12	5.5	93	174	98	123	0	66	9	28	0	0	0
ORLANDO	29.2	17.7	23.4	35.0	AUG 8+	- 2.2	JAN 20	237	2162	1018	73	AUG 17-18	0	0		82	84	51	65	3.7		10	13.9	26	SEP 11	5.4	110	154	101	117	0	88	33	137	0	3	0
PENSACOLA	25.2	15.5	20.4	35.6	JUL 14	- 5.0	FEB 10+	724	1536	1132	59	SEP 4	0	0		82	85	61	70	3.5	.4	7	11.6	20	MAY 12	5.8	103	109	153	114	0	73	36	45	0	13	0
TALLAHASSEE	26.4	12.2	19.3	37.2	JUN 15	- 11.7	JAN 21	899	1318	1480	91	JUL 28-29	0	0		87	88	53	69	3.0	.2	5	14.3	23	JUN 26	5.6	102	139	124	130	0	98	67	87	0	39	0
TAMPA	28.1	17.0	22.6	35.6	JUN 20	- 5.0	JAN 21	313	1896	1177	111	SEP 9-10	0	0		82	86	55	69	3.9	.2	10	16.5	30	MAR 3	5.5	106	146	113	100	0	96	24	87	0	6	0
WEST PALM BEACH	28.9	19.0	23.9	37.2	APR 30	- 1.1	JAN 20	157	2262	1303	138	NOV 4-5	0	0		80	81	58	70	4.2	1.3	10	17.9	1	AUG 9	5.7	94	162	109	135	0	76	17	96	0	1	0
GEORGIA																																					
ATHENS	22.2	10.7	16.5	35.6	JUN 26+	- 11.1	FEB 10	1559	962	1259	70	MAR 2-3	76	76	DEC 3	82	87	59	67	3.2	.6	29	13.9	31	FEB 5	5.9	110	101	154	128	1	56	60	37	1	52	0
ATLANTA	21.8	10.8	16.3	33.9	JUN 26	- 11.1	FEB 10	1589	908	1249	78	MAR 2-3	51	25	DEC 3 +	78	82	57	64	3.8	.5	31	29.1	SW	MAY 12	5.9	108	104	153	129	2	48	48	11	2	55	0
AUGUSTA	24.0	10.7	17.4	37.8	JUN 15	- 10.0	FEB 10	1376	1089	1331	88	MAR 2-3	10	10	DEC 3	87	90	55	70	3.0	.6	26	14.3	24	JUL 11	6.0	105	99	161	114	0	60	37	46	0	49	0
COLUMBUS	24.3	12.4	18.4	35.6	JUN 15+	- 9.4	FEB 10	1158	1235	1638	108	SEP 16-17	T	T	APR 7 +		89	58	67	2.8	.4	35	24.6	29	JUN 25	5.7	122	89	154	123	0	66	28	54	0	28	0
MACON	25.3	12.2	18.7	37.2	JUN 6	- 8.9	FEB 10+	1156	1367	1322	77	DEC 2-3	T	T	DEC 3 +	82	87	55	64	3.2	.5	31	19.7	NW	JAN 15	5.9	99	97	169	133	0	71	37	92	0	39	0
ROME	22.4	9.2	15.8	36.7	JUN 26	- 13.9	FEB 10	1804	947	1224	62	MAR 25-26	69	46	MAR 25															134	1			42	4	79	0
SAVANNAH	25.6	13.3	19.4	38.9	JUN 15	- 8.3	JAN 21+	946	1421	1558	179	AUG 16	T	T	JAN 19	83	85	54	69	3.5	.5	26	17.0	W	FEB 13	6.1	99	94	172	136	0	68	52	66	0	29	0
HAWAII																																					
HILO	27.6	18.4	23.0	32.8	AUG 14	12.2	MAR 18	0	1746	3574	281	APR 23-24	0	0		85	88	80	69	2.8	.6	17	13.0	S	JAN 28	7.2	39	130	196	273	0	17	0	2	0	0	0
HONOLULU	28.2	20.8	24.5	31.7	SEP 7+	13.3	JAN 7	0	2305	677	65	MAR 30-31	0	0		71	76	72	57	5.9	4.6	6	15.2	NE	FEB 22	5.8	77	177	111	110	0	8	0	0	0	0	0
KAHULUI	29.3	18.6	23.9	33.3	OCT 13+	11.1	JAN 8	1	2103	511	125	JAN 27-28	0	0		76	85	76	56	5.5	4.2	5	17.9	NE	FEB 22	4.7	169	107	89	83	0	13	0	15	0	0	0
LIHUE	27.6	21.8	24.7	30.6	SEP 23+	11.7	JAN 7	2	2371	1260	117	DEC 18-19	0	0		76	79	75	67	5.1	3.7	7	16.1	SW	JAN 14	6.5	45	184	136	192	0	13	0	0	0	0	0
IDAHO																																					
BOISE	16.8	4.8	10.8	40.0	AUG 1	- 14.4	MAR 14+	3192	506	301	22	NOV 26-27	650	79	DEC 12-13	58	64	50	40	4.2	.2	8	19.7	NW	MAR 30	5.9	110	86	169	100	11	12	20	50	16	117	0
LEWISTON	17.0	5.1	11.1	41.1	AUG 1	- 13.9	JAN 5	3063	471	392	18	SEP 1-2	490	81	JAN 6-7			61	48							6.6	94	70	201	116	9			46	13	95	0
POCATELLO	13.7	.1	6.9	36.7	AUG 14+	- 25.0	JAN 5	4317	220	427	27	OCT 30-1	1633	173	NOV 14-15	63	73	54	46	4.4	2.5	22	21.0	SW	MAR 30	6.3	94	95	176	115	17	16	21	36	54	178	9
ILLINOIS																																					
CAIRO U	20.0	10.6	15.3	37.2	JUN 25	- 13.9	FEB 9	2025	986	1049	68	JUL 14-15	277	102	FEB 12								28.2	SW	DEC 10	5.4	132	107	126	108	5			30	13	59	0
CHICAGO MIDWAY	16.1	5.9	11.0	38.3	JUN 28+	- 22.8	FEB 2	3251	636	751	56	DEC 9-10	886	180	JAN 3	76	74	58	59	5.0	1.2	23	19.2	S	NOV 1	6.0	102	115	148	117	11	46	8	35	34	120	10
MOLINE	15.9	4.4	10.2	37.2	JUN 19	- 28.3	JAN 7	3509	600	976	129	JUL 10	871	417	JAN 3	74	79	56	59	4.4	1.2	24	21.0	E	APR 27	5.9	107	106	152	96	7	43	24	30	42	131	17
PEORIA	16.4	4.9	10.7	37.8	JUN 19	- 21.7	FEB 9	3316	496	670	72	JUL 9-10	401	104	JAN 3	75	80	57	60	4.6	1.0	22	20.6	SW	DEC 15+	6.3	91	108	166	93	3	47	30	29	37	130	11
ROCKFORD	15.1	4.1	9.6	36.7	JUN 28	- 25.6	FEB 2	3646	511	706	57	DEC 14-15	853	175	JAN 3	78	83	58	61	4.7	.9	25	19.2	28	JUL 8	6.1	104	96	165	103	9	39	21	27	46	130	19
SPRINGFIELD	18.0	6.5	12.3	37.8	JUN 26+	- 22.2	FEB 2	2882	724	702	67	JUL 10	419	76	APR 5	74	78	54	58	5.0	1.2	22	24.1	SW	DEC 15	5.9	105	107	153	101	7	44	18	42	25	112	5
INDIANA																																					
EVANSVILLE	19.6	8.0	13.8	37.2	JUL 9+	- 17.8	FEB 9	2460	876	1022	83	JUN 19	645	218	APR 6	78	81	59	62	3.7	.5	24	25.0	SW	DEC 10	5.8	114	110	141	114	10	36	20	44	20	95	1
FORT WAYNE	15.9	4.6	10.3	36.1	JUN 28	- 23.9	JAN 19	3341	461	804	40	JUN 1-2	668	122	FEB 12-13	79	82	61	66	4.5	1.6	25	22.4	SW	DEC 10	6.7	71	116	178	124	7	33	23	11	35	131	11

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow † : Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 a.m. EST	7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	Max. temp. 32.2°C and above	0°C and below	Min. temp. 0°C and below	-17.8°C and below
INDIANA	°C.	°C.	°C.	°C		°C		Base 18.3°C.	Base 18.3°C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			Tenths											
INDIANAPOLIS	17.1	5.9	11.5	34.4	JUN 27	- 20.6	FEB 2	2998	562	952	56	DEC 14-15	439	150	FEB 12	78	82	60	64	4.3	1.0	24	25.0	SW	DEC 10	6.3	98	100	167	118	6	39	19	7	29	126	6
SOUTH BEND	15.0	5.1	10.1	36.7	JUN 28	- 21.7	FEB 2	3389	427	757	45	JUL 28	1839	112	JAN 26-27	80	83	63	66	4.7	1.4	24	17.4	21	DEC 15+	6.9	67	102	196	141	29	37	25	7	40	128	10
IOWA																																				
BURLINGTON	16.1	5.1	10.6	36.7	JUN 27	- 24.4	JAN 6	3367	614	683	58	DEC 14-15	521	229	JAN 3	73	78	60	61	4.6	.9	25	15.6	22	DEC 15+	6.0	99	126	140	88	5	41	25	25	40	132	12
DES MOINES	15.4	4.8	10.2	36.7	JUN 27+	- 27.2	FEB 8	3548	636	719	52	NOV 1	1232	345	JAN 3	73	79	60	58	4.6	.6	25	20.1	NW	JUL 8	6.1	93	110	162	98	11	43	18	25	53	136	9
DUBUQUE	13.3	2.9	8.1	35.6	JUN 19	- 27.2	FEB 2+	4024	365	942	67	NOV 1	1354	300	JAN 3-4		79	61	64											116	17		3	73	146	23
SIOUX CITY	15.5	3.6	9.6	38.3	SEP 7	- 26.1	JAN 6	3718	579	499	55	FEB 18	516	112	DEC 29-30	74	79	57	57	4.9	.2	24	21.9	NW	MAR 18	5.9	108	99	158	89	6	39	21	29	59	152	15
WATERLOO	12.7	1.2	7.0	33.9	SEP 2+	- 32.8	FEB 8	4374	298	746	46	MAY 17-18	1422	376	JAN 3-4	81	85	62	64	5.1	.6	27	19.7	28	FEB 27	6.2	100	98	167	96	12	32	29	8	85	170	29
KANSAS																																				
CONCORDIA	17.5	5.3	11.4	39.4	JUN 24	- 25.6	FEB 9	3162	701	896	100	JUL 22-23	1288	221	FEB 21-22	77	84	61	59	5.6	1.2	17	30.4	NW	MAR 18	5.3	137	95	133	94	11	56	22	44	97	130	10
DODGE CITY	19.1	5.7	12.4	41.1	JUL 13	- 22.2	JAN 7+	2878	795	642	61	NOV 16-17	785	262	FEB 21	69	77	52	50	5.8	1.2	18	28.2	NW	MAR 18	5.3	135	106	124	77	5	53	21	43	94	126	7
GOODLAND	18.1	3.0	10.6	41.7	JUN 26+	- 23.9	JAN 6	3278	516	444	40	MAY 17-18	947	193	JAN 2-3	71	78	50	47	5.9	.9	21	21.9	33	MAR 18	5.1	134	113	118	81	12	40	19	49	28	153	6
TOPEKA	18.4	6.2	12.3	37.2	SEP 10+	- 28.9	FEB 8	2891	787	730	69	FEB 21-22	904	386	FEB 21-22	77	82	59	59	4.1	.7	20	18.8	NW	MAR 18	5.8	124	88	153	93	9	49	19	50	32	124	4
WICHITA	19.3	6.9	13.1	38.9	JUL 17+	- 21.1	FEB 8	2714	882	752	64	OCT 29	544	302	FEB 21-22	74	80	57	56	5.5	1.2	17	25.5	NW	MAR 18	5.5	127	99	140	78	5	51	24	63	72	126	3
KENTUCKY																																				
COVINGTON	18.1	7.0	12.6	36.1	JUN 27	- 19.4	FEB 2	2677	632	1033	57	FEB 21-22	742	163	FEB 8	75	79	58	63	4.2	1.2	24	17.9	24	JUN 24	6.7	72	108	185	118	11	33	46	14	23	102	4
LEXINGTON	18.8	7.4	13.1	33.9	JUN 27	- 18.9	FEB 2+	2482	651	1135	78	JUN 21-22	485	185	FEB 8	76	80	57	64	4.0	1.1	22	16.5	19	DEC 10	6.4	88	118	163	113	6	45	24	14	70	94	3
LOUISVILLE	19.1	8.1	13.6	36.1	JUN 27	- 17.2	FEB 9	2365	715	1074	86	JUL 18-19	655	198	FEB 7-8	75	79	57	60	3.8	.8	25	24.6	W	JUL 13	6.3	87	120	158	112	9	31	12	16	20	78	0
LOUISIANA																																				
ALEXANDRIA	24.7	12.4	18.6	36.7	JUL 19+	- 7.8	FEB 10	1084	1243	1452	156	DEC 5-6	51	41	JAN 7			61	71	2.7	.3	14	15.6	27	MAY 24	5.7	108	112	145	114	1	78	52	66	2	30	0
BATON ROUGE	25.8	14.4	20.1	36.1	AUG 27	- 5.0	FEB 10+	810	1521	1500	109	SEP 15-16	T	T	FEB 8	86	90	60	67	3.3	.6	11	17.9	17	SEP 16	5.9	99	121	145	119	5	49	47	83	8	17	0
LAKE CHARLES	26.4	15.3	20.9	35.0	SEP 5+	- 1.7	FEB 10+	670	1654	1112	175	DEC 5-6	T	T	JAN 7 +	89	90	62	73	4.0	1.1	12	17.9	36	JAN 14+	6.2	84	126	155	93	9	74	59	99	8	6	0
NEW ORLEANS	25.9	14.8	20.3	35.0	JUN 14+	- 4.4	FEB 10	732	1531	1459	165	SEP 4-5	0	0		84	86	62	70	3.3	.5	9	21.5	5	JUN 27	5.7	106	122	137	115	9	48	25	60	8	11	0
SHREVEPORT	25.3	12.9	19.2	40.0	JUL 16	- 6.1	FEB 10+	1044	1409	902	79	NOV 18	43	20	JAN 7	79	87	58	60	3.6	.8	15	13.4	32	APR 64	5.8	109	105	151	99	9	51	28	92	3	24	0
MAINE																																				
CARIBOU	9.0	- 2.0	3.5	30.6	JUN 20	- 34.4	FEB 4	5411	69	809	36	NOV 25-26	3274	297	MAR 4-5		79	62	70							7.0	65	89	211	168	40			0	104	190	45
PORTLAND	12.5	1.8	7.2	35.6	JUN 30	- 32.2	JAN 19	4226	719	1058	71	OCT 10-11	2677	277	FEB 7-8	80	77	59	71	4.2	1.3	28	17.0	E	MAR 44	6.1	96	109	160	118	24	15	48	5	49	156	24
MARYLAND																																				
BALTIMORE	18.4	8.2	13.3	35.6	JUL 8	- 12.8	FEB 2	2445	679	1358	110	AUG 26-27	196	71	JAN 1	72	75	55	60	3.7	1.2	28	24.1	NW	MAR 44	6.2	101	98	166	126	3	26	39	10	16	72	0
MASSACHUSETTS																																				
BLUE HILL OBS R	14.0	4.6	9.3	33.9	JUN 30	- 21.7	JAN 19	3589	354	967	96	NOV 25	1987	305	NOV 21-22	76	79	61	68				29.9	SSW	AUG 28					116	17		7	40	140	8
BOSTON	15.0	6.3	10.7	34.4	JUL 9+	- 16.7	JAN 28+	3188	472	906	66	NOV 25	1019	124	JAN 1	74	73	58	66	5.3	1.8	28	24.6	SW	MAR 4	6.1	99	121	145	119	17	16	24	15	23	116	0
WORCESTER	13.1	3.4	8.2	33.3	JUN 30	- 22.8	JAN 28+	3881	262	1113	79	SEP 12	1986	376	NOV 25	74	74	56	64	4.2	2.1	28	16.5	29	MAR 5	6.2	88	122	154	110	23	19	41	3	53	156	12
MICHIGAN																																				
ALPENA	11.9	- .1	5.9	36.7	JUN 28	- 27.8	FEB 1	4584	132	895	60	JUN 29-30	3518	381	MAR 6-7	81	82	60	68	3.3	.8	25	17.0	NW	JAN 27+	6.7	67	114	184	154	45	33	38	1	73	174	23
DETROIT	15.0	5.7	10.4	38.3	JUN 28	- 19.4	FEB 2+	3329	496		72	AUG 26-27	699			72	75	57	60	4.8	1.5	25	19.2	21	DEC 10						12	26	13	17	64	123	3
DETROIT METRO.	15.1	3.9	9.5	37.2	JUN 28+	- 22.8	FEB 2	3548	390	579	35	DEC 29-30	780	81	JAN 3-4	79	82	57	64	4.6	1.4	26	22.4	W	JAN 30+	6.6	72	115	178	120	12	28	20	17	63	137	5

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow † Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	Max temp.: 32.2°C and above	0°C and below	Min. temp: 0°C and below	-17.8°C and below
	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			Tenths											
MICHIGAN																																				
FLINT	13.7	3.7	8.7	35.6	JUN 28	- 20.6	FEB 2+	3766	308	674	45	DEC 14-15	1298	196	MAR 6-7	79	82	61	65	4.6	1.7	25	17.4	24	FEB 27+	6.7	69	119	177	129	15	33	13	7	52	133	4
GRAND RAPIDS	14.1	3.2	8.7	35.6	JUN 28	- 23.9	FEB 2+	3820	373	791	54	DEC 10	2037	203	MAR 18-19	78	80	60	63	4.7	1.5	23	26.8	SW	DEC 10	7.0	61	109	195	132	21	28	29	11	56	147	10
HOUGHTON LAKE	11.9	.5	6.2	33.9	JUN 29+	- 27.2	FEB 1	4540	185	661	43	DEC 10	2964	264	MAR 19-20	84	86	64	69	4.1	1.2	26	15.6	27	MAY 15	7.0	63	107	195	132	34	39	40	3	86	174	22
LANSING	14.3	3.1	8.7	35.0	JUN 28+	- 21.1	FEB 2	3763	318	881	49	SEP 5-6	1328	170	MAR 6-7	81	82	63	69	4.6	1.7	24	25.0	SW	DEC 154	6.7	69	117	179	132	15	36	25	8	50	142	6
MARQUETTE U	10.0	1.8	5.9	35.6	JUN 28	- 23.3	FEB 2+	4622	163	854	37	JUN 5	3411	338	JAN 3-4								18.8	SW	JAN 20	6.9	68	94	203	168	34			3	92	154	8
MUSKEGON	13.5	3.3	8.4	33.3	JUN 29	- 21.7	JAN 19	3835	291	587	46	DEC 10	2959	218	NOV 29 +	77	80	62	66	5.0	1.3	24	19.7	24	JUN 6+	6.8	74	96	195	147	33	37	20	4	54	147	5
SAULT STE MARIE	9.1	- 1.4	3.9	31.7	JUN 28	- 33.3	FEB 2	5255	52	996	42	NOV 1-2	3764	196	MAR 27-28	83	84	67	73	3.8	.4	31	18.3	NW	DEC 24	7.2	67	84	214	175	44	34	42	0	99	181	39
MINNESOTA																																				
DULUTH	8.6	- 2.1	3.3	32.2	AUG 9	- 31.7	FEB 2	5516	91	874	66	AUG 17-18	2619	269	JAN 13	79	82	65	66	4.6	.7	29	21.9	W	AUG 9	6.8	79	96	190	156	26	42	50	1	114	190	51
INTERNATIONAL FALLS	8.6	- 3.7	2.4	33.9	AUG 16	- 38.9	JAN 12	5840	102	631	60	SEP 30	1217	173	FEB 26-27	80	83	65	64	4.2	.8	26	15.6	22	OCT 30	6.8	79	95	191	138	12	31	7	3	114	192	71
MINNEAPOLIS	11.9	1.5	6.7	36.1	AUG 22	- 30.6	FEB 8	4532	357	748	61	JUL 7	1750	163	NOV 25-26	71	76	58	58	4.5	.6	28	18.8	SW	OCT 30+	6.3	96	94	175	120	25	37	11	10	96	156	34
ROCHESTER	11.9	1.0	6.5	33.9	SEP 7+	- 31.1	FEB 8	4549	301	764	56	SEP 8-9	1516	241	JAN 3-4	81	84	66	68	5.9	1.4	25	22.8	17	JUL 12	6.4	93	94	178	117	15	37	34	7	94	157	35
ST CLOUD	10.9	- .3	5.3	36.1	AUG 22	- 33.3	FEB 8	4939	252	813	88	JUN 28-29	1590	239	FEB 26-27		80	59	61							6.2	100	96	169	111	21			9	103	167	45
MISSISSIPPI																																				
JACKSON	25.1	11.8	18.4	36.7	JUL 14	- 10.6	FEB 10	1174	1284	1576	119	SEP 15-16	T	T	NOV 22-23+	89	93	60	70	3.3	.5	15	16.5	SE	FEB 21	5.8	109	109	147	120	0	85	34	90	1	42	0
MERIDIAN	24.6	11.5	18.1	37.8	JUN 14	- 10.6	FEB 10	1222	1194	1595	124	JUL 15-16	T	T	NOV 22 +	89	90	57	68	2.7		30	12.5	4	JUL 12+	6.2	88	116	161	115	0	72	37	73	0	43	0
MISSOURI																																				
COLUMBIA REGIONAL	18.7	7.3	13.0	38.3	SEP 14	- 18.9	FEB 8	2641	771	733	41	JAN 2-3	424	157	NOV 28-29	71	77	56	56	5.0	.8	20	25.9	SW	DEC 15	6.2	98	105	162	103	6	49	32	44	23	105	1
KANSAS CITY	19.2	8.3	13.8	37.8	AUG 23	- 20.0	FEB 8	2550	959	675	62	OCT 20-21	460	130	FEB 21-22	71	78	56	56	4.5	.6	20	18.8	NW	APR 27	5.6	121	106	138	89	5	40	3	51	25	94	1
SAINT JOSEPH	18.6	5.7	12.2	36.7	JUN 26+	- 28.9	JAN 6	2862	685	719						74	78	57	56	3.8	.4	20	20.6	35	APR 26	5.6	123	96	146	93				40	27	121	7
ST LOUIS	19.4	7.4	13.4	37.8	SEP 14	- 17.2	FEB 9	2576	848	857	65	DEC 9-10	249	155	APR 5-6	79	86	58	61	4.2	.9	22	18.8	SW	DEC 15	6.1	98	107	160	97	2	44	16	46	19	107	0
SPRINGFIELD	20.5	7.0	13.8	38.9	JUL 17	- 23.3	FEB 8	2418	814	962	60	MAY 23-24	505	175	APR 4	74	79	54	57	4.8	1.4	18	26.8	SE	DEC 14	5.5	129	101	135	101	6	56	28	59	14	108	2
MONTANA																																				
BILLINGS	13.7	1.0	7.3	38.9	AUG 14	- 28.3	JAN 14	4306	356	376	46	OCT 1-2	1372	178	DEC 6-7	62	70	54	48	5.3	2.0	27	21.9	NW	DEC 9+	6.3	93	103	169	99	19	17	26	37	56	160	20
GLASGOW	11.8	- 1.2	5.3	41.1	AUG 14	- 35.6	FEB 7	5019	352	175	19	AUG 30	940	224	JAN 29-30	63	70	53	49	5.1	.7	4	20.6	30	SEP 11	6.1	89	128	148	85	12	14	12	34	95	172	46
GREAT FALLS	13.6	.4	7.0	38.3	AUG 14+	- 34.4	JAN 14+	4379	309	292	23	MAY 5-6	1694	127	DEC 6	56	62	46	42	5.8	3.5	24	21.0	SW	DEC 31	6.6	81	96	188	97	25	20	15	35	51	159	28
HAVRE	12.7	- 1.8	5.5	40.6	AUG 6+	- 34.4	FEB 7+	4934	301	204	22	JUN 5-6	1615	297	JAN 8-9	61	70	51	46	4.7	1.5	26	23.2	W	SEP 11	6.4	79	124	162	81	16	16	13	38	76	188	47
HELENA	12.3	- 1.4	5.5	34.4	AUG 14+	- 34.4	JAN 13	4752	117	257	18	AUG 29-30	1087	236	JAN 9	60	69	51	44	3.7	1.8	28	19.2	W	MAR 11	6.8	73	88	204	97	10	27	5	19	56	190	24
KALISPELL	12.6	- 1.1	5.7	36.7	AUG 11+	- 27.8	DEC 16	4650	126	418	34	JUN 28-29	2253	231	DEC 8-9	75	80	59	50	3.2	.5	18	17.0	32	OCT 13	7.0	74	78	213	132	27	22	24	27	50	199	22
MILES CITY	13.3	.7	7.0	40.0	AUG 14+	- 35.0	FEB 7	4557	486	475			1237			68	75	56	53	5.0	1.0	32								111	19	20	15	41	75	163	34
MISSOULA	14.2	.1	7.2	38.3	AUG 4+	- 23.3	DEC 8	4224	212	333	20	APR 23-24	1361	109	NOV 28-29	73	84	61	51	3.0	.8	31	17.9	SW	OCT 26	6.8	79	82	204	137	22	23	19	35	45	185	10
NEBRASKA																																				
GRAND ISLAND	16.7	3.9	10.3	40.0	JUN 24	- 26.7	JAN 6	3444	599	649	83	JUN 29-30	1059	249	FEB 21-22	68	73	53	51	5.2	.6	22	24.6	34	MAR 18	5.7	114	108	143	94	11	40	19	41	47	148	13
LINCOLN U	16.6	5.8	11.2	38.9	JUL 7+	- 25.6	FEB 8	3257	742	705	44	FEB 21-22	1364	315	JAN 2-3								25.5	S	MAY 21	5.8	118	85	162	96	12			39	45	128	9
NORFOLK	15.3	2.9	9.1	38.3	SEP 7+	- 26.1	JAN 7	3796	497	590	61	FEB 18-19	556	79	JAN 2-3		81	56	56							5.8	119	91	155	95	7			29	63	157	15
NORTH PLATTE	15.9	1.2	8.6	37.8	SEP 7	- 27.8	JAN 6	3848	352	616	61	APR 19-20	881	246	MAR 4-5	77	83	55	55	4.5	.4	6	25.5	NW	MAR 18	5.6	113	118	134	101	10	54	19	22	46	177	12

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow †: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm or more	Thunderstorms	Heavy fog	Max temp: 32.2°C and above	0°C and below	Min temp: 0°C and below	-17.8°C and below
NEBRASKA	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			Tenths											
OMAHA	16.9	4.8	10.8	39.4	JUN 26+	- 27.2	FEB 8	3366	707	701	72	MAY 9-10	1237	274	FEB 21-22	72	78	56	55	4.0	.1	24	25.0	NW	JUN 18	6.0	104	102	159	104	13	45	18	46	42	140	12
SCOTTSBLUFF	16.6	1.4	9.0	38.3	JUN 26	- 25.6	JAN 7	3698	352	433	42	MAY 4-5	749	142	MAR 4-5	70	79	49	45	4.4	.8	34	17.9	33	AUG 9+	5.8	119	90	156	84	11	44	14	32	31	161	8
VALENTINE	15.4	.8	8.2	40.6	JUN 26	- 31.7	FEB 7	4106	459	451	86	AUG 29-30	1110	196	APR 26-27								29.1	SE	OCT 18	5.8	117	102	146	86	12			41	84	166	23
NEVADA																																				
ELKO	14.9	- .7	7.1	36.1	JUL 29	- 27.8	JAN 4	4227	190	347	44	MAY 21	1826	218	MAY 20-21	58	68	47	37	2.9	1.0	25	14.3	22	FEB 24	5.6	114	109	142	108	24	35	7	33	99	194	20
ELY	15.1	- 2.8	6.2	35.6	JUL 14	- 32.2	JAN 5	4536	138	239	18	MAY 4-5	1816	165	JAN 12-13	60	69	46	40	4.5	1.7	21	19.2	SE	DEC 22+	5.2	129	118	118	84	26	37	0	20	36	232	23
LAS VEGAS	25.6	10.9	18.2	45.0	JUL 28+	- 11.1	JAN 6	1589	1614	69	15	MAY 7	T	T	DEC 13 +	28	35	25	18	3.9	1.3	23	28.6	SW	JUL 14	3.2	212	94	59	22	0	14	1	122	0	51	0
RENO	18.4	- .7	8.9	38.9	JUL 28	- 23.9	JAN 3	3634	244	269	35	DEC 24-25	1621	378	DEC 24-25	55	72	47	34	2.6	.8	28	21.9	SW	MAR 25	4.6	162	91	112	69	16	17	6	55	15	202	9
WINNEMUCCA	18.6	- .9	8.8	41.1	JUL 28	- 22.8	JAN 4	3769	370	239	25	JUN 24	1138	183	APR 23-24	57	68	45	35	3.7	.8	25	18.8	W	MAR 12	5.5	132	78	155	78	13	15	4	67	15	214	13
NEW HAMPSHIRE																																				
CONCORD	13.8	.2	7.0	35.0	JUN 30	- 33.9	JAN 19	4294	224	833	65	JUL 29-30	2578	239	NOV 25-26	82	81	54	65	3.5	1.3	30	20.1	SW	JUL 1	6.2	90	121	154	117	26	17	45	5	50	180	27
MT WASHINGTON OBS	.9	- 6.7	- 2.9	18.9	AUG 19	- 37.8	JAN 28+	7694	0	2547	115	NOV 25-26	9985	587	APR 7	85	85	84	84	15.1			55.9	W	MAR 4+	8.0	42	69	255	206	91	16	220	0	169	226	72
NEW JERSEY																																				
ATLANTIC CITY	16.7	6.5	11.6	32.8	JUL 8+	- 19.3	FEB 1	2814	423	1097	98	AUG 4-5	257	76	JAN 1	80	79	57	71	4.5	1.2	27	21.0	29	JAN 26	6.4	87	102	176	110	4	23	63	4	13	104	1
NEWARK	17.3	8.8	13.1	35.6	JUL 9+	- 13.9	FEB 2+	2602	358	1290	199	AUG 27-28	536	188	JAN 1	72	73	54	62	4.5	1.6	28	15.6	24	MAR 4	6.6	79	110	176	113	5	23	14	23	38	49	0
TRENTON U	16.7	8.4	12.6	34.4	JUL 8	- 13.9	FEB 2	2655	498	1232	192	AUG 27-28	521	152	JAN 1								19.2	NE	AUG 28	6.2	91	120	154	111	4			10	28	71	0
NEW MEXICO																																				
ALBUQUERQUE	20.6	4.7	12.7	40.0	JUL 13	- 27.2	JAN 7	2637	641	204	23	OCT 24-25	320	132	DEC 13-14	46	57	36	29	4.5	.1	23	25.9	S	OCT 29	3.9	188	97	80	60	4	33	9	57	11	121	5
CLAYTON	18.9	3.3	11.2	36.7	JUL 12	- 22.8	JAN 7+	2937	384	411	43	MAY 29	589	168	DEC 1-2		71	40	40							4.4	167	93	101	74	11			29	14	145	4
ROSWELL	24.3	6.3	15.3	41.1	JUL 5	- 20.0	JAN 5	1924	886	256	32	AUG 24-25	277	61	DEC 1-2 +								21.0	SW	MAR 5					50	7		93	4	108	1
NEW YORK																																				
ALBANY	14.0	1.8	7.9	32.8	JUN 30	- 33.3	JAN 19	3991	253	1005	115	AUG 27-28	2611	556	NOV 24-25	82	82	58	69	3.7	1.3	27	25.5	NW	JUN 8	6.9	68	108	189	137	21	25	25	1	40	163	28
BINGHAMTON	11.8	2.9	7.4	30.0	JUL 8+	- 22.8	JAN 19	4122	192	850	55	JUL 30-31	2443	401	MAR 3-4	80	84	65	70	4.4	1.6	25	25.0	SW	JAN 26	7.2	43	113	209	145	27	25	65	0	71	150	13
BUFFALO	13.3	4.3	8.8	31.7	JUN 29+	- 18.9	FEB 1	3682	282	836	59	JUL 24	2380	193	FEB 8-9	80	81	62	70	5.1	2.3	25	25.0	SW	MAR 18	7.3	48	109	208	168	24	34	8	0	46	134	4
NEW YORK J	16.8	8.9	12.9	35.6	JUL 8	- 15.6	JAN 19	2661	742	1442	147	AUG 27-28	333	163	JAN 1	71	74	56	63	3.9	1.1	29	19.7	NE	NOV 24					110	4	16		18	18	70	0
J.F. KENNEDY	16.6	8.9	12.8	36.1	JUL 8	- 13.9	FEB 2+	2674	706	953	86	AUG 27-28	455	152	JAN 1	72	72	56	66	5.5	1.4	28	19.7	28	MAR 4	6.3	84	126	155	103	6	18	25	18	28	76	0
NEW YORK LA GUARDIA	16.1	8.9	12.5	33.9	JUL 8	- 13.9	JAN 19	2694	632	1173	139	AUG 27-28	356	148	JAN 1	69	70	55	60	5.3	1.4	30	25.0	NE	NOV 25	6.3	84	119	162	109	5	27	14	5	30	65	0
ROCHESTER	14.0	3.3	8.7	33.9	SEP 6+	- 20.6	JAN 19+	3801	342	868	67	JUL 13	3040	310	FEB 13-14	84	85	64	72	4.4	2.1	25	21.5	SW	DEC 11	6.9	63	111	191	147	27	28	12	10	46	148	5
SYRACUSE	13.8	3.5	8.7	34.4	JUN 30	- 22.2	JAN 19+	3769	307	995	54	JUL 24	3366	373	MAR 3-4	80	79	62	71	4.2	1.3	25	21.0	W	JAN 30	7.1	67	96	202	161	36	33	3	6	42	145	9
NORTH CAROLINA																																				
ASHEVILLE	19.8	7.3	13.6	32.8	JUN 27	- 13.3	FEB 10	2179	513	1220	56	OCT 15-16	665	414	DEC 3-4	87	90	60	71	3.4	1.1	34	17.9	34	MAY 24	6.2	91	112	162	143	4	47	96	4	5	93	0
CAPE HATTERAS R	20.9	12.7	16.8	32.2	AUG 21	- 6.1	FEB 2	1439	966	1634	134	SEP 29-30	T	T	JAN 31 +	84	83	66	80	5.5	.4	30	19.7	13	SEP 30	6.1	101	98	166	138	9	38	23	1	2	24	0
CHARLOTTE	20.9	9.8	15.4	34.4	JUN 6	- 12.2	FEB 10	1828	825	1231	54	MAY 12-13	358	191	DEC 3	78	84	58	65	3.5	.4	29	21.0	SW	MAR 15	6.2	96	97	172	136	3	60	32	12	4	69	0
GREENSBORO	19.8	8.3	14.1	33.9	JUN 28	- 14.4	FEB 2	2146	661	1072	49	MAY 12-13	246	107	DEC 3-4	82	85	58	68	3.3	.7	28	19.2	NW	JAN 26	6.4	90	98	177	128	3	45	43	7	12	87	0
RALEIGH	21.0	8.9	15.0	34.4	JUL 18+	- 15.0	FEB 2	1928	779	1150	68	OCT 1-2	229	135	MAR 25-26	80	84	56	69	4.2	.6	28	18.3	27	JAN 26	6.0	105	97	163	137	3	52	42	18	7	70	0
WILMINGTON	23.3	12.2	17.7	35.0	JUN 5	- 6.1	FEB 2+	1295	1137	1466	89	AUG 16-17	T	T	DEC 3	84	86	59	75	3.7	.5	28	17.9	NW	DEC 18	6.0	106	93	166	132	0	43	28	17	0	33	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow†: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow† 254mm or more	Thunderstorms	Heavy fog	Max temp: 32.2°C and above	0°C and below	Min temp: 0°C and below	-17.8°C and below
NORTH DAKOTA	°C.	°C.	°C.	°C		°C		Base 18.3°C	Base 18.3°C.	Mm	Mm		Mm.	Mm.		%	%	%	%	M.p.s	M.p.s		M.p.s			Tenths											
BISMARCK	11.1	- 1.8	4.7	38.9	AUG 21	- 38.3	FEB 8	5156	235	387	41	OCT 17-18	1069	124	FEB 3	77	82	69	67	4.4	0.7	33	20.1	S	OCT 18+	6.4	92	93	174	102	12	37	13	18	93	181	57
FARGO	10.6	- 1.1	4.8	35.6	AUG 16+	- 34.4	JAN 15	5096	208	581	58	SEP 3-4	986	119	JAN 25	80	84	66	65	5.0	0.3	28	21.5	SE	OCT 18	6.3	90	104	171	105	13	33	12	10	101	173	33
WILLISTON	11.2	- 1.9	4.7	38.3	AUG 7	- 35.0	JAN 15	5167	244	440	57	SEP 4-5	729	104	NOV 16-17	75	81	59	56	4.6	1.0	31	22.4	SE	JUL 10	6.3	90	107	168	93	11	28	8	20	96	183	52
OHIO																																						
AKRON	15.6	4.5	10.1	36.1	JUN 28	- 20.6	FEB 2+	3334	386	818	61	AUG 26-27	1339	191	FEB 8	76	79	58	65	4.3	1.4	25	17.4	21	DEC 15+	6.9	60	107	198	154	16	34	33	4	38	130	7
CINCINNATI OBS	17.9	7.4	12.7	36.7	JUN 27	- 18.3	FEB 2	2644	652	1004	89	SEP 1-2	612	193	FEB 8								15.6	NW	JAN 26				117	6			16	29	98	2
CLEVELAND	14.9	4.8	9.9	35.0	JUN 28	- 21.7	FEB 2	3408	384	808	51	SEP 12-13	1204	183	FEB 8-9	74	76	59	64	4.6	1.7	23	21.9	SW	DEC 15	6.9	68	93	204	148	16	35	11	8	44	133	8
COLUMBUS	16.4	5.2	10.8	34.4	JUN 28	- 20.0	JAN 18	3097	428	856	58	JUL 23-24	932	226	FEB 8	78	80	58	63	4.2	1.0	24	21.0	SW	DEC 15	6.6	81	96	188	125	12	33	23	7	32	127	5
DAYTON	16.7	6.4	11.6	36.7	JUN 27	- 20.0	FEB 2	2937	536	844	43	JUN 25-26	757	122	FEB 8	75	78	60	64	4.4	1.3	24	25.0	W	JAN 26	6.4	87	101	177	120	9	34	28	8	30	117	5
MANSFIELD	15.7	4.7	10.2	36.1	JUN 28	- 21.1	FEB 2+	3294	392	663	52	MAY 5-6	1044	213	FEB 8	81	82	61	69	5.1	2.1	23	20.6	18	DEC 15+	6.7	76	106	183	128	14	33	44	5	34	133	8
TOLEDO	15.6	3.4	9.5	37.2	JUN 28	- 22.8	FEB 2	3522	378	589	35	JUL 10-11	732	104	FEB 12-13	79	81	57	65	4.3	1.5	25	21.0	W	JAN 29	6.7	71	110	184	127	9	34	26	15	44	141	8
YOUNGSTOWN	14.4	3.7	9.1	35.0	JUN 28	- 22.2	FEB 2	3606	296	826	40	AUG 20	2126	259	NOV 21-22	80	82	62	67	4.4	1.4	25	18.3	27	MAR 15	7.0	69	91	205	168	21	30	33	3	51	138	5
OKLAHOMA																																						
OKLAHOMA CITY	21.8	9.1	15.4	40.6	JUL 18	- 16.1	FEB 8	1999	1006	697	64	JUN 2-3	292	124	DEC 2 +	72	79	53	53	5.4	1.4	16	23.2	N	JUN 2	5.2	138	107	120	91	2	52	37	67	7	75	0
TULSA	21.6	9.8	15.7	38.9	JUL 14	- 16.7	FEB 8	1937	1037	1433	153	SEP 15-16	241	97	FEB 6-7	76	82	57	55	4.8	1.4	18	23.2	NW	MAY 26	5.5	126	98	141	99	5	57	20	67	9	75	0
OREGON																																						
ASTORIA	13.8	5.9	9.8	28.3	AUG 8	- 6.1	JAN 12	3057	11	2013	76	JAN 24-25	544	274	JAN 12	87	89	79	74	4.0	1.4	21	24.6	17	JAN 15+	7.8	52	61	252	209	5	11	38	0	1	44	0
BURNS II	14.6	.0	7.3	36.1	AUG 12+	- 23.9	JAN 4	4187	230	342	25	JUL 21	1250	135	DEC 11-12	64	72	58	46	3.2	1.4	29				5.8	113	96	156	103	20			29	29	199	3
EUGENE	16.3	4.7	10.5	38.3	AUG 11	- 7.8	JAN 13	2946	141	1541	72	NOV 25-26	645	224	JAN 12-13	84	90	75	62	3.8	1.2	20	19.7	21	MAR 11	7.2	67	73	225	151	5	1	53	14	0	64	0
MEACHAM	10.4	1.2	5.8	35.0	JUL 31	- 16.7	DEC 28	4678	185	1060			4790										13.9	25	JAN 21				146				9	63	185	0
MEDFORD	17.8	4.6	11.2	42.8	AUG 11	- 8.3	JAN 3	2899	356	491	41	JAN 16-17	523	236	JAN 13-14	71	83	68	49	2.3	.8	31	13.4	13	DEC 21+	6.2	108	63	194	113	4	4	54	46	4	95	0
PENDLETON	17.9	5.6	11.7	42.2	JUL 31	- 11.1	JAN 4+	2819	474	367	34	NOV 26	589	130	DEC 28-29	60	68	53	45	4.2	1.7	25	19.2	31	APR 9	6.2	99	83	183	103	10	9	17	39	10	86	0
PORTLAND	16.4	6.6	11.6	38.3	AUG 10	- 6.7	JAN 5	2647	231	1060	38	NOV 25-26	335	107	JAN 12-13	75	82	71	58	3.4	.8	21	21.5	S	MAR 26	7.3	70	58	247	168	5	10	32	15	0	44	0
SALEM	16.3	4.6	10.4	38.3	AUG 11	- 11.1	MAR 1	2986	166	1249	56	APR 8-9	579	150	JAN 13-14	80	87	73	60	3.4	1.5	21	17.9	19	MAR 26	7.2	71	61	233	164	8	3	32	14	0	78	0
SEXTON SUMMIT R	12.1	3.4	7.8	36.1	AUG 11	- 10.6	JAN 2	3971	174	1291	93	NOV 9-10	5669	546	DEC 9-10			74	65				26.4	19	MAR 11				135				3	35	147	0
PACIFIC AREA																																						
GUAM TAGUAC R	29.7	22.4	26.1	32.2	OCT 18+	18.3	SEP 6+	0	2859	3281	252	MAY 2-3	0	0		79			80				21.0	E	MAY 3				302	0	25	0	3	0	0	0
JOHNSTON	27.6	24.0	25.8	29.4	OCT 13+	19.4	MAR 27+	0	2768	614	56	SEP 2	0	0		76	78	77	72	7.4	6.4	9	17.9	NE	MAR 5	5.8	95	148	122	155	0	5	0	0	0	0	0
KOROR P	30.9	24.2	27.6	33.3	MAY 3+	21.7	JUL 30+	0	3426	4047	203	MAY 27-28	0	0		77	89	91	81	3.4	.7	9	13.4	N	OCT 7	9.2		44	321	263	0	35	0	60	0	0	0
KWAJALEIN	29.9	24.7	27.3	32.2	JAN 18	21.7	AUG 6	0	3331	3208	137	APR 24-25	0	0		79	83	84	77	6.0	5.3	8	14.8	10	MAY 3+	8.2	24	79	262	251	0	7	0	1	0	0	0
MAJURO	29.3	24.6	26.9	31.1	SEP 11	22.2	AUG 23	0	3187	4125	137	JUL 22	0	0		80	82	83	77	4.9	4.5	7	14.3	E	OCT 19+	8.1	16	107	242	268	0	9	0	0	0	0	0
PAGO PAGO	29.4	22.9	26.2	31.7	NOV 15+	17.8	SEP 28+	0	2926	2443	128	NOV 12-13	0	0		83	87	88	74	3.5	2.3	9	13.0	E	JUN 1	6.5	45	176	144	241	0	25	0	0	0	0	0
PONAPE R	30.4	22.8	26.7	32.8	NOV 12+	20.0	FEB 27	0	3076	5191	148	JUL 16-17	0	0		79	89	90	77	3.0	1.9	10	10.7	NE	DEC 8	8.6	6	79	280	302	0	30	0	21	0	0	0
TRUK MOEN ISLAND	30.2	24.6	27.4	31.7	NOV 13+	22.2	FEB 11+	0	3356	3408	142	MAY 1	0	0		77	84	85	77	3.9	2.5	8	34.9	S	MAY 1	9.2	2	44	319	279	0	16	0	0	0	0	0
WAKE	29.4	23.9	26.7	32.2	SEP 1+	19.4	FEB 24	0	3097	1337	160	SEP 5-6	0	0		70	78	80	65	6.3	4.8	8	21.5	SW	SEP 5	5.6	109	149	107	192	0	7	0	18	0	0	0
YAP R	30.2	23.8	27.0	32.2	AUG 27	20.6	OCT 10	0	3208	3767	94	NOV 9-10	0	0		77	87		79				13.9	W	NOV 10	8.6	1	85	279	291	0	26	0	1	0	0	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

YEAR 1971

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days Base 18.3°C	Cooling degree days Base 18.3°C	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow† Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation .25mm or more	Snow† .254mm or more	Thunderstorms	Heavy fog	Max temp: 32.2°C and above	0°C and below	Min temp: 0°C and below	-17.8°C and below
	°C	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			Tenths										
PENNSYLVANIA																																				
ALLENTOWN	15.6	5.3	10.4	35.0	JUL 8	- 17.2	FEB 2	3238	431	1232	99	AUG 27-28	772	198	JAN 1	82	84	61	68	4.0	1.3	29	17.9	28	MAR 4	6.4	88	112	165	112	8	31	31	7	26	127	0
ERIE	12.8	4.1	8.4	32.8	JUN 28	- 21.7	FEB 2	3738	189	865	55	JUL 24	2583	315	FEB 8-9	73	75	64	66	4.9	1.8	23	17.9	25	JAN 29	7.0	65	95	205	167	29	40	7	1	50	131	4
HARRISBURG	16.8	7.2	12.0	35.6	JUL 8	- 14.4	FEB 3+	2827	579	1052	70	AUG 2-3	782	282	JAN 31-1		75	58	63	3.5	1.3	29	20.6	W	JAN 26	6.4	83	115	167	132	9	27	24	15	39	97	0
PHILADELPHIA	17.6	8.6	13.1	35.6	JUL 8	- 14.4	FEB 2	2567	725	1214	144	AUG 27-28	439	140	JAN 31-1	74	75	54	63	4.5	1.1	28	19.2	W	MAR 4	6.5	81	106	178	106	6	25	22	20	18	80	0
PITTSBURGH	15.7	5.2	10.4	35.6	JUN 28	- 21.1	FEB 2	3215	398	844	75	JUL 10-11	1547	234	FEB 8-9	74	77	57	61	4.2	1.7	27	21.5	27	JAN 30	7.1	67	88	210	151	17	31	27	5	33	120	5
PITTSBURGH WSO	16.6	6.4	11.5	35.6	JUN 29+	- 19.4	FEB 2+	2939	515	831	72	MAY 5-6	805	160	MAR 9															134	8			11	28	104	3
SCRANTON	14.0	4.3	9.2	32.8	JUL 8	- 20.0	FEB 3+	3595	318	906	44	MAY 12-13	1806	521	NOV 24-25	81	84	63	68	3.7	1.1	25	17.0	W	MAR 4	6.9	74	91	200	141	16	28	29	3	43	133	5
WILLIAMSPORT	15.6	5.5	10.6	34.4	JUL 8	- 25.0	FEB 1	3220	436	993	69	FEB 13	1455	282	MAR 3-4	81	82	59	65	3.4	1.0	28	15.6	30	JAN 27	6.9	77	89	199	142	16	27	52	4	28	117	4
RHODE ISLAND																																				
BLOCK ISLAND	13.7	6.8	10.2	30.6	JUL 8	- 16.1	JAN 20	3171	285	893	65	FEB 7-8	127	30	JAN 1															107	2			0	19	94	0
PROVIDENCE	15.6	5.7	10.7	33.3	AUG 9+	- 20.6	JAN 20	3231	494	976	62	JUL 19	729	165	JAN 1	77	76	55	67	4.6	1.5	29	20.6	26	MAR 4	6.1	100	103	162	110	10	15	21	10	22	126	4
SOUTH CAROLINA																																				
CHARLESTON	24.5	13.0	18.8	36.1	JUN 15	- 5.6	FEB 14+	1072	1294	1538	119	AUG 25-26	T	T	MAR 26 +	83	84	57	72	3.8	.6	26	31.7	NW	APR 23	5.9	109	95	161	124	0	69	23	46	0	98	0
COLUMBIA	24.3	11.4	17.9	37.2	JUN 15+	- 10.0	JAN 20	1347	1248	1761	122	AUG 16-17	64	43	MAR 25	84	87	54	67	3.4	.5	28	15.6	1	JUN 26+	6.0	111	85	169	119	1	67	39	43	0	84	0
GNVLE-SPARTANBURG	21.4	7.4	15.4	35.0	JUN 26	- 12.2	FEB 1	1819	836	1426	73	OCT 15-16	483	290	DEC 3	79	82	57	67	3.1	.5	31	16.1	NE	DEC 3	5.9	100	109	156	131	3	44	47	18	72	71	0
SOUTH DAKOTA																																				
ABERDEEN	13.1	- .9	6.3	40.6	AUG 23+	- 38.3	FEB 8	4700	371	527	46	SEP 4-5	1095	122	FEB 3-4	76	81	60	59	4.9	.4	34	17.4	33	APR 1	5.9	116	100	149	99	14	43	23	28	86	174	44
HURON	13.2	- .1	6.6	40.6	AUG 22	- 34.4	FEB 8	4444	419	471	31	AUG 30	1232	277	FEB 18-19	78	84	59	58	5.3	.3	22	20.1	S	OCT 18	6.0	106	104	155	97	14	44	17	31	82	180	34
RAPID CITY	14.1	.5	7.3	38.3	SEP 2+	- 30.0	FEB 7	4259	306	487	49	MAY 22-23	1704	206	JAN 30-31	69	73	53	53	5.1	1.5	34	26.4	NW	OCT 13	6.0	102	108	155	111	14	33	17	28	62	176	18
SIOUX FALLS	13.6	.7	7.2	39.4	AUG 22	- 32.8	FEB 8	4417	407	600	57	JUL 9-10	499	119	MAR 18	77	82	59	60	5.3	.6	27	17.4	33	APR 1	5.9	121	90	154	84	9	41	28	18	83	172	35
TENNESSEE																																				
BRISTOL	19.9	7.8	13.9	33.3	SEP 9	- 17.8	FEB 2	2208	642	1098	46	MAY 6-7	653	231	FEB 13	79	83	57	63	2.4	.7	28	13.9	30	JUN 21+	6.3	89	102	174	145	7	43	41	4	12	90	1
CHATTANOOGA	21.5	9.7	15.6	36.1	JUN 26	- 12.8	FEB 10	1894	971	1296	77	SEP 16-17	170	114	MAR 25	82	94	57	61	2.9	.4	27	14.8	SW	FEB 22	6.1	100	98	147	132	2	44	49	33	7	71	0
KNOXVILLE	20.4	9.8	15.1	33.9	JUN 26	- 16.1	FEB 10	1891	788	1281	69	JUL 18-19	465	178	APR 6-7	78	83	59	63	3.2	.8	29	15.6	W	MAR 19	6.5	82	102	181	143	6	55	59	11	9	99	0
MEMPHIS	22.9	11.2	16.7	37.8	JUL 15	- 11.7	FEB 9	1663	1166	1122	82	FEB 21	231	102	FEB 7-8	69	75	55	56	4.1	.6	19	20.6	W	APR 23	5.7	114	112	139	112	4	59	12	56	8	47	0
NASHVILLE	21.1	9.2	15.2	36.7	JUN 26	- 20.6	FEB 9	1984	891	1033	50	MAY 27-28	302	112	JUN 8	81	85	59	64	3.7	.9	24	18.8	S	DEC 10	6.0	103	114	148	116	5	62	33	28	13	76	2
OAK RIDGE A	20.3	8.8	14.6	34.4	JUN 26	- 13.9	FEB 1	2050	723	1355	101	MAY 12-13	188	28	FEB 13								21.0		AUG 11	6.4	86	94	185	139	2			15	8	68	0
TEXAS																																				
ABILENE	24.4	11.4	17.9	39.4	JUL 9+	- 16.1	FEB 8	1311	1237	663	44	SEP 22-23	41	30	FEB 7	63	72	49	44	5.5	2.2	19	25.9	NE	OCT 22	5.1	140	97	128	66	1	49	12	76	3	41	0
AMARILLO	20.9	6.3	13.6	37.8	JUL 6	- 20.0	JAN 5	2361	706	585	64	SEP 21-22	686	343	FEB 20-21	58	68	42	38	6.6	2.4	20	24.1	SW	JUN 8	4.4	180	76	110	69	7	52	32	43	17	106	4
AUSTIN	26.8	15.0	20.9	38.3	JUL 20+	- 6.7	FEB 8	727	1722	634	73	AUG 3-4	T	T	DEC 2 +	73	83	55	51	4.3	1.2	15	19.2	NW	FEB 21	5.7	100	117	148	79	0	34	29	110	0	17	0
BROWNSVILLE	29.1	19.1	24.1	37.2	SEP 7	1.7	FEB 9+	185	2333	703	90	SEP 17-18	0	0		83	86	59	68	5.2	2.8	14	20.1	N	MAR 2	5.8	90	153	122	64	0	21	33	117	0	0	0
CORPUS CHRISTI	28.3	17.8	23.1	36.7	SEP 7+	- 2.2	FEB 9	321	2114	939	119	SEP 10-11	0	0		87	90	63	69	5.5	3.0	12	29.5	NW	SEP 10	5.8	95	133	137	64	0	21	31	107	0	3	0
DALLAS	25.2	14.1	19.6	40.0	JUL 19	- 9.4	FEB 8	1058	1498	1035	103	OCT 3-4	33	20	MAR 2 +	65	75	53	48	5.0	1.9	15	17.0	SW	DEC 14	5.6	125	100	140	76	0	35	17	94	1	32	0
DEL RIO	27.3	14.4	20.9	38.3	MAR 28	- 6.1	FEB 8+	596	1888	467	70	AUG 11	0	0		64	77	55	45	4.6	2.5	11	17.4	33	MAR 2	5.7	114	93	158	70	0	36	17	105	0	13	0
EL PASO	24.9	9.7	17.3	38.3	JUN 28+	- 16.1	JAN 8	1444	1151	184	42	JUL 2-3	122	38	JAN 3-4	40	51	32	26	4.0	.8	26	25.0	SW	DEC 14+	3.7	193	118	54	52	1	33	1	100	4	55	0

See reference notes at end of table

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow†: Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 am EST	7:00 am EST	1:00 pm EST	7:00 pm EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow† 25.4mm or more	Thunderstorms	Heavy fog	Max temp.: 32.2°C and above	0°C and below	Min. temp: 0°C and below	-17.8°C and below
	°C.	°C	°C	°C		°C		Base 18.3°C	Base 18.3°C.	Mm.	Mm.		Mm.	Mm.		%	%	%	%	M.p.s.	M.p.s.		M.p.s.			Tenths										
TEXAS																																				
FORT WORTH	24.9	12.6	18.8	39.4	JUL 19+	- 11.1	FEB 8	1169	1384	921	79	DEC 8-9	41	41	MAR 2-3	74	84	56	54	4.6	1.5	17	15.6	1	MAY 27+	5.6	119	97	149	67	1	44	15	80	1	33	0
GALVESTON U	24.0	18.9	21.5	33.9	SEP 6+	- 1.7	JAN 7	482	1687	914	132	SEP 9-10	T	T	JAN 7	81	83	77	75				19.2	E	SEP 9					84	0			6	0	3	0
HOUSTON INTERCON	26.5	14.5	20.5	37.8	JUL 7	- 3.9	MAR 4+	701	1566	961	87	DEC 1-2	T	T	JAN 6-7	87	89	60	66	3.4	1.2	12	13.0	30	APR 16+	6.3	84	114	167	87	3	64	49	83	0	19	0
LUBBOCK	23.2	8.1	15.7	40.0	JUL 5+	- 20.0	JAN 5	1822	916	514	58	SEP 23-24	351	130	FEB 20-21	61	71	45	38	5.2	1.3	19	17.9	32	JUN 10+	4.7	161	91	113	58	4	38	16	65	7	81	2
MIDLAND	24.7	9.7	17.2	40.0	JUL 5	- 16.7	JAN 5	1369	1017	320	65	MAY 28-29	3	3	FEB 22	59	70	41	36	5.4	1.9	16	16.1	5	APR 5+	4.5	171	84	110	48	0	27	10	69	2	55	0
PORT ARTHUR	25.9	15.4	20.7	36.1	JUL 5	- 2.2	FEB 10+	637	1551	1154	154	AUG 3-4	0	0		88	92	66	75	4.3	1.3	13	33.1	SW	MAY 9	5.9	97	129	139	104	0	72	46	71	0	8	0
SAN ANGELO	26.1	11.5	18.8	40.0	JUL 5	- 11.1	FEB 8	1060	1288	616	84	APR 15-16	T	T	MAR 2	63	73	46	42	5.1	1.9	18	16.1	28	FEB 21	5.2	137	98	130	54	0	37	13	93	0	36	0
SAN ANTONIO	27.9	15.2	21.6	37.8	JUL 16+	- 5.0	FEB 8	613	1870	808	74	AUG 2-3	0	0		71	79	53	48	4.1	1.2	12	19.2	NW	MAY 24	6.0	101	110	154	85	0	33	21	125	0	22	0
VICTORIA	27.7	16.3	22.0	36.7	JUL 21+	- 5.6	FEB 8	491	1872	916	144	SEP 10-11	0	0		84	88	57	63	4.7	1.8	13	27.7	S	JUN 15	6.3	80	125	160	77	0	43	47	105	0	10	0
WACO	26.1	14.3	20.2	39.4	JUL 16+	- 7.2	FEB 8	891	1646	691	90	JUL 23-24	T	T	MAR 3 +	71	80	55	52	5.1	1.8	16	23.7	16	MAY 24	5.2	136	100	129	71	0	53	10	104	0	19	0
WICHITA FALLS	24.8	10.4	17.6	42.2	JUL 16+	- 14.4	FEB 8	1586	1403	699	117	AUG 14-15	183	107	DEC 2	73	83	51	50	5.7	1.6	14	21.9	31	SEP 4	5.2	128	119	118	71	2	63	9	111	4	73	0
UTAH																																				
MILFORD	17.7	.3	9.0	39.4	JUL 14	- 31.7	JAN 6+	3788	437	268	22	OCT 24	1659	234	FEB 17			42								4.5	160	108	97	73	19			64	29	188	10
SALT LAKE CITY	16.9	3.6	10.2	37.8	AUG 14+	- 21.1	JAN 6	3407	514	477	37	OCT 30-31	1981	216	OCT 31	64	67	47	43	4.3	.9	17	18.3	NW	FEB 25+	5.6	117	98	160	109	25	37	8	60	23	134	3
WENDOVER	16.2	4.9	10.6	37.2	AUG 11+	- 22.2	JAN 6	3427	657	170	19	APR 23-24	173	56	JAN 12-13		55	43								5.1	142	103	120	67	1			50	23	134	2
VERMONT																																				
BURLINGTON	11.7	1.1	6.4	33.3	JUN 30	- 31.7	FEB 3	4554	252	813	65	AUG 27-28	3160	396	MAR 3-4	81	79	61	69	3.2	.7	23	20.1	SW	MAR 15	7.2	56	99	210	158	34	15	15	4	79	160	32
VIRGINIA																																				
LYNCHBURG	19.2	8.0	13.6	34.4	JUN 28	- 13.3	FEB 2+	2265	602	1124	68	OCT 9-10	572	224	JAN 31-1		81	55	66				20.1	W	JAN 26	5.8	116	101	148	127	5			5	12	85	0
NORFOLK	20.4	11.1	15.8	35.6	JUN 7	- 10.0	JAN 29	1713	843	1212	111	OCT 31-1	168	107	MAR 26	77	77	59	67	5.0	.3	29	23.2	NE	AUG 27	6.1	97	108	160	114	3	40	28	20	3	38	0
RICHMOND	20.2	8.6	14.4	33.9	JUN 7	- 16.1	FEB 2	2120	747	1142	83	OCT 22-23	363	213	MAR 26	82	84	56	69	3.4	.4	27	19.2	NW	JAN 26	6.2	94	118	143	113	3	33	36	14	12	81	0
ROANOKE	19.4	7.6	13.5	33.9	JUN 28	- 14.4	FEB 1	2274	561	1189	60	OCT 23	754	231	JAN 31-1	74	77	53	61	3.8	1.3	29	23.2	33	JAN 26	5.9	109	106	160	133	8	32	25	9	11	86	0
WASHINGTON																																				
OLYMPIA	14.8	3.7	9.3	37.2	AUG 10	- 10.0	JAN 5	3324	78	1466	62	JAN 25-26	1115	165	JAN 10-11		94	80	67				17.0	20	JAN 16	7.5	50	81	234	180	15			9	4	81	0
QUILLAYUTE	13.2	4.2	8.7	35.6	AUG 9	- 9.4	FEB 28	3476	14	3037	168	JAN 25-26	1481	213	FEB 26-27	88	91	80	73	3.0	.8	20	14.3	SE	DEC 14	7.7	50	69	246	235	17	6	55	1	0	78	0
SEATTLE-TACOMA	14.1	6.6	10.3	35.0	JUL 29	- 5.0	MAR 1	2972	122	1098	42	DEC 7-8	655	122	DEC 28-29	74	82	73	63	3.8	1.3	19	20.1	SW	JAN 16	7.5	56	68	241	180	12	4	36	6	3	42	0
SPOKANE	13.7	2.9	8.3	38.3	AUG 11+	- 19.4	DEC 7	3885	310	469	28	JUN 10	1382	198	DEC 8	65	73	60	50	4.2	2.0	20	24.1	SW	MAR 26	6.4	97	85	183	126	19	6	49	31	33	140	2
STAMPEDE PASS R	6.8	.8	3.8	31.1	JUL 31	- 13.9	DEC 28	5315	72	2608	92	JAN 23-24	14709	810	JAN 23-24		90	82	79							7.8	60	48	257	211	99			0	110	194	0
WALLA WALLA U	17.7	7.1	12.4	41.1	JUL 31	- 11.1	DEC 30	2610	517	539	49	MAY 26	566	112	DEC 28-29								18.8	W	MAR 10	6.4	102	71	192	118	9			39	9	57	0
YAKIMA	17.7	1.6	9.7	43.3	AUG 10	- 16.7	DEC 30	3414	113	199	18	JAN 14-15	950	262	JAN 14-15	63	74	49	40	3.4	1.6	28	17.4	30	JAN 23+	5.8	120	86	159	63	15	2	10	42	17	168	0
WEST INDIES																																				
SAN JUAN P.R.	30.3	23.8	27.1	34.4	SEP 26+	20.0	JAN 24+	0	3247	904	47	MAY 23	0	0		75	72	59	69	4.2	3.3	9	16.5	NE	DEC 7	5.5	69	224	72	201	0	38	0	74	0	0	0
WEST VIRGINIA																																				
BECKLEY	15.9	5.4	10.7	30.6	JUN 28	- 20.6	FEB 1	2971	254	1052	47	MAY 29-30	1623	241	JAN 31-1	82	84	61	69	4.4	1.5	24	16.5	28	JAN 26	6.9	73	94	198	174	23	45	47	0	31	112	4
CHARLESTON	18.6	7.2	12.9	35.0	JUN 28	- 17.2	FEB 1	2494	560	986	58	SEP 12-13	986	282	JAN 31-1	78	82	58	62	2.9	1.0	25	16.5	31	JAN 26	6.9	56	117	192	149	12	33	118	9	21	93	0
ELKINS	16.7	3.2	10.0	32.8	JUN 28	- 22.8	JAN 2	3222	244	978	55	SEP 12-13	2291	475	JAN 31-1		82	56	66							7.5	41	107	217	172	29			1	27	149	8

See reference notes at end of table.

ANNUAL CLIMATOLOGICAL DATA
METRIC UNITS

YEAR 1971

State and Station	Temperature: Averages: Daily maximum	Daily minimum	Annual	Extremes: Highest	Date	Lowest	Date	Heating degree days	Cooling degree days	Precipitation: Total	Greatest in 24 hours	Date (s)	Snow † Total	Greatest in 24 hours	Date (s)	Relative humidity: 1:00 a.m. EST	7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST	Wind: Average speed	Resultant speed	Resultant direction	Fastest mile (1.6 kilometers): Speed	Direction	Date	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear, 0-0.3	Partly cloudy, 0.4-0.7	Cloudy, 0.8-1.0	Precipitation 25mm or more	Snow † 25.4mm. or more	Thunderstorms	Heavy fog	Max. temp: 32.2°C and above	0°C and below	Min. temp: 0°C and below	-17.8°C and below
	°C	°C	°C	°C		°C		Base 18.3°C.	Base 18.3°C.	Mm	Mm		Mm.	Mm		%	%	%	%	M.p.s.	M.p.s		M.p.s			Tenths											
WEST VIRGINIA					JUN		FEB					JUL			MAR										JAN											
HUNTINGTON	18.4	7.7	13.1	33.3	28	- 17.2	24	2421	553	900	61	17-18	815	201	3	70	83	59	63	2.9	.9	23	17.0	27	26	7.1	52	114	107	137	8	47	70	3	20	85	0
PARKERSBURG U	18.0	7.0	12.5	36.1	JUN 28	- 17.2	FEB 2 +	2618	559	881	74	SEP 12-13	643	127	NOV 24 +								21.9	W	JAN 24					120	7			10	22	92	0
WISCONSIN																																					
GREEN BAY	12.1	.8	6.4	36.1	JUN 28	- 32.2	FEB 2	4552	769	727	34	SEP 27	1844	218	JAN 3-4	79	82	64	68	4.5	1.1	26	22.4	SW	FEB 27	6.5	89	107	169	126	17	32	38	7	85	150	26
LA CROSSE	13.1	1.7	7.4	35.0	SEP 24	- 37.8	FEB 8	4266	357	767			1748			84	86	65	66	3.5	.5	23								123	16	40	32	13	88	150	26
MADISON	14.1	1.3	7.7	35.0	JUN 28	- 32.2	JAN 18	4196	376	690	69	NOV 1-2	1628	345	MAR 18-19	80	83	61	64	4.5	1.1	25	17.9	SW	FEB 27	6.3	97	96	172	113	15	41	23	39	62	150	26
MILWAUKEE	12.2	2.7	7.4	34.4	JUN 28	- 26.1	FEB 2	4197	287	672	46	JUL 8	1166	267	MAR 18-19	78	81	64	68	5.3	1.6	26	27.7	W	JUN 19	6.2	97	107	161	115	14	38	27	7	68	163	18
WYOMING																																					
CASPER	13.9	- .7	6.6	35.6	JUL 16	- 26.7	FEB 7	4428	219	380	47	MAY 4-5	2195	290	APR 19	69	75	51	45	5.6	2.5	24	19.2	21	DEC 0	5.9	111	102	152	93	29	39	16	28	58	134	19
CHEYENNE	13.8	.4	7.1	35.0	JUL 17	- 26.1	JAN 6	4172	153	353	22	MAY 4-5	1654	226	MAR 23-24	60	62	40	42	5.9	3.1	29	26.8	NW	NOV 20	5.7	106	123	136	88	21	47	23	9	41	124	0
LANDER	13.4	- .4	6.5	33.9	AUG 14 +	- 25.6	JAN 5	4497	256	482	55	APR 25-26	1767	411	APR 25-26	56	63	48	43	3.4	1.2	25	27.3	SW	MAR 13	5.9	100	120	145	72	33	38	7	17	64	203	11
SHERIDAN	14.3	- 1.4	6.4	37.8	AUG 14	- 32.0	DEC 8	4518	246	401	50	APR 24-25	1943	163	OCT 27 +	63	66	47	45	3.5	1.5	31	30.1	SW	JAN 18	6.2	103	89	173	115	28	15	6	28	63	188	26

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.

Precipitation data in column headed 'Greatest in 24 hours' are computed on a 24-hour basis without regard to calendar day - data may include precipitation with a measurable amount from the last day of the previous month or the first day of the following month.

Wind directions under resultant direction are in tens of degrees.

Value entered in column 'Fastest Mile' is the highest observed 1-minute wind speed when the direction is in tens of degrees. These stations are not equipped with a recording anemometer from which 'Fastest Mile' data can be evaluated.

Data in this table are obtained by conversion from data in the English Units table.

† Includes all forms of frozen precipitation, except hail or ice pellets alone.

+ And also on an earlier date or dates.

R Number of days maximum 21.1°C or above for Alaskan stations.

Y Peak gust.

X Sun below horizon November 19 - January 23, inclusive.

X Sun below horizon November 24 - January 17, inclusive.

* Less than 0.05.

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	July Annual	Extremes Length, yrs	Extremes Record highest	Extremes Record lowest	Normal Heating degree days (1931-1960) January	Normal Heating degree days (1931-1960) Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Normal Driest month	Normal Annual	Extremes Wettest month	Extremes Driest month	Extremes Maximum in 24 hours	Snow @ Mean total	Snow @ Extreme	Relative humidity (percent) January 7:00 a.m. EST	January 1:00 p.m. EST	January 7:00 p.m. EST	July 7:00 a.m. EST	July 1:00 p.m. EST	July 7:00 p.m. EST	Wind Speed (mph) Mean speed January	Wind Speed (mph) Mean speed July	Wind Speed (mph) Fastest mile	Sunshine (percent of possible) January	Sunshine (percent of possible) July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail .10 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Temperature Min 32 and below	Temperature Min Zero and below
ALABAMA							88	112	-24							0.00	20.33																						
BIRMINGHAM	620	56.6	36.3	92.5	70.7	64.1	8	102	- 4	592	2551	6.00	2.95	53.05	17.67	T	7.05	0.5	1.4	8.4	80	61	65	88	62	66	8.6	5.9	65	41	60	100	113	152	117	1	56	8	41	65	*
HUNTSVILLE	624	52.4	33.4	92.4	69.8	62.0	4	101	3	694	3070	5.22	2.72	48.67	9.89	0.77	5.04	2.0	4.4	2.4	84	68	71	88	60	64	9.3	6.1	46			105	104	156	114	2	54	21	49	74	0
MOBILE	211	62.3	43.7	92.0	73.1	68.2	10	102	8	415	1560	9.67	3.03	68.13	19.29	0.03	13.36	0.1	0.4	3.5	81	63	70	89	62	72	11.0	7.2	63			103	119	144	123	*	80	37	82	20	0
MONTGOMERY	183	58.6	37.7	91.9	71.7	65.0	9	102	5	543	2291	6.16	2.28	50.69	21.32	0.02	8.81	0.1	0.1	2.5	82	61	65	91	62	68	7.8	6.0	60	47	63	107	107	151	108	*	61	22	67	42	0
ALASKA							88	100	-80							0.00	14.13																					B		
ANCHORAGE DK 2/1966	85	20.5	4.3	64.6	49.5	35.2	44	86	-38	1631	10864	2.57	0.42	14.71	5.91	0.00	2.06	10.7	59.4	17.7																		12	201	41
ANCHORAGE	114	19.9	4.3	66.0	50.3	35.8	7	85	-30	1640	10648	2.57	0.42	14.71	4.60	T	1.66	9.4	65.9	16.4	69	69	69	80	73	62	5.7	7.0	61	42	42	67	63	235	116	21	1	28	11	186	42
ANNETTE	110	38.4	30.3	63.2	51.4	45.6	11	90	1	940	7069	16.88	5.67	118.36	34.87	0.56	7.59	13.5	54.6	14.2	77	78	73	87	77	68	12.3	8.1	60			42	59	264	223	16	2	16	26	78	0
BARROW	31	9.4	-23.0	44.9	33.3	9.6	51	78	-56	2517	20174	0.90	0.11	4.26	2.81	0.00	1.00	2.3	28.8	15.0	66	66	65	95	91	88	11.3	11.6	58			x59	x52	x187	73	7	*	65	*	324	170
BARTER ISLAND	39	9.9	-23.6	47.5	35.0	10.4	22	75	-59	2536	19862	1.05	0.17	6.28	4.91	T	2.25	5.9	46.7	17.0	69	68	68	92	89	86	14.1	10.5	81			v51	v66	v104	94	14	*	74	*	319	160
BETHEL	125	10.8	-3.7	61.8	47.5	28.7	13	86	-40	1903	13196	4.20	0.58	18.42	5.81	0.00	2.02	5.4	50.5	6.5	76	77	76	92	86	68	14.1	11.6	62			61	61	243	137	18	1	50	11	226	78
BETTLES	644						21	92	-68						5.91	0.00	1.93	9.5	75.5	19.0	67	59	64	87	72	54	5.8	6.6	40			86	88	182	107	29	6	4	35	249	130
BIG DELTA	1268						30	92	-63						6.18	T	2.14	6.1	40.7	10.0	70	70	70	79	71	55	10.8	6.0	74			60	91	214	95	15	3	13	35	224	97
COLD BAY	96	32.6	22.9	54.3	45.0	37.9	27	78	-13	1153	9880	4.59	1.46	34.30	9.97	0.02	4.90	8.5	50.6	11.4	85	85	83	91	89	80	17.7	15.4	73			13	48	304	210	17	*	25	1	161	2
CORDOVA 1963	41	31.6	14.5	60.3	46.1	38.2	20	84	-33	1299	9764	12.51	3.48	80.98	27.72	0.08	7.92	25.0	124.7	22.9	83	82	81	92	86	80	4.6	4.1				51	52	262	215	35	2	12	9	189	18
FAIRBANKS	436	0.8	-21.4	71.7	47.6	25.8	9	96	-61	2359	14279	2.20	0.25	11.29	6.20	T	3.42	10.6	69.8	20.1	68	68	69	79	69	51	2.7	6.3	40			64	83	216	102	33	5	20	52	227	121
GULKANA	1572						29	91	-65						4.34	0.00	2.06	7.4	46.5	10.0	67	66	64	84	71	47	5.1	8.2	52			64	88	213	80	17	5	19	30	238	106
HOMER	67						20	80	-21						8.59	0.00	3.02	10.4	56.2	24.5	64	72	68	90	79	70	7.7	5.4				60	67	220	142	21	*	8	2	195	13
ILIAMNA 1969	186						27	91	-47						11.02	0.01	2.63	10.9	64.4	15.7	73	74	72	87	79	64	14.8	8.3				81	68	216	137	22	0	12	10	196	45
JUNEAU	12	30.1	20.0	62.7	47.8	40.1	28	86	-22	1237	9075	8.33	2.87	54.62	19.29	0.27	4.66	23.0	104.7	31.0	80	80	77	90	81	73	8.5	7.7	68	33	37	46	38	281	320	29	*	22	19	150	10
KING SALMON	49	20.8	5.9	63.0	46.8	33.8	8	85	-42	1600	11343	3.43	0.64	19.18	7.30	0.00	2.00	6.4	45.8	9.5	71	71	70	84	79	64	10.4	10.2	71			57	61	247	150	16	1	34	10	206	53
KOTZEBUE	10	1.3	-12.7	58.6	46.8	20.7	20	85	-52	2192	16105	2.16	0.28	8.18	5.18	T	1.78	5.3	46.5	8.6	71	71	71	87	85	77	14.6	12.9	93			91	69	206	110	15	*	20	4	252	110
MC GRATH	344	0.8	-18.7	68.6	48.7	25.8	29	90	-67	2294	14283	3.79	0.47	18.58	6.26	T	2.39	4.3	89.7	15.2	69	68	68	86	75	56	2.7	5.9	75			66	66	233	134	28	6	14	29	231	113
NOME	13	11.5	-2.7	54.6	44.4	26.1	6	86	-46	1879	14171	3.80	0.69	17.88	7.82	T	2.38	9.1	53.9	8.4	71	69	70	80	75	70	11.8	10.1	55	38	31	83	67	215	128	17	*	24	5	249	84
ST. PAUL ISLAND	22	29.7	21.1	49.4	41.6	34.3	54	64	-26	1228	11199	3.29	0.96	23.60	9.32	0.08	1.93	12.8	58.0	13.8	86	87	85	96	96	91	20.3	13.1	82			20	64	281	204	19	*	53	0	191	5
SHEMYA	122	33.9	28.6	49.2	43.6	38.4	26	63	7	1045	9687	2.76	1.32	27.27	8.71	0.14	5.26	11.1	57.4	15.3	83	83	82	95	96	92	21.4	13.8	90			6	61	298	212	19	*	81	0	129	0
SUMMIT	2401						31	89	-45						6.74	T	2.79	13.1	118.5	28.0	70	70	71	89	79	62	15.1	7.8	48			65	67	233	140	45	6	17	9	251	85
TALKEETNA	345						32	91	-48	1724	11559	5.33	0.75	28.02	11.92	0.04	3.12	17.5	101.5	36.0	68	68	61	89	77	62	6.3	3.7	26			78	76	211	132	31	4	6	31	228	66
UNALAKLEET	15						26	86	-50						8.07	T	1.53	5.3	41.2	14.0	60	67	63	87	82	74	18.0	10.7	56			70	65	221	104	14	2	17	6	236	83
YAKUTAT	28	34.4	20.2	60.5	47.7	40.0	7	83	-24	1169	9092	19.59	5.06	131.81	43.88	0.52	7.19	39.1	219.6	32.4	77	77	74	98	88	82	7.9	7.0	75			41	45	272	220	50	2	32	4	198	21
ARIZONA							77	127	-40							0.00	11.40																						
FLAGSTAFF	7006	40.4	14.1	81.4	49.6	45.6	22	96	-22	1169	7152	2.84	0.51	18.31	7.30	T	3.43	15.4	84.1	27.3	74	52	49	70	34	40	7.8	6.1	40			160	94	102	74	20	51	9	2	214	10
PHOENIX	1117	64.0	35.3	104.6	75.0	69.0	11	116	19	474	1765	1.12	0.09	7.20	5.56	0.00	3.07	T	T	0.6	67	44	31	47	29	20	4.9	6.9	75	78	84	212	82	71	38	0	23	2	161	15	0
PRESCOTT 1964	5014	51.0	23.1	90.8	61.1	55.7	22	103	- 5	865	4362	2.66	0.24	12.23	9.61	0.00	3.08	5.9	16.7	12.4	71	49	44	59	30	31	7.2	8.3	72	73	74	184	99	82	60	6	46	4	48	130	*
TUCSON	2584	62.6	37.0	98.5	74.1	67.7	31	111	16	471	1800	2.88	0.13	11.00	7.93	0.00	3.93	0.3	1.4	6.8	62	39	33	57	33	28	7.9	8.2	71	82	77	194	91	80	50	1	40	1	141	21	0
WINSLOW	4895	45.2	16.8	95.7	64.6	55.7	12	109	-15	1054	4782	1.43	0.26	7.23	4.80	0.00	2.12	2.5	10.7	17.0	77	62	51	56	29	26	7.1	9.0	63			180	96	89	53	4	36	5	74	140	6
YUMA	194	66.8	40.0	106.9	78.7	72.5	7	116	24	363	1217	0.50	0.01	3.03	2.68	0.00	2.42	0.0	T	T	57	39	27	50	32	23	7.1	9.5	54	84	90	247	68	50	15	0	7	1	165	2	0
ARKANSAS							81	120	-29							0.00	12.00																						
FORT SMITH	447	50.2	29.4	94.7	71.2	61.8	7	110	0	781	3292	5.26	2.66	42.22	14.01	T	7.13	1.8	5.3	5.6	79	59	61	87	53	51	8.2	6.5	58	48	70	123	96	146	94	3	56	15	72	80	*
LITTLE ROCK	257	50.6	30.5	92.7	71.1	61.7	12	108	- 4	756	3219	5.28	2.82	48.66	14.46	T	7.71	2.4	5.7	11.3	81	61	64	88	58	61	8.9	7.0	65	46	70	118	101	146	102	2	56	16	73	66	*
TEXARKANA 1968	391	54.9	32.2	93.3	71.9	64.9	3	101	9	626	2533	5.30	2.73	49.19	16.65	T	6.55	1.5	2.7	7.5	79	62	62	90	60	62	8.2	6.2				126	95	144	98	1	62	18	64	44	0
CALIFORNIA							87	134	-45							0.00	26.12																						
BAKERSFIELD	475	57.4	37.4	100.3	68.2	65.1	8	111	25	546	2122	1.17	T	6.36	4.61	0.00	1.68	T	T	T	81	73	59	45	30	19	5.7	7.1	44			201	79	85	36	0	3	22	109	12	0
BISHOP	4108	53.7	19.8	98.0	55.2	56.2	24	109	- 6	874	4227	1.18	0.09	5.84	8.95	0.00	3.64	3.9	8.6	18.0		47	34		19	14						203	89	74	29	2	13	*	97	144	*
BLUE CANYON m	5280	43.6	30.5	77.0	59.0	50.7	28	94	5	865	5507	11.70	0.04	60.37	45.12	0.00	9.33	49.1	241.4	38.5		60			32		10.7	7.1	70			175	63	127	89	41	12	68	1	101	0
BURBANK 1965	724	64.9	42.3	86.2	61.4	63.6	7	106	32	366	1646	3.22	T	14.53	13.84	0.00	7.76	0.2	0.2	4.7	62	45	37	82	50	38	4.5	5.9				187	102	76	38	*	4	28	49	1	0
EUREKA U	43	53.6	41.1	60.5	52.0	52.3	61	85	22	546	4643	6.71	0.10	38.43	13.97	0.00	5.83	0.2	0.2	3.0							6.9	6.8	56	41	52	78	102	185	117	*	5	40	0	4	0
FRESNO	328	55.4	36.7	100.0	62.6	63.0	8	110	21	586	2492	2.19	T	11.14	8.56	0.00	2.59	0.1	0.2	1.5	91	84	66	62	38	22	5.4	7.1	43	51	96	201	72	92	43	*	6	40	111	30	0
LONG BEACH	34	65.3	40.8	82.0	61.1	62.8	12	111	25	375	1711	2.31	T	9.84	11.24	0.00	6.86	T	T	T	76	56	50	82	61	53	5.7	6.8	44			152	123	87	29	0	4	58	22	1	0
LOS ANGELES	97	63.8	45.0	75.9	62.3	61.9	13	110	30	347	1769	2.88	0.01	12.69	11.07	0.00	6.19	T	T	T	66	53	58	86	68	69	6.7	7.5	62			143	116	106	35	0	3	46	5	*	0
LOS ANGELES U	270	65.0	46.6	83.3	62.6	64.4	31	110	28	310	1949	3.33	T	14.68	14.94	0.00	6.11	T	T	0.3	63	51	50	84	54	53	6.8	5.4	49	71	82	187	105	73	35	0	6	17	19	*	0
MT SHASTA R	3544	41.4	25.1	85.3	50.7	49.9	29	103	- 2	983	5722	6.36	0.18	36.72	17.60	0.00	5.90	35.6	115.6	37.4	82	75	70	67	40	30						163	85	117	90	21	13	7	21	135	*
OAKLAND	6	55.4	40.6	72.7	58.9	57.5	8	96	32	527	2870	3.83	T	17.99	11.29	0.00	5.45	T	T	1.0	83	78	73	86	75	67	6.9	9.2	49			144	116	105	53	*	2	17	2	*	0
POINT ARGUELLO 1963	364	59.0	40.3	65.5	51.5	55.2	4	97	24	474	3595	2.35	0.02	11.27	8.36	T	2.28	T	T	T							7.3	6.9				116	89	160	68	0	2	140	1	9	0
RED BLUFF	342	53.4	37.5	99.6	67.9	63.5	27	118	20	605	2515	4.29	0.04	22.05	11.38	0.00	4.00	0.9	1.7	9.9	81	72	59	69	20	18	9.2	8.0	68	52	96	178	67	120	70	1	10	18	97	23	0
SACRAMENTO	17	53.2	37.2	93.4	57.4	60.4	11	115	23	614	2773	3.24	T	16.29	12.64	0.00	5.59	T	T	T	91	87	72	76	48	28	8.2	9.3	70	45	98	194	67	104	57	0	5	35	82	10	0
SACRAMENTO U 1964	19	54.4	38.3	90.0	58.0	60.7	32	112	22	577	2587	3.98	T	18.02	12.20	0.00	5.07																					58		66	10	0
SANDBERG R	4517	46.0	33.8	86.6	63.2	55.5	39	102	3	778	4209	2.58	0.02	12.10	11.12	0.00	6.87	8.0	27.2	38.5	46	55	55	40	26	28	17.1	12.9	77			200	79	77	36	7	4	79	20	58	0
SAN DIEGO	13	64.6	45.4	76.8	63.4	63.2	11	111	31	313	1439	2.15	0.01	10.40	7.60	0.00	3.07	T	T	T	69	54	55	83	70	67	5.6	6.9	51	70	68	152	116	97	42	0	3	28	3	*	0
SAN FRANCISCO	8	55.4	41.7	71.9	53.5	56.9	12	106	29	508	3012	4.09	0.01	18.69	12.30	0.00	4.58	T	T	1.5	86	79	66	88	66	60	7.1	13.7	58			163	102	100	62	*	2	18	4	3	0
SAN FRANCISCO U C	52	55.8	45.5	64.3	53.3	56.8	35	101	30	443	3001	4.55	0.01	20.78	11.47	0.00	3.65	T	T	T		82	68		84	75	6.1	11.2	47	56	66				62	7	0	2	1	*	0
SANTA CATALINA 1968	1568	59.7	47.4	77.9	59.4	60.9	9	103	34	353	2052	3.16	0.02	14.36	7.49	0.00	4.22	0.0	T	T																				
SANTA MARIA	236	62.3	38.1	71.6	52.8	57.0	8	100	21	459	2967	2.84	0.03	13.37	9.69	0.00	3.07	T	T	T	81	63	60	88	65	62	6.7	6.5				178	107	80	46	0	2	87	6	24	0
STOCKTON	22	52.4	37.0	95.4	60.9	61.3	12	113	19	629	2676	2.66	T	13.37	8.05	0.00	4.58	0.0	T	T	90	87	70	64	40	25	6.6	7.9	46			189	73	103	51	0	3	43	88	25	0

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January: Daily maximum	January: Daily minimum	July: Daily maximum	July: Daily minimum	Annual	Extremes: Length, yrs	Record highest	Record lowest	Normal Heating degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960): Wettest month	Driest month	Annual	Extremes: Wettest month	Driest month	Maximum in 24 hours	Snow: Mean total January	Mean total Seasonal	Extreme Maximum in 24 hours	Relative humidity (percent) January: 7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST	July: 7:00 a.m. EST	1:00 p.m. EST	7:00 p.m. EST	Wind Speed (m.p.h.) Mean speed January	July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days: Sunrise to sunset: Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max: 90 and above	Min: 32 and below	Min: Zero and below
COLORADO							84	118	-60									0.00	11.08																						
ALAMOSA	7536	35.6	0.8	82.5	47.2	41.9	26	93	-50	1476	8529	1.07	0.17	6.56	3.50	T	1.82	4.0	34.5	15.8	76	59	58	84	40	37						160	137	79	60	13	44	15	3	228	42
COLORADO SPRINGS	6145	41.9	15.2	86.2	56.7	48.5	11	99	-21	1128	6423	2.37	0.24	13.10	8.00	T	3.69	4.5	38.8	18.0	56	40	46	72	38	44	10.1	9.6	60			131	110	125	82	11	49	21	15	163	8
DENVER	5283	42.1	14.8	88.4	57.4	49.6	12	101	-25	1132	6283	2.70	0.47	14.81	7.31	T	3.43	8.2	58.1	19.4	62	44	48	72	36	36	9.3	8.8	56	72	70	116	135	115	87	10	41	12	22	144	5
GRAND JUNCTION	4843	34.8	17.1	92.5	63.8	52.6	8	105	-15	1209	5641	1.07	0.42	8.29	3.48	0.00	1.57	7.4	26.4	9.1	76	63	61	48	29	22	5.4	9.4	46	60	77	142	104	119	71	3	36	9	2	147	5
PUEBLO	4694	45.3	14.7	92.1	60.8	52.7	7	105	-17	1085	4462	1.85	0.30	11.84	6.17	T	3.77	5.7	31.8	16.9	61	45	42	70	38	35	7.7	8.6	80	74	76	136	126	104	70	10	42	8	9	159	7
CONNECTICUT							84	105	-32									0.00	12.12																						
BRIDGEPORT	7	37.4	22.9	82.6	64.8	51.5	6	100	- 3	1079	5617	4.45	2.96	44.89	13.29	0.07	5.95	7.1	27.6	16.7	69	59	62	77	60	69	12.9	9.7	67			102	100	154	114	9	27	25	4	200	7
HARTFORD	169	34.7	17.3	85.0	61.8	49.8	12	102	-26	1209	6172	4.01	2.94	42.92	21.87	0.35	12.12	11.5	56.4	15.0	72	57	62	79	50	61	9.8	7.9	53	57	61	80	112	173	128	14	32	12	100	128	7
NEW HAVEN 1963	6	37.1	22.0	80.5	63.2	50.2	24	100	- 8	1097	5897	4.62	3.19	46.02	10.95	0.12	5.55	9.3	37.1	17.2	76	63		81	66		8.3	6.3	57	65	68	100	109	154	128	11	27	26	3	183	1
DELAWARE							79	110	-17									0.00	7.83																						
WILMINGTON	74	41.3	25.5	86.2	65.8	54.1	24	102	- 4	980	4930	5.59	2.91	44.56	12.09	0.16	6.24	6.0	21.7	15.6	75	61	69	80	54	67	9.8	7.7	58			98	104	161	114	6	31	30	10	164	4
DIST. OF COLUMBIA																		T	7.31																						
WASHINGTON DULLES	290						9	103	- 8						9.39	T	5.54	7.1	27.8	15.4	78	58	68	86	53	68	8.1	6.2	46			99	108	159	104	7	26	27	27	119	3
WASHINGTON NATIONAL	10	44.3	29.5	87.0	69.3	57.0	11	101	3	871	4224	4.90	2.47	40.78	14.31	T	6.39	5.1	17.7	14.4	68	54	58	75	52	60	10.2	8.3	78	49	62	102	105	159	111	5	29	13	50	91	3
FLORIDA							82	109	- 2									0.00	38.70																						
APALACHICOLA U	13	62.3	47.9	87.6	75.4	68.8	42	102	13	347	1308	8.53	2.44	56.23	22.55	0.01	11.71	T	T	1.2	87	69	80	85	72	76	8.4	6.6	67	58	62	132	112	121	156	*	20	24	10	6	0
DAYTONA BEACH	31	69.6	48.7	88.2	72.0	70.3	28	102	21	248	879	7.00	1.95	49.90	19.89	T	9.29	0.0	T	T	88	60	78	80	66	70	9.3	7.8	58			96	135	135	118	1	20	12	4	6	0
FORT MYERS	14	74.8	52.2	91.0	73.3	73.7	13	98	26	146	442	9.08	1.20	53.34	18.58	0.00	10.85	0.0	0.0	0.0	88	59	74	87	60	74	8.4	6.9	52			106	157	101	216	0	26	22	11	1	0
JACKSONVILLE	24	66.8	44.0	92.0	73.2	69.5	30	105	12	332	1239	7.68	1.69	53.36	19.36	T	10.17	T	0.1	1.5	87	67	73	87	58	75	8.7	7.9	52	58	60	90	128	138	116	*	41	24	15	12	0
KEY WEST INTL AP	4	73.7	65.4	87.4	79.1	76.8	19	95	46	40	108	6.73	1.53	39.99	21.57	0.00	8.89	0.0	0.0	0.0	83	69	77	76	66	71	12.2	10.1	122	69	74	100	165	100	119	0	61	1	40	0	0
LAKELAND L	214	71.2	52.2	90.5	72.6	72.3	31	101	20	195	661	8.30	1.59	51.37	19.67	0.00	10.12	T	T	T							7.3	5.7		69	59	100	156	107	121	0	100	19	82	2	0
MIAMI BEACH 1964	9	74.2	63.9	87.0	77.6	76.2	24	98	35	56	141	7.36	1.65	46.26	18.02	0.01	8.35	0.0	0.0	0.0							11.7	10.9	122	67	63	147	121	97	122	0			14	0	0
MIAMI INTL AP	7	75.8	62.9	88.8	74.7	75.1	7	96	34	74	214	9.47	1.67	59.76	24.40	0.01	9.95	0.0	0.0	0.0	84	60	69	85	64	72	9.4	7.8	74			74	170	118	133	0	26	7	37	0	0
ORLANDO	108	70.7	50.0	92.0	73.0	72.0	8	98	24	220	766	8.00	1.57	51.37	19.57	T	9.67	T	T	T	87	57	69	90	59	74	9.1	7.6	64			89	146	129	114	0	33	20	30	3	0
PENSACOLA 1/	112	62.3	44.6	89.2	74.1	68.4	8	98	11	400	1463	8.02	2.98	62.87	15.52	0.00	10.02	T	T	T	81	64	73	88	65	71	8.8	6.6	59	48	57	100	113	152	118	0	24	18	46	14	0
TALLAHASSEE	55	65.1	42.7	90.5	72.0	68.0	11	100	10	375	1485	8.05	2.43	56.86	20.12	T	9.47	T	T	T	87	59	72	92	61	75	8.1	5.9	58			98	136	131	119	0	33	62	31	17	0
TAMPA	19	71.3	51.0	89.7	73.4	72.2	8	97	23	202	683	8.62	1.46	51.57	20.59	T	12.11	T	T	T	86	60	73	87	63	72	9.1	7.4	67	66	63	98	141	126	108	0	27	14	9	1	0
WEST PALM BEACH	15	75.5	58.3	90.8	74.3	75.3	7	99	29	87	253	9.66	2.35	61.70	24.86	0.04	15.23	0.0	0.0	0.0	82	58	73	85	65	76	9.3	7.9	86			76	153	136	101	0	18	8	34	1	0
GEORGIA							80	112	-17									0.00	18.00																						
ATHENS	802	54.6	34.5	90.2	69.2	61.9	28	105	- 1	642	2929	5.10	2.86	48.53	14.98	T	9.93	0.7	2.0	5.0	81	58	65	91	60	70	8.8	6.4	62			111	107	147	111	3	41	26	61	44	*
ATLANTA	1010	52.0	37.3	87.0	70.7	61.4	11	98	- 3	639	2983	5.37	2.44	47.14	15.72	T	9.67	0.8	1.8	8.3	79	59	64	90	64	71	10.6	7.4	70	48	62	100	111	145	114	*	40	20	21	4	*
AUGUSTA	136	59.4	36.7	91.3	70.0	64.0	7	104	5	549	2397	4.90	2.01	39.18	11.43	T	5.98	0.2	0.6	3.3	83	53	66	90	59	72	6.7	5.8	62			100	103	163	106	*	26	10	40	6	*
COLUMBUS	385	59.0	36.6	91.5	70.6	64.4	26	104	3	552	2383	6.01	1.77	48.67	13.24	0.00	5.63	T	T	T	85	60	71	89	59	70	7.5	5.4	55			113	100	151	111	*	40	10	74	47	0
MACON	354	60.7	38.2	92.8	71.0	65.6	7	104	3	508	2136	5.64	2.01	44.08	11.77	0.00	8.35	0.2	0.4	3.7	82	56	66	89	59	69	8.4	7.1	70	55	63	110	105	148	113	*	46	14	30	8	0
ROME	637	52.8	31.3	90.6	67.4	60.4	24	106	- 5	710	3326	5.87	2.93	52.26	17.37	T	7.93	0.8	2.3	8.2	81	58	73	88	54	67						106	117	143	109	1	41	24	61	34	*
SAVANNAH	46	62.5	40.9	91.2	71.4	66.4	7	102	9	437	1819	6.62	2.05	48.91	20.10	0.02	7.04	T	0.2	3.6	84	54	68	93	61	75	8.8	7.5	66	55	65	106	112	147	120	*	44	18	40	9	0
THOMASVILLE 2 1963	283	63.4	44.0	92.0	72.0	68.2	41	106	8	394	1529	6.81	2.08	51.01	18.83	T	9.00	T	T	2.0	85	60	70	85	60	78	5.3	4.1		54	57	122	119	124	114	*	32	13	37	14	0
HAWAII							67	100	18									0.00	38.00																						
HILO	27	78.7	62.8	82.4	67.4	73.1	24	94	53			15.18	6.79	136.62	50.82	0.36	15.70	0.0	0.0	0.0	84	79	67	88	81	67	7.7	7.1	46	45	42	30	125	210	280	0	9	0	1	0	0
HONOLULU U 1964	12					78.1	42	88	57			3.86	0.62	23.96	18.70	0.06	17.41	0.0	0.0	0.0																						
HONOLULU	7	79.1	65.8	84.6	73.0	75.9	2	91	54			3.76	0.33	21.89	20.79	T	17.07	0.0	0.0	0.0	77	76	65	66	64	52	9.0	10.5	67	63	75	96	169	102	102	0	7	0	6	0	0
KAHULUI	48	80.8	63.4	86.4	70.1	75.2	7	99	48			3.14	0.18	16.93	13.66	0.00	5.82	0.0	0.0	0.0	86	96	66	82	72	55	11.6	16.0	43	65	75	115	161	93	90	0	6	0	24	1	0
LIHUE	103	78.2	63.5	83.1	72.0	74.5	21	90	50			5.51	1.46	43.00	22.91	0.30	11.54	0.0	0.0	0.0	84	84	69	80	75	65	10.4	12.4	73	51	61	59	129	149	229	0	11	0	9	0	0
IDAHO							79	119	-60									0.00	7.17																						
BOISE	2838	36.1	22.1	91.4	59.0	51.0	32	111	-17	1113	5809	1.33	0.16	11.43	4.00	0.00	2.24	7.8	21.6	13.0	81	74	72	53	33	22	9.7	9.5	51	42	89	126	89	150	91	9	15	16	43	126	1
IDA FALLS 42NW 01966	4790	26.5	0.2	89.0	49.2	41.7	16	103	-43	1630	8760	1.24	0.33	7.02	5.04	0.00	1.78										4.7	9.0	50				44						219	41
IDA FALLS 6NW 01966	4932	27.9	3.2	87.9	50.1	42.4	17	101	-40	1538	8475	1.10	0.26	7.57	4.42	0.00	1.73	6.4	26.7	8.5							5.8	7.9	51				69	10	13	14	25	13	24	155	23
LEWISTON	1413	37.7	23.7	89.8	57.8	51.6	25	115	-22	1063	5542	1.73	0.43	13.24	4.80	T	1.73	7.8	18.7	12.8	81	75	73	60	36	23						96	76	109	103	4	16	21	34	7	2
POCATELLO	4454	31.6	13.0	89.6	55.1	47.0	8	104	-19	1324	7039	1.21	0.51	10.85	3.98	0.00	1.67	10.2	38.7	10.1	77	72	68	62	32	22	11.1	9.3	72	37	84	110	98	157	98	13	25	15	34	110	5
ILLINOIS							32	117	-35									0.00	16.94																						
CAIRO U	314	44.6	30.2	90.3	71.8	59.6	29	104	- 5	856	3821	4.79	2.88	48.23	14.95	T	7.96	2.9	10.0	10.5	80	67		84	59		9.8	6.5	53	49	75	113	106	147	114	3	33	7	40	44	*
CHICAGO MIDWAY	607	33.0	19.0	84.1	67.1	50.8	8	101	-16	1209	6159	4.07	1.60	33.18	14.17	0.20	6.24	9.7	38.9	19.8	70	64	66	77	58	56	11.9	9.3	60	44	63	94	105	166	110	12	28	13	22	110	1
MOLINE	582	31.6	13.6	88.0	63.2	50.1	12	100	-26	1314	6408	4.37	1.35	32.79	14.18	0.01	6.29	7.5	28.1	16.4	73	66	69	84	58	60	10.5	7.5	57	48	71	103	103	163	100	7	37	20	15	117	12
PEORIA	652	33.7	17.6	87.0	65.0	51.4	12	102	-20	1218	6025	4.27	1.71	34.84	13.09	0.03	5.06	5.5	22.6	9.0	77	68	71	84	59	60	11.5	9.1	75	44	63	100	103	163	100	7	40	21	19	113	12
ROCKFORD	724	30.2	13.7	86.3	62.1	48.6	8	99	-22	1333	6830	4.30	1.44	35.62	11.81	0.01	5.56	8.3	32.3	10.9	77	69	74	84	56	53	10.1	8.1	54			93	103	164	101	11	41	24	13	140	11
SPRINGFIELD	588	36.3	20.5	89.6	66.4	53.6	12	106	-22	1138	5429	4.45	1.87	34.83	9.91	0.15	5.12	4.8	21.3	10.3	77	67	70	83	56	58	13.0	9.5	75	46	73	109	96	161	107	7	30	17	19	127	9
INDIANA							84	116	-35									0.00	10.50																						
EVANSVILLE	381	42.7	28.6	90.3	67.2	57.0	11	104	-18	955	4435	4.31	2.57	41.45	13.50	0.01	6.05	3.5	13.3	10.6	77	65	67	85	57	59	9.6	6.4	59	42	75	103	101	161	114	6	46	14	12	103	5
FORT WAYNE	791	34.4	19.6	85.1	63.2	50.3	11	101	-18	1178	6205	4.17	2.09	35.31	9.72	0.14	4.60	6.6	29.7	13.6	79	71	75	83	56	58	11.4	9.1	65	41	71	78	108	179	108	3	41	20	15	134	10
INDIANAPOLIS	792	37.1	21.0	86.0	64.3	52.1	13	99	-18	1113	5699	4.62	2.28	39.29	12.69	0.17	4.00	4.9	20.5	12.5	79	68	70	87	60	62	11.1	7.4	60	41	70	90	103	171	101	7	44	20	16	119	9
SOUTH BEND	773	33.0	18.1	84.5	62.6	49.4	8	98	-13	1221	6439	3.62	1.88	35.70	9.75	0.02	4.70	16.0	65.2	15.6	80	74	75	83	57	60	12.0	9.4	63			78	105	167	100	12	43	24	10	128	9

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Record highest	Record lowest	Normal Heating degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours	Snow @ Mean total January	Mean total Seasonal	Extreme Maximum in 24 hours	Relative humidity (percent) January 7:00 a.m. EST	January 1:00 p.m. EST	July 7:00 p.m. EST	July 7:00 a.m. EST	July 1:00 p.m. EST	July 7:00 p.m. EST	Wind Speed (m.p.h.) Mean speed January	Mean speed July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail .10 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Min Zero and below
IOWA							90	118	-47							0.00	16.70																							
BURLINGTON	692	32.7	16.1	87.6	65.6	51.2	74	111	-27	1259	6114	5.01	1.39	34.60	15.10	0.06	6.28	7.2	25.9	13.0	79	69	73	85	58	60	11.3	8.0	52	53	77	103	104	158	104	9	51	14	32	128	11
DES MOINES	938	28.5	11.3	87.3	65.2	49.2	11	100	-24	1398	6808	4.71	1.10	30.37	14.19	0.03	5.50	8.4	32.1	19.8	79	72	72	83	58	57	11.8	9.1	74	51	71	102	98	165	105	10	50	18	10	130	14
DUBUQUE	1056	27.3	11.1	83.7	61.5	46.6	6	97	-28	1420	7376	4.22	1.40	35.71	15.46	T	8.85	8.9	40.6	15.5	77	70	74	86	61	64						93	100	173	110	13	45	28	6	161	22
SIOUX CITY	1095	27.9	9.5	89.5	65.2	49.1	12	104	-26	1435	6951	4.39	0.74	24.77	9.69	T	4.28	6.1	31.6	11.4	79	71	73	87	60	57	11.1	9.0	91	58	78	108	104	163	98	10	47	19	21	153	29
WATERLOO	868	26.8	8.9	85.7	61.8	47.2	12	99	-34	1460	7320	4.83	0.92	31.48	12.60	T	9.31	7.0	30.4	14.8	77	70	73	88	60	62	11.1	8.3	54			97	104	164	95	10	41	24	13	160	20
KANSAS							85	121	-40							0.00	12.59																							
CONCORDIA	1470	37.3	17.6	92.1	68.4	54.1	10	108	-14	1163	5479	4.20	0.70	25.39	14.14	0.02	5.46	3.8	22.1	13.2	81	66	69	83	53	50	12.2	11.6	68	52	74	135	95	135	80	7	42	19	47	133	7
DODGE CITY	2582	42.4	19.7	92.8	67.5	55.4	8	107	-10	1051	4986	3.03	0.47	19.25	9.13	T	4.55	4.0	18.8	12.8	77	58	59	77	46	40	13.8	13.1	78	69	79	136	106	123	77	6	54	23	63	126	9
GOODLAND	3654	40.9	13.9	91.8	61.3	50.8	5	108	-12	1166	6141	2.67	0.39	16.50	8.09	0.00	2.95	5.3	32.7	15.2	77	56	56	83	47	41	12.3	11.9	66			142	123	100	74	11	60	28	44	159	4
TOPEKA	877	38.5	19.0	91.6	68.1	54.9	7	105	-20	1122	5182	4.51	1.02	32.36	15.20	T	5.52	6.1	20.6	15.2	77	65	66	84	60	58	10.6	9.0	81	54	68	114	98	153	93	6	59	14	32	124	4
WICHITA	1321	41.6	22.3	92.4	69.4	57.1	19	113	-12	1023	4620	4.21	0.81	28.41	10.46	T	4.98	3.7	15.3	13.5	79	63	65	79	50	46	12.7	11.3	66	58	73	127	97	141	89	4	56	18	63	114	2
KENTUCKY							83	114	-34							0.00	10.40																							
COVINGTON	869	40.5	22.7	87.4	68.3	53.4	10	102	-19	1035	5265	3.89	2.26	38.02	12.18	0.18	5.21	6.6	24.0	9.8	76	64	67	84	55	50	10.8	7.1	40			81	102	182	127	7	44	24	24	110	6
LEXINGTON	966	42.9	26.1	88.2	66.5	55.6	8	98	-10	946	4683	4.94	2.28	44.73	16.65	0.24	5.88	5.7	16.5	9.5	78	66	68	84	57	62	11.8	7.5	44			90	104	162	129	6	47	19	18	100	3
LOUISVILLE	477	43.5	26.5	88.5	66.6	55.7	11	101	-20	930	4660	4.59	2.25	41.32	14.91	0.23	6.97	5.5	18.6	13.0	76	63	63	86	58	60	9.6	6.6	61	41	66	98	105	162	102	5	44	10	25	96	2
LOUISIANA							81	114	-16							0.00	22.00																							
ALEXANDRIA	92	60.7	39.9	91.8	72.6	66.4	12	104	5	471	1921	5.73	3.13	56.69	13.09	0.08	6.18	0.3	0.7	7.3	88	65	72	96	61	69	7.1	4.9	46			107	109	149	101	*	65	40	72	47	0
BATON ROUGE	64	63.5	42.3	92.0	73.4	68.1	13	102	10	409	1560	6.27	2.45	54.46	14.51	0.06	12.08	T	0.1	1.0	85	65	67	92	63	71	9.4	6.1	58			90	119	147	106	*	69	38	82	25	0
LAKE CHARLES	9	62.3	45.0	90.5	74.0	68.6	7	99	20	381	1459	7.29	3.06	56.04	17.36	T	14.10	T	T	0.3	88	69	77	93	63	70	10.3	6.5	58			92	124	149	90	5	70	50	77	13	0
N.O. AUDUBON PK 1964	6	64.8	46.2	91.4	73.7	69.5	3	97	17	344	1254	8.12	3.19	62.96	10.15	0.00	4.03	0.0	2.3	4.5	80	68	72	96	72	80	5.4	3.2	26	37	47	99	129	137	115	1	79	18	84	14	0
NEW ORLEANS INTL AP	4	64.4	44.8	90.6	72.6	69.6	28	100	14	363	1385	6.72	2.84	53.90	19.09	0.00	9.86	T	0.2	2.7	86	67	73	91	66	73	9.6	6.3	49			113	120	132	113	*	69	31	69	12	0
SHREVEPORT	254	56.7	38.3	94.2	73.2	66.1	19	107	3	552	2184	4.94	2.28	46.28	12.39	0.00	7.17	0.4	1.3	4.0	83	63	64	89	56	56	10.3	7.9	44	50	73	121	99	145	95	1	52	20	92	44	0
MAINE							84	105	-48							0.00	8.05																							
CARIBOU	624	19.8	1.1	75.1	53.9	38.4	32	96	-41	1690	9767	4.07	2.02	36.31	8.45	0.12	6.23	22.4	109.3	18.2	74	67	73	82	68	70	12.4	9.8				67	101	207	150	31	30	27	2	190	42
PORTLAND	43	31.8	11.7	79.5	56.7	45.0	31	100	-39	1339	7511	4.37	2.42	42.85	12.27	0.26	7.71	18.4	75.4	22.8	78	62	71	80	59	75	9.2	7.7	76	55	69	109	101	155	125	19	18	53	5	161	15
MARYLAND							76	109	-40							0.00	14.75																							
BALTIMORE U 1964	14	44.1	30.4	87.4	70.7	57.6	94	107	- 7	859	4111	4.60	2.98	44.21	17.69	0.05	7.82	6.1	22.7	24.5	72	58	66	71	52	65	10.3	8.9	66	48	69	121	123	121	127	6	32	15	26	71	*
BALTIMORE INTL AP	148	44.2	25.3	87.2	66.4	55.2	21	102	- 7	936	4654	5.19	2.89	43.05	18.35	T	7.82	5.7	24.0	15.5	72	57	62	80	52	63	10.1	8.3	80	52	66	110	110	145	111	8	28	30	32	101	*
MASSACHUSETTS							84	106	-34							0.00	18.15																							
BLUE HILL OBS	629	34.4	19.5	80.2	61.6	48.7	86	101	-21	1178	6368	4.54	3.27	47.50	18.78	0.06	9.93	15.6	60.9	28.2	76	62	68	81	57	74	17.4	13.0	92	49	57				135	16			5	132	4
BOSTON	15	36.8	23.0	81.9	65.4	51.4	7	98	- 4	1088	5634	4.22	2.88	42.77	17.09	0.35	8.40	12.4	43.0	19.4	66	57	61	73	55	65	14.6	11.3	65	53	65	101	106	158	127	11	19	23	10	103	1
NANTUCKET 1969	43	39.2	26.8	74.3	61.7	49.5	4	90	2	992	5891	4.54	2.71	43.66	12.92	0.01	6.53	8.7	34.8	20.1	79	67	75	87	76	91	14.7	11.0	73	42	60	86	93	186	125	8	20	98	1	108	0
PITTSFIELD 1968	1170	30.5	13.1	79.2	56.4	44.9	29	95	-25	1339	7578	4.89	2.51	44.42	10.32	0.42	4.25	19.0	78.0	17.0												57	127	181	152	24	28	45	3	163	14
WORCESTER	986	31.2	16.8	79.0	60.5	46.8	16	94	-19	1271	6969	4.26	2.92	45.41	8.56	0.83	4.79	16.1	78.5	24.0	73	60	67	73	55	66	12.8	8.8	76			96	108	162	127	10	21	84	3	147	7
MICHIGAN							85	112	-51							0.00	9.78																							
ALPENA	689	28.9	10.4	80.4	51.4	42.1	13	98	-28	1404	8506	3.61	1.61	29.92	8.37	0.16	3.18	23.0	86.9	16.1	77	69	73	82	52	60	7.8	6.3	44	38	68	71	107	187	147	26	34	25	6	185	27
DETROIT CITY AP	619	33.0	20.7	83.9	64.8	50.1	38	105	-16	1181	6232	3.53	2.05	30.95	8.05	0.10	3.72	8.0	31.7	10.0	79	69	74	75	51	55	11.5	8.2	46	32	70	80	108	177	131	11	32	11	15	125	2
DETROIT METRO. AP	633	33.3	19.0	83.9	60.9	48.9	13	99	-13	1203	6516	3.54	1.92	30.80	7.70	0.15	3.71	8.1	34.9	10.3	78	69	73	82	52	57	11.2	8.4	52	38	64	76	107	182	130	12	33	24	12	140	7
DETROIT W R 1968	711	33.4	19.8	86.0	62.4	50.0	7	99	-13	1190	6258	3.48	1.94	30.67	8.71	0.25	4.78	7.2	32.7	8.7	78	70	72	82	49	52	12.0	8.7	60			78	107	180	128	12	33	28	15	143	7
FLINT	771	31.9	17.1	83.5	58.9	47.5	8	97	-22	1256	6885	3.39	1.70	30.14	8.68	0.07	6.04	10.8	42.2	19.8	75	69	71	83	56	59	11.8	8.2	81			67	110	188	130	13	33	19	5	140	8
GRAND RAPIDS	784	31.3	16.7	84.5	60.0	47.6	8	100	-16	1271	6998	3.46	1.75	31.19	8.21	0.14	3.21	23.5	80.1	15.1	82	73	77	80	54	56	11.5	8.6	60	39	69	69	101	195	141	25	36	28	11	149	9
HOUGHTON LAKE	1149	27.6	10.7	80.1	59.9	42.9	7	96	-25	1420	8342	3.12	1.29	28.34	6.67	0.32	2.59	21.9	89.1	11.7	83	73	79	85	55	58	10.0	7.5	40			73	97	195	146	28	40	31	3	176	26
LANSING	841	31.1	17.4	83.4	59.9	47.6	8	100	-24	1262	6909	3.73	1.95	31.18	7.94	0.17	4.35	11.2	48.0	20.4	83	75	79	81	55	59	12.3	8.9	63	36	71	78	108	179	137	14	34	23	12	152	12
MARQUETTE U	677	25.7	13.2	75.7	57.6	42.6	35	102	-21	1411	8393	3.46	1.65	31.61	10.20	0.21	4.65	20.8	105.2	16.1	75	68	72	76	63	66	8.9	7.1	59	34	67	62	101	202	150	31	28	17	5	160	11
MUSKEGON	625	32.3	19.7	81.9	60.6	48.2	12	99	-12	1209	6696	3.06	1.80	30.07	8.54	0.11	3.61	29.9	93.1	20.1	81	76	78	82	58	58	12.4	8.4	44			80	92	193	142	30	37	23	3	140	5
SAULT STE MARIE	721	23.1	8.4	75.6	53.5	40.6	31	98	-28	1525	9048	3.81	1.50	31.22	7.78	0.16	5.10	24.6	105.3	14.3	82	76	81	88	61	67	10.2	8.4	47	34	63	67	90	208	164	35	30	47	1	179	29
MINNESOTA							85	114	-59							0.00	10.75																							
DULUTH	1428	17.9	3.6	77.1	53.9	37.9	11	95	-38	1745	10000	4.27	0.96	28.97	8.48	0.13	4.05	16.6	78.0	25.4	74	67	67	82	57	58	12.2	10.0	75	50	67	76	103	186	135	22	34	54	2	186	52
INTERNATIONAL FALLS	1179	14.2	8.1	78.4	52.8	36.2	32	98	-46	1919	10606	3.87	0.71	24.69	11.26	0.10	4.87	10.4	58.6	17.0	73	68	70	88	57	58	9.3	7.9	52			81	104	180	134	18	31	14	4	199	68
MINNEAPOLIS	834	22.4	2.3	83.9	60.7	43.7	12	99	-34	1631	8382	4.00	0.70	24.78	8.03	T	4.12	8.5	44.9	16.2	74	68	68	83	56	55	10.5	9.3	92	50	70	98	102	165	113	14	36	11	14	159	35
ROCHESTER	1297	23.0	4.2	84.0	60.5	44.0	12	97	-32	1593	8295	4.46	0.80	28.46	8.34	0.04	3.28	8.6	44.7	11.3	76	72	74	86	61	61	13.9	10.2	52			95	96	174	115	13	43	35	5	163	36
ST CLOUD	1034	20.4	0.2	83.1	58.9	42.0	32	103	-40	1702	8879	4.49	0.72	25.92	9.34	0.01	4.62	7.9	43.5	14.5	76	68	70	87	54	55	8.2	7.0				96	102	167	108	14	36	20	11	177	45
MISSISSIPPI							83	115	-19							0.00	15.68																							
JACKSON	310	58.3	37.4	92.9	71.7	65.5	8	103	7	547	2203	5.74	2.04	50.82	11.88	0.00	6.97	0.2	1.4	5.3	86	64	71	93	60	67	9.3	6.3	45	46	63	107	105	153	108	*	60	26	81	52	0
MERIDIAN	290	59.4	36.8	92.6	70.3	64.8	7	103	6	543	2289	6.32	2.22	53.13	16.82	0.00	6.95	0.5	1.6	15.0	87	61	70	92	58	66	7.3	5.2	40			114	112	139	103	*	57	24	72	60	0
VICKSBURG U 1966	234	57.4	40.5	90.4	73.2	65.9	29	101	2	512	2041	5.73	2.04	49.50	16.58	T	9.97	0.9	1.6	10.0	83	62	70	93	62	71	9.3	6.7	56	49	67	111	114	140	105	1	62	12	65	23	0

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January: Daily maximum	January: Daily minimum	July: Daily maximum	July: Daily minimum	Annual	Extremes: Length, yrs	Record highest	Record lowest	Normal Heating degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960): Wettest month	Driest month	Annual	Extremes: Wettest month	Driest month	Maximum in 24 hours	Snow @: Mean total: January	Mean total: Seasonal	Extreme: Maximum in 24 hours	Relative humidity (percent): January: 7:00 a.m. EST	January: 1:00 p.m. EST	January: 7:00 p.m. EST	July: 7:00 a.m. EST	July: 1:00 p.m. EST	July: 7:00 p.m. EST	Wind Speed (mph): Mean speed: January	Mean speed: July	Fastest mile	Sunshine (percent of possible): January	July	Annual mean number of days: Sunrise to sunset: Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail .10 inch or more	Thunderstorms	Heavy fog	Temperature: Max: 90 and above	Min: 32 and below	Min: Zero and below
MISSOURI							84	118	-40								0.00	18.18																						
COLUMBIA MUNI 1969	778	39.3	21.3	89.7	67.6	55.0	30	113	-18	1076	5046	4.70	1.71	36.96	13.30	0.09	4.37	4.4	19.4	10.3	70	65	68	35	55	56	11.1	8.0	63	52	74	116	96	153	107	6	55	14	40	100	4
COLUMBIA REGIONAL	887	38.0	20.6	87.4	67.1	54.4	7	103	-11	1107	5121	4.70	1.71	36.96	9.81	0.23	4.21	4.2	19.2	6.2	77	65	66	83	52	51	11.1	9.4	58	59	73	98	93	174	112	7	54	30	36	108	9
KANSAS CITY	742	39.9	23.4	91.9	71.0	56.8	12	106	- 9	1032	4711	4.57	1.74	34.07	11.94	0.04	7.46	5.6	19.8	12.8	75	61	62	79	57	53	9.9	8.9	72	53	76	110	102	144	98	6	50	12	42	90	3
ST JOSEPH	811	37.2	17.1	91.0	67.8	53.8	9	103	-20	1172	5484	5.93	1.09	34.18	13.73	T	7.12	5.6	19.7	11.3	74	64	67	85	60	57	10.9	7.9	60			125	99	141	95	6	56	19	41	122	5
ST LOUIS	535	40.2	23.5	89.2	66.9	55.3	11	106	-11	1026	4900	4.29	1.97	35.31	9.09	0.08	3.29	4.2	17.1	11.2	79	61	66	85	58	56	10.2	7.6	60	52	70	102	104	159	106	6	44	10	36	107	3
SPRINGFIELD	1268	43.4	23.8	90.3	67.2	56.5	12	102	-10	973	4561	5.28	1.96	41.08	18.75	0.08	6.85	2.7	14.7	15.7	77	58	63	86	57	58	12.3	9.7	66	50	71	114	101	149	104	6	58	20	32	108	3
MONTANA							105	117	-70								0.00	11.50																						
BILLINGS	3567	33.2	13.1	88.5	60.8	47.5	13	105	-26	1296	7049	2.55	0.54	13.23	7.64	T	2.83	8.4	54.6	23.7	66	61	58	64	39	31	12.9	9.8	79	49	79	80	119	167	94	19	29	19	30	150	18
GLASGOW	2284	19.6	0.1	85.3	56.1	41.4	7	106	-47	1711	8996	2.98	0.41	12.27	5.36	T	3.98	7.8	27.2	8.8	72	69	69	74	44	34	11.2	10.6	46			86	107	173	87	9	27	12	25	193	48
GREAT FALLS	3662	31.6	12.5	84.7	54.1	44.7	11	106	-43	1349	7750	2.90	0.60	14.07	8.13	T	3.20	9.7	56.2	11.0	67	63	62	65	37	28	15.7	10.3	82	51	81	86	103	176	99	19	27	13	23	154	20
HAVRE	2584	24.2	3.6	85.3	54.6	42.1	11	111	-52	1584	8700	2.73	0.43	11.89	4.72	T	2.34	11.0	38.9	16.2	73	69	71	72	37	27	10.4	9.3	71	51	85	87	100	178	84	13	21	9	29	185	46
HELENA	3828	28.8	8.4	84.4	52.3	43.4	8	105	-38	1438	8129	2.23	0.43	10.88	4.74	0.02	2.06	9.0	49.1	21.5	70	66	66	68	39	28	7.0	7.9	73	48	80	84	103	178	97	14	35	9	20	189	21
KALISPELL	2965	27.6	12.0	83.7	47.6	42.8	12	105	-35	1401	8191	2.21	0.96	15.42	4.72	T	2.35	20.2	68.3	15.4	81	81	76	84	43	34	7.2	6.8	40			78	82	208	132	23	24	35	17	195	17
MILES CITY	2629	27.4	5.6	90.2	60.4	45.8	34	110	-37	1504	7723	2.71	0.37	12.17	9.78	T	2.71	6.6	32.3	10.5	73	69	69	69	38	30	9.3	9.5				101	108	156	93	13	29	10	39	173	12
MISSOULA	3190	28.0	10.3	85.0	49.0	43.2	12	105	-30	1420	8125	1.91	0.72	12.83	4.19	T	1.82	13.5	49.4	11.2	85	81	78	77	43	30	5.2	6.7	72	28	81	76	82	207	124	16	25	28	24	191	10
NEBRASKA							96	118	-47								0.00	13.15																						
GRAND ISLAND	1841	34.1	11.0	90.7	63.7	50.1	11	107	-28	1314	6530	3.85	0.56	21.85	13.96	0.00	5.41	5.7	28.1	12.0	77	64	67	84	53	48	11.6	10.8	57			124	101	140	87	3	50	18	40	152	16
LINCOLN U	1150	34.0	16.2	92.3	67.9	52.8	7	105	-18	1237	5964	4.50	0.90	27.43	12.93	0.05	5.38	6.3	28.9	19.0				9.8	9.4	64	58	75	115	104	146	76	8	49	8	33	129	9
NORFOLK	1544	30.1	8.6	89.2	64.7	48.9	26	113	-26	1414	6979	4.26	0.73	23.95	12.22	T	4.23	5.4	28.3	10.5	76	64	68	84	53	50						119	98	149	97	3	50	11	33	158	21
NORTH PLATTE	2775	37.3	10.7	90.0	62.2	49.2	7	103	-25	1271	6684	3.25	0.40	18.27	8.01	T	3.80	5.5	32.2	9.7	80	65	65	87	55	51	9.5	9.8	72	59	75	120	108	137	84	10	60	18	20	180	16
OMAHA	977	31.7	12.9	89.7	67.3	51.5	8	107	-17	1324	6218	4.53	0.80	27.56	13.75	T	6.47	8.0	32.0	18.3	75	65	67	82	58	56	11.2	9.1	73	54	76	113	107	145	99	3	49	11	33	138	11
SCOTTSBLUFF	3957	38.7	11.9	89.2	60.1	48.7	7	103	-25	1231	6673	3.10	0.29	14.38	8.33	T	3.74	5.7	36.3	12.1	77	60	58	83	45	39	10.8	9.5	80			122	110	133	84	17	44	10	35	171	13
VALENTINE	2587	33.3	6.7	90.6	60.2	46.9	17	109	-29	1395	7429	3.11	0.34	17.30	8.96	T	3.38	3.9	25.1	9.0	68	66	77	50	42	30	10.1	10.1	72	65	74	120	106	139	78	8	45	6	30	178	26
NEVADA							83	122	-50								0.00	7.40																						
ELKO	5050	35.1	10.0	90.8	48.3	45.4	7	102	-18	1314	7433	1.16	0.30	9.05	4.61	0.00	4.13	10.5	40.0	16.7	77	71	60	59	27	20	5.5	6.2	58			133	97	135	78	15	21	6	47	197	14
ELY	6253	36.8	8.7	86.8	48.1	44.3	33	99	-27	1308	7733	0.95	0.49	8.33	3.53	0.00	1.54	8.6	47.4	13.1	70	50	55	51	23	22	10.7	10.4	74	65	80	132	110	123	72	15	33	2	14	218	10
LAS VEGAS	2162	54.2	32.0	103.5	75.8	65.7	10	115	8	688	2709	0.53	0.04	3.90	2.59	0.00	2.59	0.9	1.2	5.0	52	37	27	29	20	15	6.9	9.8	64	78	84	215	83	67	23	6	15	1	191	41	0
RENO	4404	44.6	16.2	89.4	45.9	48.4	8	103	-11	1073	6332	1.19	0.17	7.19	5.25	0.00	2.37	6.6	26.4	16.9	72	65	48	68	30	20	4.1	6.5	80	65	92	166	80	110	40	9	13	8	44	189	2
WINNEMUCCA	4301	39.7	14.7	92.0	49.9	47.4	27	106	-24	1172	6761	1.05	0.19	8.63	2.86	0.00	1.79	5.9	25.7	9.9	77	66	57	45	21	14	7.7	8.3	66	45	85	138	86	141	67	9	15	4	43	194	7
NEW HAMPSHIRE							95	106	-46								0.00	10.38																						
CONCORD	342	31.7	10.6	82.8	56.4	45.6	6	102	-29	1358	7383	3.75	2.48	38.80	10.10	0.40	4.47	16.9	64.1	19.0	70	57	64	87	53	66	7.3	5.6	72	51	63	96	112	157	124	18	21	12	9	171	26
MT WASHINGTON OBS	6262	14.7	2.2	54.9	43.3	27.0	39	71	-47	1820	13817	7.00	5.21	74.09	25.56	0.75	10.38	82.1	221.5	49.3	82	83	83	91	86	90	46.0	25.0	231	33	31	59	75	228	205	63	16	309	0	243	65
NEW JERSEY							87	110	-34								0.00	14.81																						
ATLANTIC CITY	64	42.9	26.6	83.9	66.3	54.1	7	106	- 8	936	4812	4.90	2.85	42.36	13.09	0.10	6.46	5.2	17.4	14.4	75	57	68	86	59	74	12.2	9.3	60	53	68	103	103	159	123	5	26	6	17	157	2
NEWARK	7	39.5	25.0	86.1	66.5	53.7	6	105	1	1014	5067	4.43	2.80	42.38	11.84	0.21	7.84	7.3	29.4	26.0	73	58	63	72	52	60	11.3	8.9	82			96	115	154	129	7	25	21	20	89	2
TRENTON U	56	40.0	26.2	85.2	66.7	53.9	39	106	-14	989	4980	4.77	2.59	41.28	14.10	0.05	7.59	5.7	23.8	16.6				9.9	7.9	66	51	69	101	115	149	121	7	23		19	80	0
NEW MEXICO							80	116	-50								0.00	11.28																						
ALBUQUERQUE	5311	46.4	23.5	91.2	65.8	56.6	17	104	-17	930	4348	1.33	0.38	8.13	3.33	0.00	1.92	1.9	9.7	14.2	66	47	36	61	36	28	7.8	9.0	90	73	76	175	110	80	58	6	43	5	61	120	1
CLAYTON	4969	46.2	20.2	88.4	60.6	53.1	27	104	-21	986	5158	2.74	0.33	14.51	7.77	0.00	4.67	3.0	19.0	12.7	63	41	47	77	42	42						163	100	102	67	7	54	11	37	143	3
RATON 1968	6379	45.3	12.6	86.6	52.9	48.9	23	98	-31	1116	6228	2.63	0.26	14.75	11.93	0.00	5.60	4.8	24.2	10.1		45			38						134	132	99	58	7	28	8	18	182	0
ROSWELL	3612	55.1	20.6	95.4	61.7	58.5	11	110	- 8	840	3793	1.82	0.34	11.62	5.64	0.00	3.37	2.8	11.2	15.3	70	46	37	73	40	35	8.4	9.4	75	78	76	178	102	85	50	6	40	9	100	108	2
SILVER CITY 1968	5373	52.6	26.4	90.3	63.9	58.2	7	102	- 9	791	3705	2.40	0.28	10.76	4.47	0.00	2.08	2.6	8.4	7.0		43	39		36	36						187	110	68	60	3	54	1	43	105	0
NEW YORK							83	108	-52								0.00	11.17																						
ALBANY	275	31.0	14.4	83.7	60.5	47.6	6	98	-25	1311	6875	3.58	2.20	35.08	8.96	0.20	4.52	5.3	65.8	21.9	79	64	74	77	54	62	9.7	7.3	71	46	64	72	114	179	133	16	28	23	8	158	19
BINGHAMTON	1590	30.1	17.4	78.3	58.5	45.8	20	96	-20	1277	7296	3.85	2.18	36.24	9.46	0.26	3.88	9.0	88.2	23.0	81	73	75	85	58	66	11.7	8.5	72	37	66	50	100	215	161	24	31	62	3	148	8
BINGHAMTON U 1968	858	34.2	18.9	83.1	60.4	48.8	77	103	-28	1190	6651	3.81	2.36	36.68	9.59	0.16	4.59	2.8	52.2	21.0													151	75					3	133	1
BUFFALO	708	30.8	18.2	80.1	59.4	46.7	11	94	-25	1256	7062	3.60	2.54	35.65	9.13	0.11	3.88	22.3	88.3	24.3	77	72	75	79	56	61	14.4	10.7	91	33	69	58	108	199	168	24	30	20	3	137	5
NEW YORK CENTRAL PK	132	39.5	26.9	85.3	68.2	54.5	103	106	-15	986	4871	4.44	2.84	42.37	16.85	0.02	11.17	7.7	29.8	26.4	68	60	61	75	55	63	10.9	7.7	79	51	68	107	125	133	121	8	18		17	82	0
NEW YORK KENNEDY	13	38.0	25.6	84.7	67.1	53.2	11	104	- 2	1029	5219	4.97	2.93	43.93	17.41	T	6.59	7.6	27.1	19.9	70	59	64	73	57	70	13.3	10.4	52			96	122	147	117	8	23	11	11	91	0
NEW YORK LA GUARDIA	11	39.6	27.5	84.8	68.8	54.7	10	107	- 2	973	4811	5.08	3.09	44.22	16.05	0.03	7.11	6.8	28.6	22.8	64	56	57	70	51	59	14.2	10.4	72			99	117	153	119	8	24	14	14	78	0
ROCHESTER	547	32.6	17.8	82.5	60.7	48.0	8	98	-11	1234	6748	3.01	2.36	31.90	9.70	0.22	3.12	22.0	85.2	18.7	73	67	71	81	53	59	11.6	7.4	73	37	70	66	109	190	151	24	29	23	12	137	6
SYRACUSE	410	31.5	16.5	82.4	62.0	48.0	8	97	-26	1271	6756	3.60	2.84	37.60	8.41	0.21	4.27	26.9	109.1	24.5	74	67	73	78	55	62	10.8	8.5	63	39	67	63	103	195	167	32	29	9	6	140	10
NORTH CAROLINA							89	109	-29								0.00	22.22																						
ASHEVILLE U 1964	2203	49.0	30.4	85.0	63.7	56.5	36	99	- 7	784	4042	4.31	2.22	37.88	13.75	T	6.78	2.5	12.2	15.8	81	59	66	89	57	70	9.4	5.4	52	48	60	108	124	136	128	3	50	47	13	84	0
ASHEVILLE	2140	47.5	27.7	83.5	61.3	54.7	7	96	- 7	849	4466	5.85	2.77	48.19	11.28	0.16	5.13	5.3	22.8	16.3	86	60	69	97	66	76	9.4	6.7	49	54	63	100	107	158	120	6	60	25	8	111	1
CAPE HATTERAS R	7	53.2	39.9	83.8	72.2	62.2	14	95	12	580	2612	6.42	2.99	54.49	14.63	0.45	8.11	0.4	1.9	7.0	80	68	77	85	71	83	12.8	10.4	72	54	65	102	99	167	121	1	45	18	3	73	0
CHARLOTTE	736	51.4	34.0	88.8	69.4	60.8	11	100	2	491	3191	4.88	2.53	43.38	10.89	T	4.84	2.3	8.7	12.0	78	56	61	89	59	67	7.9	6.5	59	54	69	111	107	147	110	2	42	35	16	76	0
GREENSBORO	897	49.6	33.8	87.7	66.9	58.2	9	100	2	784	3895	4.79	2.68	47.16	13.26	0.13	7.49	3.4	8.9	14.3	80	56	64	91	62	73	8.3	6.4	63	51	63	113	109	144	113	2	47	31	28	87	0
RALEIGH	434	51.9	31.3	88.1	67.6	59.5	7	98	0	725	3393	5.43	2.71	43.59	12.94	0.25	5.20	2.9	7.4	9.3	76	53	61	91	61	74	8.3	6.3	56	54	68	116	107	143	115	2	44	35	25	88	0
WILMINGTON	28	58.4	37.3	89.0	70.9	63.8	8	100	13	546	2347	7.68	2.85	51.29	15.51	0.17	8.24	0.4	1.6	5.3	79	55	70	86	65	78	9.5	8.4	88	58	64	116	113	138	114	1	45	23	10	46	0
WINSTON-SALEM 1964	963	49.8	31.5	88.2	67.8	59.1	11	100	1	753	3595	4.63	2.78	44.13	10.86	0.12	3.60	3.2	9.2	10.9	72	52	59	84	52	67	9.3	7.6				121	102	142	114	1	42	12	34	76	0

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Record highest	Record lowest	Normal Heating degree days (1931-1960) January	Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours	Snow, ice Mean total January	Mean total Seasonal	Extreme Maximum in 24 hours	Relative humidity (percent) January 7:00 a.m. EST	January 1:00 p.m. EST	January 7:00 p.m. EST	July 7:00 a.m. EST	July 1:00 p.m. EST	July 7:00 p.m. EST	Wind Speed (mph) Mean speed January	Mean speed July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Min Zero and below
NORTH DAKOTA							80	121	-60							0.00	7.70																							
BISMARCK	1647	19.6	0.1	85.7	57.7	42.2	17	108	-43	1708	8851	3.40	0.36	15.15	8.29	T	3.25	7.2	38.9	15.5	71	66	67	83	48	43	10.2	9.8	72	55	77	94	100	162	09	12	34	13	22	197	53
FARGO	896	17.3	2.8	83.8	59.0	41.1	17	100	-35	1789	9226	3.04	0.51	18.48	8.52	0.02	4.72	6.4	33.2	11.2	72	69	71	86	56	53	13.1	10.8	115	60	71	90	103	144	102	11	34	13	15	191	56
WILLISTON	1899	19.4	2.9	85.9	56.7	40.9	10	107	-41	1758	9243	3.31	0.48	13.70	7.38	T	5.03	7.7	34.6	7.6	77	71	72	83	47	40	10.7	9.2	70	50	76	95	105	165	93	12	23	9	22	190	56
OHIO							98	113	-39							0.00	10.51																							
AKRON	1208	35.6	20.9	83.2	61.9	50.3	8	97	- 9	1138	6037	4.26	2.25	36.43	11.43	0.20	4.19	9.9	47.1	10.9	78	69	72	83	55	61	11.7	7.6	51			70	103	192	150	15	40	07	0	120	5
CINCINNATI ABBE OBS.	761	41.3	25.1	87.5	66.3	55.2	56	103	-17	970	4806	4.18	2.24	39.51	13.68	0.10	4.77	5.2	19.1	11.0							8.3	5.2	49	42	69	132	6	50			29	99	2
CLEVELAND	777	35.4	21.3	82.4	61.3	49.7	11	98	-19	1135	6196	3.52	2.33	35.35	9.50	0.36	3.73	10.1	49.9	15.0	75	69	71	81	57	61	12.4	8.8	74	31	67	71	103	191	153	18	36	13	8	127	5
COLUMBUS	812	37.8	22.0	86.6	62.9	52.0	12	98	-15	1088	5660	4.16	2.11	36.67	9.75	0.11	4.81	7.3	28.7	8.9	76	67	69	84	56	59	10.1	6.6	63	38	66	77	105	183	134	9	42	18	15	125	6
DAYTON	1002	36.9	22.2	85.3	65.1	52.3	8	100	-12	1097	5622	4.10	2.23	36.04	10.89	0.10	4.30	6.7	27.4	11.3	74	65	68	80	55	58	11.8	8.0	78	41	68	83	101	182	120	9	41	22	17	116	5
MANSFIELD	1296	36.3	21.2	85.9	63.3	51.6	6	97	-10	1123	5782	4.23	2.27	38.16	9.06	0.43	5.06	9.0	40.2	12.0	76	69	73	82	56	63	13.0	7.8	46			72	105	188	135	14	39	30	7	128	6
TOLEDO	669	34.1	18.4	85.1	60.2	49.0	16	99	-17	1200	6494	3.79	1.88	30.50	8.47	0.27	4.39	8.7	36.7	9.8	79	69	73	86	55	61	10.9	7.5	72	45	68	76	110	179	132	11	30	10	14	145	5
YOUNGSTOWN	1179	34.4	20.2	81.7	59.3	48.8	28	100	-18	1169	6417	4.32	2.50	39.27	9.87	0.27	4.31	12.8	58.6	20.7	82	73	77	84	54	64	11.9	7.9	58			70	99	196	162	20	36	29	8	136	5
OKLAHOMA							80	120	-27							0.00	15.50																							
OKLAHOMA CITY	1285	45.9	28.1	92.8	72.2	60.3	6	108	1	868	3725	5.19	1.31	30.82	10.78	T	7.68	2.9	9.2	8.4	81	63	64	80	40	47	13.5	11.6	87	58	76	140	98	127	83	3	50	19	66	83	0
TULSA	650	45.9	26.5	92.9	71.4	59.7	12	110	- 3	893	3860	5.26	1.62	37.08	18.81	T	7.54	3.2	9.5	9.8	77	58	58	82	54	50	11.0	9.3	75	53	71	125	103	137	90	4	53	19	72	88	1
OREGON							82	119	-54							0.00	10.17																							
ASTORIA	8	46.5	34.8	68.6	52.5	50.8	18	100	11	753	5186	13.65	1.27	80.44	21.89	0.01	4.32	4.0	7.7	10.8	88	85	80	91	75	70	9.1	8.4	55			49	72	244	200	2	9	43	1	30	0
BURNS U	4151	35.2	14.3	86.8	52.1	46.7	21	103	-26	1246	6957	1.62	0.29	10.96	5.73	0.00	2.15	15.4	49.1	11.0	83	76	69	53	35	21	6.1	7.7				124	91	150	93	17	14	12	22	188	4
EUGENE	359	45.3	32.8	82.2	51.0	52.5	29	105	- 4	903	4726	6.61	0.27	39.56	20.99	0.00	4.82	5.8	8.4	22.9	92	87	81	87	55	37	8.3	8.0	63			77	83	205	137	3	5	59	15	56	0
MEACHAM	4050	32.7	19.3	77.6	49.2	43.5	27	105	-23	1209	7874	4.53	0.50	33.87	10.30	0.00	3.00	32.6	149.8	22.9		81	78		39	24			39			92	68	205	151	45	16	31		187	10
MEDFORD	1298	42.4	28.4	88.3	55.7	52.6	33	109	0	918	5008	3.38	0.18	19.78	12.72	0.00	3.75	4.2	8.6	9.3	91	80	75	75	45	26	4.1	5.7	55			117	81	167	102	3	9	48	54	94	0
PENDLETON	1482	39.3	25.1	89.3	57.8	52.8	36	113	-22	1017	5127	1.49	0.22	12.38	3.92	0.00	1.49	9.2	17.6	13.3	81	77	76	54	34	22	8.4	9.7	77			106	90	169	100	6	11	27	33	84	3
PORTLAND U 1964	30	44.9	35.5	79.2	57.9	54.6	62	107	3	769	4109	7.42	0.39	42.37	17.45	0.00	5.01	5.1	9.1	16.0																			8	21	0
PORTLAND	21	43.7	33.0	78.6	55.7	52.9	31	107	- 3	825	4635	6.38	0.41	37.18	12.83	0.00	2.60	4.9	8.4	10.6	86	82	77	83	62	45	10.0	7.3	88	23	69	67	70	228	153	3	7	33	9	45	0
ROSEBURG 1964	505	47.2	33.4	84.0	51.8	53.4	11	106	- 1	766	4491	5.69	0.21	33.11	15.74	T	4.80	3.2	6.5	9.4		86	73		54	34	3.9	5.9	60	26	79	76	80	201	135	2	5	59	21	56	0
SALEM	196	45.5	31.5	91.7	50.4	52.4	10	104	8	822	4754	7.37	0.35	41.75	15.40	0.00	3.16	4.2	7.4	10.8	88	86	79	87	58	40	8.9	6.6	58			76	84	205	150	3	6	30	17	70	0
SEXTON SUMMIT R	3836	39.3	28.9	75.5	51.6	44.0	27	100	- 2	958	6254	5.59	0.25	33.12	20.03	0.00	5.20	26.7	104.9	34.1	83	81	78	68	60	41	12.9	11.9	63			120	67	170	120	20	6	150	2	114	0
PACIFIC AREA																																									
CANTON ISLAND 1966	8	88.4	77.8	89.4	77.7	83.5	20	98	70			4.35	1.10	20.43	20.49	T	5.56	0.0	0.0	0.0	80	79	65	80	80	65	15.1	13.1				76	146	144	103	0	4	0	155	0	0
ENIWETOK 1966	13	84.6	77.8	86.5	79.1	82.3	13	94	70			9.09	1.02	51.46	24.54	0.12	4.62	0.0	0.0	0.0	77	77	68	82	84	75	17.3	12.6							202	0	5	0	15	0	0
GUAM TAGUAC R	361	83.9	72.4	86.7	72.3	79.3	15	95	54			13.36	2.64	88.53	25.32	0.50	9.92	0.0	0.0	0.0	86	88	79	93	95	79	8.2	5.1	80	54	47	7	135	223	267	0	20	*	5	0	0
JOHNSTON ISLAND	7	80.7	73.4	85.0	77.1	79.3	16	89	62			3.89	0.84	26.11	15.80	0.11	9.51	0.0	0.0	0.0	74	75	66	78	77	68	13.6	15.3	49	67	76	78	172	118	164	0	4	0	0	0	0
KOROR R	94	86.0	74.6	86.6	75.1	80.9	22	93	69			15.76	7.13	147.49	34.82	1.65	11.67	0.0	0.0	0.0	88	90	81	90	92	82	8.5	6.6	73	57	52	0	45	320	260	0	37	0	48	0	0
KWAJALEIN ISLAND	8	82.2	78.0	85.2	77.9	81.1	19	97	69			12.13	2.15	94.76	30.38	0.18	6.68	0.0	0.0	0.0	80	80	71	85	86	79	17.7	10.7	55			18	81	266	240	0	10	0	10	0	0
MAJURO ISLAND	10	84.1	76.3	84.6	75.7	80.4	14	91	69			15.92	6.98	143.63	31.10	0.40	10.01	0.0	0.0	0.0	80	81	75	83	84	77	13.0	8.7	38	59	54	12	81	272	258	0	18	0	1	0	0
MARCUS ISLAND 1968	20	76.0	68.2	87.2	78.0	78.2	4	93	55			7.19	1.61	42.57	13.51	0.10	5.66	0.0	0.0	0.0	72	75	68	79	83	71	14.0	11.7	114	58	73	85	147	133	146	0	6	1	23	0	0
PAGO PAGO AM SAMOA	12						12	92	62						32.66	1.36	9.01	0.0	0.0	0.0	90	90	76	84	85	77	6.8	11.4	56	51	56	30	144	191	253	0	26	0	15	0	0
PONAPE R	123	85.6	75.3	86.6	72.7	80.1	21	96	66			20.31	9.74	191.92	38.65	1.71	22.48	0.0	0.0	0.0	84	84	76	94	95	79	8.6	4.7	36	46	48	2	64	299	298	0	30	0	34	0	0
TRUK MOEN ISLAND	5	84.9	76.5	86.1	74.8	80.7	21	94	70			14.12	6.29	137.52	34.89	0.94	14.92	0.0	0.0	0.0	81	82	76	89	91	80	10.4	7.1	78	63	59	1	56	308	269	0	21	0	6	0	0
WAKE	11	81.5	73.3	86.6	77.4	80.0	24	92	64			7.08	1.14	36.86	17.66	0.06	15.00	0.0	0.0	0.0	75	75	65	81	82	71	13.3	12.4	48	71	73	110	157	98	170	0	7	0	14	0	0
YAP	44	85.3	75.6	87.6	75.1	81.3	23	97	69			14.70	4.64	121.50	34.71	1.08	10.45	0.0	0.0	0.0	85	87	79	90	92	80	10.9	5.8	72	57	50	6	52	307	263	0	15	0	30	0	0
PENNSYLVANIA							84	111	-42							0.00	34.50																							
ALLENTOWN	387	36.7	21.3	85.2	63.0	51.1	28	105	-12	1116	5810	4.82	2.64	44.12	12.10	0.09	4.79	8.1	34.2	17.5	76	62	69	82	51	61	11.0	7.3	81			95	114	156	122	9	32	29	17	130	3
ERIE	731	32.2	18.6	77.5	60.5	47.0	6	94	-13	1228	6927	3.67	2.32	37.50	9.87	0.58	4.84	19.7	83.2	23.0	73	70	73	79	62	63	13.2	9.1	55			67	101	197	158	26	39	15	1	130	5
HARRISBURG	338	38.9	23.6	87.0	65.3	53.3	33	107	- 8	1045	5251	3.90	2.31	37.65	9.72	0.44	5.36	9.5	36.3	21.0	71	58	64	78	51	60	8.4	6.3	68	48	68	86	105	174	124	9	33	21	25	108	1
PHILADELPHIA	5	40.3	24.3	85.9	65.2	53.5	12	104	- 5	1014	5101	4.63	2.78	42.48	9.70	0.09	5.68	5.7	21.6	14.6	73	59	66	80	54	63	10.4	8.1	73	50	62	92	113	160	115	6	26	27	18	105	*
PITTSBURGH GTR. AP	1137	36.5	21.2	83.3	60.9	50.3	12	98	-19	1119	5987	3.91	2.19	36.14	8.20	0.16	3.56	11.0	47.3	14.7	76	66	68	83	52	59	10.8	7.5	58	37	63	90	104	202	150	14	35	18	8	126	5
PITTSBURGH U	747	39.5	24.7	85.0	64.8	53.0	37	103	-13	1020	5291	3.95	2.31	36.87	8.84	0.16	3.57	7.7	30.9	20.1										25	53				145	9			17	97	1
READING U 1968	266	39.1	26.3	86.4	67.3	54.3	28	103	- 2	1001	4945	4.26	2.64	41.43	14.85	0.17	6.08	8.4	30.6	18.7	71				11.4	8.5	80	46	63	98	110	157	122	8	32	8	24	92	*
W-B SCRANTON AVOCA	930	33.6	21.7	81.6	63.2	49.4	16	101	-11	1156	6754	4.79	1.99	38.48	7.78	0.03	3.18	11.0	53.1	20.5	75	64	67	83	54	62	8.9	7.3	60	44	61	71	110	184	137	14	32	25	8	134	5
WILLIAMSPORT	524	36.1	21.4	85.3	61.8	50.7	27	102	-15	1122	5934	4.18	2.51	40.65	9.45	0.19	4.38	9.8	44.1	23.1	77	62	69	87	53	64	9.1	6.7	78			69	118	179	142	12	33	39	15	131	4
RHODE ISLAND							84	102	-23							0.00	12.13																							
BLOCK ISLAND	110	37.9	26.3	75.9	63.2	50.1	21	91	- 4	1020	5804	4.07	2.56	40.45	11.51	T	8.52	5.2	21.9	16.9	73	65		87	72								98	114	153	111	7	17	82	*	90	*
PROVIDENCE	51	37.3	21.0	81.4	62.7	50.1	8	97	- 5	1110	5954	4.14	2.76	42.13	11.89	0.39	6.63	10.0	40.8	18.3	69	55	62	76	56	67	11.8	9.7	90	57	59	107	103	155	123	11	21	26	8	127	3
SOUTH CAROLINA							87	111	-13							0.00	13.25																							
CHARLESTON	40	61.2	38.3	89.2	72.0	65.2	29	103	8	487	2033	7.71	2.09	49.16	18.46	0.08	8.84	T	0.3	2.1	84	55	72	88	64	79	9.2	8.0	71	56	63	100	115	150	115	*	57	29	48	37	0
COLUMBIA	213	58.2	35.6	92.5	70.7	64.0	5	106	5	570	2484	6.09	2.36	46.82	16.72	T	7.66	0.4	1.3	8.8	83	54	65	91	57	71	7.1	6.7	60	58	64	124	103	138	100	1	53	26	65	69	0
FLORENCE 1964	146	58.3	36.7	90.9	70.4	64.0	17	108	8	552	2387	6.24	2.18	42.69	13.68	0.00	6.36	0.1	1.0	4.8	82	52	66	88	57	73	8.2	7.2				121	107	137	110	*	53	29	71	46	0
GRNVLLE-SPRTNBRG	957	52.4	35.0	87.0	71.0	61.2	9	99	- 6	665	3044	4.75	2.84	46.42	11.30	0.24	4.49	2.3	7.6	11.4	75	53	62	87	59	69	7.4	6.3	52	52	57	118	100	147	115	3	42	33	32	71	*

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Extremes Record highest	Extremes Record lowest	Normal Heating degree days (1931-1960) January	Normal Heating degree days (1931-1960) Seasonal	Precipitation (inches) Normal (1931-1960) Wettest month	Normal Driest month	Normal Annual	Extremes Wettest month	Extremes Driest month	Extremes Maximum in 24 hours	Snow (in) Mean total	Snow (in) Extreme Seasonal	Snow (in) Extreme Maximum in 24 hours	Relative humidity (percent) January 7:00 a.m. EST	January 1:00 p.m. EST	January 7:00 p.m. EST	July 7:00 a.m. EST	July 1:00 p.m. EST	July 7:00 p.m. EST	Wind Speed (m.p.h.) Mean speed January	Mean speed July	Fastest mile	Sunshine (percent of possible) January	Sunshine (percent of possible) July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Temperature Min 32 and below	Temperature Min Zero and below
SOUTH DAKOTA							82	120	-58							0.00	8.00																						
ABERDEEN	1296	21.5	0.0	87.6	59.4	43.7	19	112	-39	1680	8473	3.76	0.61	19.14	8.88	0.00	4.00	7.1	36.0	15.0	72	68	72	84	52	49	11.6	9.2	58			107	98	160	86	12	37	17	24	193	47
HURON	1281	23.1	1.9	90.3	59.6	44.7	19	112	-39	1628	8223	3.14	0.48	17.33	8.30	T	5.48	6.2	38.7	17.5	74	67	71	87	52	48	11.8	10.8	77	58	77	105	106	154	94	12	42	15	29	175	40
RAPID CITY	3162	34.1	9.8	87.7	59.9	46.8	20	109	-27	1333	7345	3.08	0.30	14.71	7.35	T	4.01	5.4	38.9	16.3	69	60	65	72	45	41	10.4	9.9	66	54	71	111	111	143	95	12	43	15	32	168	20
SIOUX FALLS	1418	25.1	5.2	86.0	62.5	45.7	9	106	-46	1544	7839	4.35	0.62	25.16	7.94	T	4.42	6.1	40.9	26.0	76	67	72	84	54	51	11.0	9.8	70			105	104	156	93	11	44	21	34	173	26
TENNESSEE							80	113	-32							0.00	11.00																						
BRISTOL	1507	46.8	29.7	86.4	65.4	56.8	10	95	-15	828	4143	5.55	2.15	41.06	9.73	0.07	3.65	5.1	16.7	16.2	79	61	65	91	61	57	6.9	6.1	50			91	111	163	133	5	46	43	14	101	2
CHATTANOOGA	665	49.9	33.4	90.0	71.4	61.2	32	106	-10	722	3254	5.64	3.02	51.96	13.68	0.30	5.40	1.8	4.4	8.9	82	62	68	89	57	54	7.3	6.9	83	42	61	104	110	143	109	3	54	36	60	96	0
KNOXVILLE	980	50.1	32.6	88.5	68.2	59.6	11	99	- 9	732	3494	4.88	2.56	46.86	11.74	T	5.08	4.0	13.1	18.2	79	63	65	90	62	65	8.2	6.4	79	38	69	97	109	160	107	4	48	31	21	74	1
MEMPHIS	258	50.6	32.4	91.1	71.5	61.5	30	106	-13	729	3232	6.07	2.72	49.73	12.29	T	4.04	2.2	6.3	16.1	80	64	69	85	57	59	10.4	7.6	67	48	73	110	99	148	104	2	51	31	66	60	0
NASHVILLE	590	48.8	30.9	90.7	69.6	60.0	6	103	- 6	778	3578	5.49	2.33	45.14	13.92	T	5.34	3.8	11.7	10.2	80	64	66	90	58	62	9.1	6.3	73	49	65	104	102	152	118	4	55	17	41	83	2
OAK RIDGE A	906	49.2	30.6	87.7	66.7	58.2	24	105	- 9	778	3817	5.05	2.67	54.71	19.27	T	7.48	3.1	10.3	12.0							4.8	3.2	59			110	91	164	107	3	41	34	32	81	0
OAK RIDGE AREA 1964	886	48.9	31.2	88.0	66.7	58.5	20	103	- 8	772	3742	5.44	2.82	51.52	12.84	0.00	7.76										5.7	3.8				113								35	70	0
TEXAS							91	120	-23							0.00	38.20																						
ABILENE	1762	56.4	32.8	94.3	72.1	64.3	8	107	3	642	2624	4.33	0.88	23.32	13.19	0.00	6.70	1.4	4.3	6.1	69	52	46	66	43	35	12.2	10.8	73	63	79	150	93	122	65	2	41	7	93	52	0
AMARILLO	3604	49.8	23.5	94.2	67.0	58.7	11	104	- 9	977	3985	3.37	0.62	20.47	10.73	0.00	6.75	3.4	14.2	13.6	69	47	43	72	41	37	13.2	13.4	84	69	77	161	101	103	67	4	48	25	60	107	0
AUSTIN	597	60.3	40.5	96.1	73.9	68.3	11	105	12	468	1711	3.71	1.94	32.58	12.31	0.00	7.22	0.5	1.1	7.0	78	59	56	86	47	42	9.8	8.7	67	49	78	116	117	133	91	•	45	22	106	23	0
BROWNSVILLE	19	70.5	52.2	92.5	75.5	73.7	6	100	30	205	600	4.99	1.04	26.76	19.26	T	12.19	T	T	T	86	68	74	89	54	61	11.9	11.8	69	45	81	97	136	132	71	•	23	24	111	1	0
CORPUS CHRISTI	41	67.4	47.4	93.6	74.6	71.8	7	101	25	291	914	4.40	1.44	28.34	20.33	0.00	8.76	0.1	0.1	1.1	89	70	72	93	57	63	11.9	11.7	120	47	83	104	122	139	75	•	31	28	90	7	0
DALLAS	481	55.8	36.0	94.5	75.3	65.8	13	107	8	601	2363	4.83	1.93	34.56	16.40	T	9.18	1.2	2.0	7.4	77	59	55	76	50	43	10.4	10.1	65	51	77	130	95	142	70	1	40	8	84	36	0
DEL RIO e	1026	63.7	38.8	98.5	73.8	70.0	9	109	18	438	1504	2.73	0.62	17.83	15.79	T	7.60	T	0.8	3.0	74	56	46	76	50	36	8.4	11.4	60			117	104	144	58	•	35	14	100	16	0
EL PASO e	3918	56.3	29.5	94.9	68.9	63.3	12	106	- 8	685	2700	1.29	0.29	7.80	6.29	0.00	2.99	1.3	4.4	7.8	59	41	31	58	30	20	9.3	9.1	70	73	79	195	98	73	44	3	36	2	133	41	0
FT. WORTH GTR. INTL	537	56.0	34.9	95.9	74.9	65.8	8	108	4	614	2405	4.59	1.48	31.33	12.64	0.02	5.01	1.6	2.9	12.1	81	59	58	78	50	44	11.7	10.1	73			142	89	134	78	1	45	21	86	44	0
GALVESTON U	7	66.5	49.3	87.3	78.9	69.9	101	101	8	350	1235	5.09	2.59	41.81	26.01	0.00	14.15	T	0.2	15.4	85	77	80	91	70	73	11.6	9.8	100	69	72				92	•			11	4	0
HOUSTON INTERCON	96	63.1	39.5	93.5	71.2	67.8	2	101	19	453	1676	4.53	2.80	45.79	14.39	0.26	4.69	0.2	0.4	T	88	64	69	92	55	59	7.9	6.1	46	45	74	90	105	171	94	•	44	42	81	23	0
HOUSTON [illegible] 1966	41	62.6	46.6	92.0	75.8	70.0	20	106	10	363	1278	5.15	2.40	45.24	17.64	0.01	10.93	0.2	0.3	3.0													104	•				31	7	0
HOUSTON HOBBY 1969	50	63.6	43.6	92.1	73.8	69.2	9	106	17	384	1336	4.36	2.67	44.95	22.31	T	15.65	0.2	0.4	4.4	84	64	67	91	59	64	11.0	8.9	64	47	74	87	126	142	103	•	47	42	91	19	0
LAREDO 1964	496	69.4	47.0	99.0	76.0	73.0	20	110	18	267	707	2.86	0.62	18.63	8.62	0.00	5.66	0.1	0.1	2.0	81	58	53	83	44	30	9.6	14.8				130	116	119	58	•	31	10	114	6	0
L. BBOCK	3254	53.0	25.4	92.4	66.5	59.7	25	107	-16	800	3678	3.18	0.54	18.98	8.85	0.00	5.70	1.6	9.2	12.1	72	49	47	75	44	30	12.0	11.8	70			142	103	99	59	•	44	14	83	100	1
MIDLAND	2851	57.1	30.9	94.5	71.2	64.3	8	107	7	651	2691	2.08	0.36	14.24	6.73	0.00	5.00	1.2	3.3	5.9	68	43	37	67	38	28	9.7	10.1	67			165	97	103	50	3	34	15	94	68	0
PORT ARTHUR	16	63.5	43.7	91.0	72.7	68.5	11	107	14	384	1447	6.00	2.88	54.00	18.71	0.00	13.17	T	0.5	4.4	89	63	77	93	63	70	11.4	8.1	74	48	67	90	127	148	100	•	47	42	87	19	0
SAN ANGELO	1903	59.4	34.3	96.9	72.7	66.4	13	111	6	567	2265	3.20	0.78	18.63	9.20	0.00	6.03	0.8	2.8	5.8	72	49	44	73	41	34	10.4	9.8	76			157	97	111	56	•	36	7	113	6	0
SAN ANTONIO INTL AP	789	62.3	41.6	94.0	73.0	68.7	30	106	0	428	1546	3.49	1.37	27.84	15.78	0.00	6.07	0.2	0.4	4.7	80	60	58	87	49	43	9.0	9.1	74	48	77	110	110	174	81	•	35	23	116	21	0
VICTORIA	104	64.8	46.0	91.7	74.6	70.2	11	107	16	344	1173	4.23	2.32	36.24	14.52	T	8.67	T	T	T	85	66	67	91	55	58	10.7	9.2	59			82	125	148	82	2	44	20	103	13	0
WACO	501	58.2	37.8	96.0	74.6	67.2	9	112	7	536	2030	4.57	1.68	32.08	15.00	0.00	7.18	0.9	1.5	7.0	81	62	59	74	45	39	12.4	11.3	69			133	94	138	76	1	45	11	104	41	0
WICHITA FALLS	994	53.9	31.6	97.9	73.3	64.5	13	113	- 5	608	2832	4.60	1.12	26.20	12.03	0.00	5.41	1.8	5.8	5.9	80	56	55	76	42	37	11.2	10.8	60			154	93	118	68	1	43	11	104	69	0
UTAH							82	116	-50							0.00	6.00																						
MILFORD	5028	37.1	12.1	92.1	56.5	48.9	23	105	-28	1252	6497	1.03	0.43	8.00	2.62	0.00	1.33	8.7	42.7	16.3				65	60		24	20				152	101	113	43	14	32	7	60	100	13
SALT LAKE CITY	4220	36.8	17.5	94.1	69.6	57.1	18	107	-18	1172	6052	1.76	0.63	13.90	4.90	0.00	2.41	13.2	55.7	15.4	77	69	67	91	55	58	10.7	9.2	59			83	125	148	82	2	44	20	103	13	0
WENDOVER	4237	35.9	18.0	92.0	66.8	57.3	34	112	-19	1178	5778	0.66	0.29	4.67	3.01	0.00	1.33	2.2	7.4	8.5	68	61	57	82	22	14						156	94	117	48		29	6	63	118	2
VERMONT							84	105	-50							0.00	8.77																						
BURLINGTON	332	25.4	6.9	81.9	56.0	43.2	7	98	-27	1513	8269	3.85	1.79	33.21	11.54	0.39	3.69	17.8	76.5	16.5	68	61	65	79	54	62	9.4	7.8	72	42	69	61	103	201	150	23	15	16	5	166	21
VIRGINIA							81	110	-20							0.00	27.00																						
LYNCHBURG	916	46.2	29.0	86.6	65.9	56.7	8	99	- 4	849	4166	4.41	2.58	40.30	11.36	0.33	4.98	5.6	19.6	13.4	70	51	59	86	57	70	8.8	6.8	56	51	61	113	164	147	113	4	41	40	70	90	1
NORFOLK	22	50.2	32.2	87.9	69.6	59.7	23	103	8	728	3421	5.97	2.74	44.94	12.83	0.36	11.40	3.3	7.5	11.6	75	60	68	82	60	72	11.7	8.7	78	57	65	107	108	150	114	3	37	24	31	64	0
RICHMOND	164	48.3	29.0	89.4	66.7	58.1	42	106	-12	815	3865	5.61	2.90	44.21	18.87	0.30	8.79	5.6	15.0	21.6	81	57	69	85	56	72	8.1	6.9	68	51	65	104	105	146	117	4	37	20	41	86	0
ROANOKE	1149	47.0	29.1	88.0	65.2	56.9	7	100	- 1	834	4150	4.63	2.70	41.23	9.12	0.19	6.41	7.4	26.6	17.4	67	50	55	82	55	63	9.9	6.7	68			103	116	146	100	7	32	24	31	46	0
WASHINGTON							106	118	-48							0.00	12.00																						
OLYMPIA	195	45.1	31.1	79.7	48.0	50.8	12	100	3	834	5236	9.06	0.76	52.37	19.84	0.00	4.93	9.4	19.5	13.7	91	80	82	90	44	48	7.9	5.0	60			63	87	226	148	6	5	82	7	87	0
QUILLAYUTE	179	44.1	33.0	70.3	49.0	49.2	6	96	7	828	5745	16.81	2.08	103.55	24.86	0.40	8.32	16.7	25.5	8.4	93	92	87	94	73	64	8.0	6.2	39	16	41	64	90	244	57	8	6	3	88	0
SEATTLE-TACOMA	400	43.6	33.0	75.6	54.1	51.1	12	99	6	829	5148	6.29	0.81	38.94	12.92	T	3.41	7.4	15.7	21.4	82	80	77	84	66	62	10.4	8.4	55	13	44	66	81	229	149	6	8	60	3	33	0
SEATTLE U 1964	14	45.6	36.8	75.1	56.1	53.2	31	100	11	738	4424	5.42	0.63	34.10	10.93	T	3.31	4.3	8.1	11.5												49	89	63	111	165	91	6	4		16	0
SPOKANE	2356	31.4	12.2	85.6	55.4	47.8	12	108	-25	1231	6685	2.44	0.38	17.19	5.71	T	2.07	9.0	54.3	13.0	83	81	77	60	37	24	8.8	8.7	56	29	81	83	87	118	115	10	11	19	7	141	4
STAMPEDE PASS e	3958	27.5	13.5	65.4	47.0	39.5	28	90	-21	1287	9283	16.19	1.46	92.19	30.42	0.19	7.06	81.2	440.1	36.2	94	93	92	97	67	59						97	67	59	141	206	81	7	51	•	138	0
TATOOSH ISLAND 1964	181	45.2	38.8	59.5	51.5	49.3	61	88	14	713	5719	12.16	1.98	77.69	22.57	0.02	5.01	3.5	7.7	12.7	94	82	82	94	89	87	20.1	15.1	94	26	47	58	76	201	107	3	5	52	2	8	0
WALLA WALLA U	949	39.0	27.4	89.2	62.7	54.2	57	113	-16	986	4885	1.89	0.21	15.50	5.86	0.00	2.0	8.0	20.0	14.0				74		34	5.1	5.4	47	23	49	117	87	161	106	7	11	24	7	44	0
YAKIMA	1052	36.5	18.5	98.9	63.1	49.8	25	110	-25	1163	5941	1.19	0.13	7.86	4.19	0.00	1.40	10.3	25.2	14.0	83	77	71	69	35	24	6.7	7.1	49			111	91	163	68	3	7	19	11	150	6

NORMALS, MEANS AND EXTREMES

State and Station	Elevation ground (feet)	Temperature (°F) Normal (1931-1960) January Daily maximum	January Daily minimum	July Daily maximum	July Daily minimum	Annual	Extremes Length, yrs	Record highest	Record lowest	Normal Heating degree days (1931-1960) January	Seasonal
WEST INDIES							71	103	40		
SAN JUAN U 1964	47	79.9	70.3	84.2	76.0	78.3	66	96	62		
SAN JUAN	13	81.3	67.4	87.1	73.7	78.0	17	95	60		
SWAN ISLAND r 1970	28	82.6	73.9	87.3	77.6	81.0	27	92	64		
WEST VIRGINIA							81	112	-37		
BECKLEY	2504	41.1	26.1	80.4	61.3	51.8	8	90	-10	973	5390
CHARLESTON	939	45.2	27.9	85.6	64.2	55.6	24	102	-12	880	4476
ELKINS	1948	43.0	22.0	82.3	57.9	50.7	27	97	-21	1008	5675
HUNTINGTON	827	45.3	27.9	86.0	64.3	55.8	11	100	-15	880	4446
PARKERSBURG U	615	42.9	26.3	86.3	65.2	55.0	83	106	-27	942	4754
WISCONSIN							81	114	-54		
GREEN BAY	682	25.1	8.5	82.0	59.0	44.3	11	97	-29	1494	8029
LA CROSSE	651	25.6	7.4	84.6	63.0	46.3	7	99	-36	1504	7589
MADISON	858	25.9	9.1	82.2	60.0	45.0	12	98	-30	1473	7863
MILWAUKEE	672	28.3	12.8	78.9	58.4	45.1	12	98	-24	1376	7635
WYOMING							112	114	-63		
CASPER	5338	32.8	13.9	87.1	56.3	46.0	7	101	-31	1290	7410
CHEYENNE	6126	37.2	13.6	85.2	54.8	45.9	12	96	-27	1228	7278
LANDER	5563	30.8	7.7	85.8	55.4	44.4	25	101	-37	1417	7870
SHERIDAN	3964	34.0	8.6	87.1	55.5	45.2	7	103	-29	1355	7683

State and Station	Precipitation (inches) Normal (1931-1960) Wettest month	Driest month	Annual	Extremes Wettest month	Driest month	Maximum in 24 hours	Snow @ Mean total January	Seasonal	Extreme Maximum in 24 hours	Relative humidity (percent) January 7:00 a m EST	1:00 p m EST	7:00 p m EST	July 7:00 a m EST	1:00 p m EST	7:00 p m EST
WEST INDIES						23.00									
SAN JUAN U 1964	7.16	2.07	60.36	16.88	0.05	10.55	0.0	0.0	0.0						
SAN JUAN	7.13	2.20	64.21	15.06	0.50	5.08	0.0	0.0	0.0	84	65	77	81	68	79
SWAN ISLAND r 1970	7.39	0.63	51.61	31.53	T	10.77	0.0	0.0	0.0						
WEST VIRGINIA					0.00	19.00									
BECKLEY	5.15	2.61	45.11	8.27	0.14	5.34	15.6	59.6	13.8	79	65	70	89	60	73
CHARLESTON	5.67	2.58	44.43	13.54	0.09	5.60	8.5	29.2	15.1	77	62	65	90	61	66
ELKINS	5.49	2.75	45.92	9.30	0.31	3.21	15.3	71.9	18.7	81	64	72	96	59	72
HUNTINGTON	4.50	1.85	39.53	8.57	T	4.27	7.4	25.3	8.2	79	64	65	90	60	66
PARKERSBURG U	4.27	2.05	38.77	12.05	0.07	4.81	6.9	24.3	18.3	82	66	74	80	52	67
WISCONSIN					0.00	11.72									
GREEN BAY	3.36	1.08	25.83	8.47	T	3.68	9.7	40.9	10.1	77	72	74	86	57	59
LA CROSSE	4.20	1.05	31.16	10.52	0.02	3.94	9.5	42.2	15.7	76	66	71	89	57	57
MADISON	3.95	1.13	30.16	10.93	0.06	5.25	9.3	38.8	16.0	77	69	72	88	57	59
MILWAUKEE	3.64	1.40	29.51	9.87	0.05	5.28	12.8	43.5	16.7	75	69	72	82	60	63
WYOMING					0.00	5.50									
CASPER	2.03	0.48	11.80	5.59	T	2.49	8.4	69.3	14.6	66	56	59	69	31	25
CHEYENNE	2.52	0.45	15.06	5.35	T	2.68	5.9	51.9	16.5	53	43	48	69	34	37
LANDER	2.65	0.42	13.58	6.88	T	3.56	7.7	99.6	23.1	66	58	58	56	34	28
SHERIDAN	2.57	0.62	15.91	9.54	T	3.84	9.9	67.8	26.7	67	59	61	71	37	33

State and Station	Wind Speed (m p h) Mean speed January	July	Fastest mile	Sunshine (percent of possible) January	July	Annual mean number of days Sunrise to sunset Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, sleet, hail 1.0 inch or more	Thunderstorms	Heavy fog	Temperature Max 90 and above	Min 32 and below	Zero and below
WEST INDIES															
SAN JUAN U 1964									208	0	49	0	10	0	0
SAN JUAN	8.7	9.7	80	65	66	55	208	102	203	0	41	0	33	0	0
SWAN ISLAND r 1970						70	159	127	153	0			13	0	0
WEST VIRGINIA															
BECKLEY	11.0	7.1	53			73	93	190	157	10	46	40	1	119	4
CHARLESTON	7.7	5.2	55			60	117	188	147	9	42	111	22	101	1
ELKINS	7.3	4.3	55			51	108	206	165	23	44	81	2	143	6
HUNTINGTON	7.4	4.8	47			70	112	183	134	8	43	58	17	104	3
PARKERSBURG U	7.2	5.1	66	31	62	109	103	153	142	9	44	12	22	98	2
WISCONSIN															
GREEN BAY	11.0	8.3	73	45	64	93	105	167	118	13	36	28	6	162	30
LA CROSSE	9.1	7.9	63			95	97	173	100	12	41	22	16	151	29
MADISON	10.5	8.2	77	49	70	97	97	171	115	12	40	22	10	166	26
MILWAUKEE	12.8	9.6	73	44	71	98	98	169	121	13	36	26	9	149	17
WYOMING															
CASPER	16.8	9.9	81			114	105	146	91	22	35	9	27	190	18
CHEYENNE	14.9	10.0	69	62	69	105	130	130	98	17	51	24	13	173	11
LANDER	6.3	7.6	77	67	77	115	126	124	70	24	32	3	20	187	19
SHERIDAN	7.7	7.2	84	56	76	100	111	154	107	23	36	6	22	197	25

Data from airport or from airport and Urban site records combined.
U indicates Urban, R indicates Rural sites.
Data for this table are based on records through 1971 except as indicated in notes.
Date after station name indicates last year included in summarization of data.
Normal values are based on the period, 1931-1960, and are means adjusted to represent observations taken at the present standard location.
Degree days are based on a daily average of 65°F.
For detailed periods of record see ANNUAL LOCAL CLIMATOLOGICAL DATA, 1971.
Fastest mile is the fastest speed, in miles per hour, of any mile of wind registered on an automatic recording wind instrument.
Refer to the Annual Climatological Data Table for stations reporting the fastest one-minute wind speed instead of fastest mile.

Clear Day averages 0-3 tenths sky cover, Partly Cloudy 4-7 tenths and Cloudy 8-10 tenths.
Heavy Fog includes data formerly referred to as "Dense" or "Thick". The upper visibility limit for heavy fog is 1/4 mile.
* Less than one-half.
B Number of days Maximum 70° or above (Alaskan stations).
\+ Relative humidity means for period of record through 1960.
‡ Mt. Washington excluded.
ϕ Estimated amounts during typhoon.
1/ Means and extremes are from post office location through 1962.
2/ Based on records from Urban office through January 1943; airport through June 1964.

c Relative Humidity readings 8:00 a.m. and NOON Local Time.
e Reopened 1963.
T Trace, an amount too small to measure.
x Sun below horizon continuously Nov. 19 - Jan. 23.
v Sun below horizon continuously Nov. 24 - Jan. 17.
(x and v)-Yearly totals for period sun above horizon.
m Mean wind speed record for 1949-1951, 1958-1962.
@ Includes all forms of frozen precipitation, except hail occurring alone.
r Resumed 1965.

ELEVATIONS — STATION PRESSURES

State and station	Ft	Mtrs
ALABAMA		
Birmingham	630	192
Huntsville	644	196
Mobile	221	67
Montgomery	202	62
ALASKA		
Anchorage	132	40
Annette	110	34
Barrow	13	4
Barter Island	50	15
Bethel	150	46
Bettles	672	205
Big Delta	1274	389
Cold Bay	103	31
Fairbanks	454	138
Gulkana	1579	481
Homer	73	22
Iliamna	160	49
Juneau	24	7
King Salmon	49	15
Kotzebue	16	5
McGrath	338	103
Nome	22	7
St. Paul Island	28	9
Shemya	102	31
Summit	2405	733
Talkeetna	356	180
Unalakleet	21	6
Yakutat	31	9
ARIZONA		
Flagstaff	7018	2139
Phoenix	1107	337
Tucson	2555	779
Winslow	4883	1488
Yuma	206	63
ARKANSAS		
Fort Smith	463	141
Little Rock	265	81
CALIFORNIA		
Bakersfield	492	150
Bishop	4145	1263
Blue Canyon	5283	1610
Eureka (U)	60	18
Fresno	327	100
Long Beach	40	12
Los Angeles	104	32
Mt Shasta (R)	3587	1093
Oakland	7	2
Red Bluff	353	108
Sacramento	25	8
Sandberg (R)	4523	1379
San Diego	28	9
San Francisco (U)	155	47
San Francisco	18	5
Santa Maria	238	73
Stockton	27	8
COLORADO		
Alamosa	7541	2298
Colorado Springs	6170	1881
Denver	5332	1625
Grand Junction	4839	1475
Pueblo	4720	1439
CONNECTICUT		
Bridgeport	17	5
Hartford	179	55
DELAWARE		
Wilmington	80	24
DISTRICT OF COLUMBIA		
Wash. Nat'l AP	65	20
Wash. Dulles Int. A.P.	323	98
FLORIDA		
Apalachicola (U)	35	11
Daytona Beach	41	12
Fort Myers	12	4
Jacksonville	31	9
Key West	21	6
Lakeland (U)	236	72
Miami	12	4
Orlando	119	36
Pensacola	118	36
Tallahassee	68	21
Tampa	11	3
West Palm Beach	21	6
GEORGIA		
Athens	811	247
Atlanta	1034	315
Augusta	148	45
Columbus	394	120
Macon	362	110
Rome	643	196
Savannah	51	16
HAWAII		
Hilo	36	11
Honolulu	15	5
Kahului	67	20
Lihue	148	45

State and station	Ft	Mtrs
IDAHO		
Boise	2868	871
Lewiston	1436	438
Pocatello	4478	1365
ILLINOIS		
Cairo (U)	357	109
Chicago (O'Hare)	674	205
Chicago (Midway)	623	190
Moline	594	181
Peoria	662	202
Rockford	743	226
Springfield	613	187
INDIANA		
Evansville	388	118
Fort Wayne	828	252
Indianapolis	808	246
South Bend	773	236
IOWA		
Burlington	702	214
Des Moines	963	294
Dubuque	1080	329
Sioux City	1103	336
Waterloo	878	268
KANSAS		
Concordia	1484	452
Dodge City	2592	790
Goodland	3688	1124
Topeka	885	270
Wichita	1340	408
KENTUCKY		
Covington	877	267
Lexington	989	301
Louisville	488	149
LOUISIANA		
Alexandria	118	36
Baton Rouge	76	23
Lake Charles	32	10
New Orleans	30	9
Shreveport	259	79
MAINE		
Caribou	628	191
Portland	63	19
MARYLAND		
Baltimore	155	47
MASSACHUSETTS		
Boston	29	9
Nantucket	12	4
Worcester	1017	310
MICHIGAN		
Alpena	693	211
Detroit (City AP)	626	191
Detroit (M. Wayne Co.)	664	202
Flint	766	233
Grand Rapids	803	245
Houghton Lake	1160	354
Lansing	874	266
Marquette (U)	734	224
Muskegon	633	193
Sault Ste. Marie	724	221
MINNESOTA		
Duluth	1417	432
International Falls	1183	361
Minneapolis	838	255
Rochester	1320	402
St. Cloud	1043	318
MISSISSIPPI		
Jackson	331	101
Meridian	310	94
MISSOURI		
Columbia	898	274
Kansas City	750	229
St. Joseph	817	249
St. Louis (Lambert)	564	172
Springfield	1270	387
MONTANA		
Billings	3570	1088
Glasgow	2298	700
Great Falls	3657	1115
Havre	2599	792
Helena	3898	1188
Kalispell	2973	906
Miles City	2634	803
Missoula	3189	972
NEBRASKA		
Grand Island	1856	566
Lincoln (U)	1189	362
Norfolk	1551	473
North Platte	2787	849
Omaha (Eppley AP)	982	299
Scottsbluff	3958	1206
Valentine	2598	792

State and station	Ft	Mtrs
NEVADA		
Elko	5077	1547
Ely	6262	1909
Las Vegas	2181	665
Reno	4400	1341
Winnemucca	4314	1314
NEW HAMPSHIRE		
Concord	346	105
NEW JERSEY		
Atlantic City (Exp. Cntr.)	67	20
Newark	30	9
Trenton (U)	190	58
NEW MEXICO		
Albuquerque	5314	1620
Clayton	4972	1515
Roswell	3619	1103
NEW YORK		
Albany	292	89
Binghamton	1638	499
Buffalo	706	215
New York Central Park	87	27
New York (Kennedy AP)	22	7
New York (LaGuardia)	31	9
Rochester	555	169
Syracuse	408	124
NORTH CAROLINA		
Asheville	2174	661
Cape Hatteras (R)	11	3
Charlotte	769	234
Greensboro	886	270
Raleigh	441	134
Wilmington	38	12
NORTH DAKOTA		
Bismarck	1660	506
Fargo	899	274
Williston	1905	581
OHIO		
Akron	1236	377
Cleveland	805	245
Columbus	833	254
Dayton	1003	306
Mansfield	1312	400
Toledo	692	211
Youngstown	1186	361
OKLAHOMA		
Oklahoma City	1304	397
Tulsa	676	206
OREGON		
Astoria	22	7
Burns (U)	4170	1271
Eugene	373	114
Meacham	4056	1236
Medford	1329	405
Pendleton	1495	456
Portland	39	12
Salem	201	61
Sexton Summit (R)	3841	1171
PACIFIC AREA		
Johnston Island	17	5
Koror (R)	109	33
Kwajalein	26	8
Majuro, Marshall Islands	10	3
Pago Pago	10	3
Ponape (R)	151	46
Taguac, Guam (R)	365	111
Truk (Moen Island)	8	2
Wake Island	12	4
Yap (R)	56	17
PENNSYLVANIA		
Allentown	385	117
Erie	737	225
Harrisburg	351	107
Philadelphia	28	9
Pittsburgh	1225	373
Scranton	948	289
Williamsport	525	160
RHODE ISLAND		
Block Island	118	36
Providence	62	19
SOUTH CAROLINA		
Charleston (U)	48	15
Charleston	48	15
Columbia	225	69
Grnvl-Spartanburg	971	296
SOUTH DAKOTA		
Aberdeen	1300	396
Huron	1289	393
Rapid City	3168	966
Sioux Falls	1427	435

State and station	Ft	Mtrs
TENNESSEE		
Bristol	1525	465
Chattanooga	688	210
Knoxville	980	299
Memphis	284	87
Nashville	605	184
Oak Ridge (R)	914	279
TEXAS		
Abilene	1753	534
Amarillo	3604	1099
Austin	621	189
Brownsville	20	6
Corpus Christi	44	13
Dallas	488	149
Del Rio	1027	313
El Paso	3916	1194
Fort Worth	576	176
Galveston (U)	54	16
Houston	108	33
Lubbock	3241	988
Midland	2862	872
Port Arthur	22	7
San Angelo	1908	582
San Antonio	794	242
Victoria	117	36
Waco	508	155
Wichita Falls	1030	314
UTAH		
Milford	5033	1534
Salt Lake City	4227	1288
Wendover	4239	1292
VERMONT		
Burlington	340	104
VIRGINIA		
Lynchburg	937	286
Norfolk	30	9
Richmond	177	54
Roanoke	1176	358
Wallops Island	13	4
WASHINGTON		
Olympia	200	61
Seattle-Tacoma	450	137
Spokane	2365	721
Stampede Pass (R)	3967	1209
Walla Walla (U)	991	302
Yakima	1066	325
Quillayute	205	62
WEST INDIES		
San Juan, P. R.	62	19
Swan Island	35	11
WEST VIRGINIA		
Beckley	2514	766
Charleston	951	290
Elkins	1997	608
Huntington	838	255
Parkersburg (U)	637	194
WISCONSIN		
Green Bay	702	214
La Crosse	672	205
Madison	866	264
Milwaukee	693	211
WYOMING		
Casper	5290	1612
Cheyenne	6141	1872
Lander	5558	1694
Sheridan	3968	1209

Data from airport unless otherwise specified. U indicates Urban, R indicates Rural, sites.
These are the elevations of the barometer (in feet and meters above mean sea level) to which station pressure values pertain in the "Climatological Data" table in the monthly publication CLIMATOLOGICAL DATA NATIONAL SUMMARY

GENERAL SUMMARY OF TORNADOES, 1971

Norman E. Poultney
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Environmental Data Service
National Oceanic and Atmospheric Administration

The 1971 tornado season began on January 3 at 3:30 p.m. in Hollywood County, Arkansas, when a tornado touched down near Symrna Church. The season ended on December 31 when a waterspout moved inland at Kaumakani, Kauai, Hawaii. Between these two dates a total of 888 tornadoes was reported on 192 days, killing 156 people, injuring 2,770, and causing property losses in excess of $50 million. This was the greatest death toll since 1965 when 298 were killed. The April through July peak season accounted for 61 percent of the annual tornado total.

The 1971 tornado output was the third highest since 1953, when the current reporting practice began, being exceeded only by 1967 with 912 and 1965 with 899. Only Alaska, Delaware, Idaho, New Hampshire, Rhode Island, Vermont, Puerto Rico, the U. S. Virgin Islands, and the Pacific Area escaped these devastating storms. The greatest number of tornadoes on a single day, 32, occurred on December 14 during the usually "quiet" time of the year. Some of the more damaging tornadoes are described briefly in the following paragraphs.

JANUARY -- A fast-moving cold front and associated squall line spawned nine tornadoes in southern Georgia on the 15th, killing one person, injuring six, and causing many thousand dollars' worth of property damage. A waterspout swept inland at Kailua Bay, Hawaii, injuring four people and doing damage estimated at $1.5 million.

FEBRUARY -- February 1971 produced 83 tornadoes, nearly twice the number of any February since 1953. The Mississippi Delta Tornadoes of the 21st was the most disastrous tornado episode of the year. On this date, four major and at least five lesser twisters killed 110 people in Mississippi and 11 in Louisiana. Injuries in the two states were 1,511 and 18, respectively. The small Mississippi communities of Delta City, Inverness, Little Yazoo, and Pugh City were virtually destroyed. Damage was estimated at $20 million.

The earliest funnel touched down near Delhi, Louisiana, about 3:00 p.m., passed through Joe's Bayou, wiping out a family of 11, and moved northeastward into Mississippi. It swept northeastward through Issaquena to Leflore Counties in Mississippi, leaving a death toll of two at Cameta, seven at Delta City, two at Isola, 21 at Inverness, and four at Moorhead. The total length of the path of this tornado in the two states was about 110 miles, the width about 1/2 mile and the forward speed about 50 m.p.h. The death toll was 36 in Mississippi and 11 in Louisiana.

The second killer tornado descended near Filter in Issaquena County and swept northeastward, lifting near the Tallahatchie River only to descend again southwest of Bethlehem and continue a short distance over the Tennessee line where it wrecked three houses valued at $40,000. Along this line 14 lives were lost at Cory, seven at Gooden Lake, two at Mound Lake, 21 at Pugh City, two at Swiftown, six at Morgan City, two near Greenwood, and four at Money. The path was apparently continuous from Filter to near Abbeville with several skips thereafter, a total of nearly 198 miles. The total known deaths in this tornado was 58, the greatest for one tornado in 1971.

The third of this fearsome quartet touched down only briefly from north of Drew to near Rome. It wrecked several houses and a cotton gin and cost three people their lives.

The last major Mississippi Delta tornado damage track extended from south-southwest of Bovina through Little Yazoo to near Lexington, a distance of about 69 miles. The forward speed was nearly 54 m.p.h. Near Bovina it demolished a house and deposited a man and his wife, fatally injured, in a field across the road. It claimed 10 more lives at Little Yazoo and one at Bentonia.

At least five other touchdowns occurred on this date in Hines, Benton, Rankin, and Pontotoc Counties. None of these caused extensive damage except the one in Pontotoc County where school buildings, two stores, and a church sustained damages estimated at $72,000.

APRIL -- On the 27th, an outbreak of seven tornadoes, apparently associated with a passing cold front, struck Kentucky. Four of these were noteworthy. Two tornadoes which followed parallel east-southeast paths occurred at 6:10 and 7:20 p.m. The first extended from near Wysox for about 25 miles with some skips. Near Schultztown, an asphalt shingle was driven 2 inches into a large oak. The sister tornado followed a discontinuous path through Muhlenberg, Butler, and Warren Counties, killing one occupant of a trailer. Between them, these two storms destroyed 33 homes, heavily damaged 42 homes and four trailers and injured 20 people. At 8:30 p.m., a tornado descended near Bramlett in Green County and moved over a 15-mile east-southeast path through Adair County. Six persons were killed and 58 injured. Later, at 9:30 p.m., another tornado hit Russell and Pulaski Counties, injuring 70 in Russell and two in Pulaski. Near Gosser Ridge, two people died when their farmhouse was destroyed. In Russell County, 35 houses and three mobile homes were destroyed and 105 homes damaged. A school suffered $150,000 damage and numerous trees and powerlines were downed.

Georgia reported 14 tornadoes, nine of which occurred on the 23d. One person was killed and 27 injured. Texas observed 24 tornadoes on 6 days, one of which struck Hereford injuring 24 and causing $3 million damage. It was the first tornado in Hereford's history.

MAY -- May saw the usual increase in tornado activity, producing 165 on 24 days, killing seven people and injuring 335. Iowa had its first tornado outbreak of the year on the 5th when three were reported, one of which struck Conway, demolishing 10 homes and damaging or destroying 45 buildings in the town. In Missouri, a multiple-funnel storm near Rothville injured six people and derailed 67 freight cars. The force of the wind rocked a 250,000-pound locomotive. Another funnel touched down in the southwest corner of Joplin and moved through the business district and out into the country. One college student was killed while seeking shelter and 60 other persons were injured. Damages to homes and businesses were estimated at over $2 million. A twin-funnel storm hit Marceline along a 1/2-mile path, destroying three homes and four mobile homes and damaging 22 homes and 200 other structures.

On the 7th a tornado hit near Bradford, Tennessee, and travelled to the vicinity of Cuba Landing, nearly 50 miles. Three fatalities were reported and 137 persons were injured. Damages were estimated at over $5.7 million. Another tornado on the 24th struck north of Memphis injuring 22 people and causing $250,000 damage.

Texas reported 27 tornadoes on 11 days. On the 23d, three out of a total of five funnels touched down in the Whitney-Whitney Lake area. One trailer resident was killed and another couple hurled 200 yards through the air and seriously injured when their mobile home disintegrated. In all, 49 persons were injured and property losses were set at $525,000.

JUNE -- This was the second most active June since

1953, with 199 tornadoes reported on 28 days. Despite all this activity, only one death was reported. Eldorado, Iowa, suffered one casualty on the 24th.

Texas recorded 33 tornadoes on 13 days. Seven of these touched down within a 30-minute period on the 5th in Hutchinson County, but did little damage. About 5 p.m., on the 9th, nine funnels, at least four of which reached the ground, were observed near Sunray, Sherman County. Damage was light because they hit open farm and ranch land. At 7 p.m., another was seen near Morse, which obligingly remained nearly stationary for 25 minutes to be photographed. The largest tornado on record in Texas touched down southwest of South Gruver and followed a 15-mile meandering course with a width of 2 miles at times. The parent cloud was not large and the display was clearly observed by many people, one of whom said, "There were the most funnels I've ever seen in my life. I'd judge between 15 and 20----." Despite its great size, damage was estimated at only $15,000 because it struck open land. No deaths or injuries were recorded. At least one other funnel touched the ground.

JULY -- July saw 100 tornadoes on 30 days, few of which were of note. Northeastern Iowa experienced an outbreak of five tornadoes on the 12th. In Worth and Mitchell Counties the first twister severely damaged 15 farmsteads causing over $150,000 damage and destroying over 5,000 acres of grain while another damaged 55 homes in Fayette. Losses in Fayette County were set at $1 million. Three tornadoes visited Maine on the 31st. Near Turner, an 8-month-old baby and her sitter, who were in a trailer which exploded when hit, were found unharmed 200 feet away. An occupant of another completely demolished trailer found himself running in an open field with no recollection of how he got there. Five of nine funnels set down and traveled skipping paths through Hand, Beadle, Buffalo, and Jerauld Counties in South Dakota, damaging a number of buildings. Losses were about $30,000.

AUGUST -- Fifty tornadoes were reported in August on 21 days. No deaths were reported; 46 were injured. At 5:45 p.m., on the 30th, a tornado swooped down southwest of Tempe, Arizona, and moved northeastward, demolishing many houses and damaging others. Forty-one people were injured, none seriously. Northeast of Flint, Michigan, a tornado struck a new trailer park, destroying 20 trailers and some nearby buildings. One injury was reported. Damage was estimated to be in excess of $150,000. In Texas, 20 out of a reported 115 funnels contacted the ground on 9 days. Touchdowns were in open country and damage was slight.

SEPTEMBER -- Tornado activity slackened off only slightly in September when 47 were observed on 15 days. Alabama reported five, causing mostly minor damage, and Louisiana reported seven, six of which were spawned by Hurricane Edith. One of these, in East Baton Rouge Parish, damaged a church, a high school, a shopping center and over 300 homes. In Texas, five of the seven tornadoes reported were progenies of Hurricane Fern. Two severe tornadoes struck central Wisconsin on the 28th. The first cut a swath through Chippewa, Clark, Marathon, and Lincoln Counties injuring five people and causing about $2 million worth of damage to buildings, livestock and crops. The second passed from Marathon County to Marinette County, injuring five people. Most of the damage was at Mountain, estimated at $200,000. Both of these storms traveled about 75 miles and were about 300 yards wide.

An interesting side light was a fire-whirl near Morley, Minnesota, which behaved rather tornadolike. It originated in a brush fire, whirled across a lake, raising a frothy funnel, upsetting an 1,800-pound boat, and crashed into the woods on the opposite shore.

OCTOBER -- Still fewer tornadoes were reported in October; 38 on 12 days with no deaths and 25 injuries. On the 17th, a tornado struck Wray, Arizona, injuring nine people in a trailer court, destroying five business buildings and damaging 50 to 60 other buildings and homes. A cluster of six tornadoes struck Lamb, Castro, and Hale Counties in Texas on the 17th. Four persons were injured by these storms, none seriously. The first covered a 35-mile path 100 yards wide and damaged four rural homes. The second, and most violent twister, cut a 400-yard-wide "snake-like" path at a forward speed of 50 m.p.h. At one farm it struck so suddenly that the family could not reach their storm cellar and sought shelter in a bedroom of their house. The couple and two of their children were hurled 50 feet and landed near some trees on their own mattresses. One child was injured. The third followed a path almost identical to the first, trailing it by 45 minutes. The other three caused minor damage. Total damage was $430,000 to property and $300,000 to crops.

NOVEMBER -- Fifteen tornadoes on 7 days were recorded in November. There were no deaths and 12 injuries. A tornado struck the Mid City Shopping Center in Portsmouth, Virginia, moved on an intermittent path by the U. S. Naval Hospital, then jumped to downtown Norfolk where it damaged the new Cultural Complex. Eleven injuries were reported.

DECEMBER -- A late season outbreak of tornadic activity occurred when 43 were observed on the 14th and 15th. Two waterspouts moved inland at Kaumakani, Kauai, Hawaii, bringing the 1971 Hawaii tornado total to four. Hawaii had reported only five since 1953. Texas was hit by 23, all on the 14th. A tornado hit Bushton, Illinois, on the 15th, damaging 80 percent of the homes and injuring 24 people. A tornado struck Missouri late on the 14th on a 49-mile path from Billings to Buffalo, passing over the Springfield Airport where it damaged 35 planes. The Weather Service barograph dropped from 27.83 inches to 27.52 inches, then jumped to 27.91 inches in about 3 minutes. The anemometer cups blew off at about 105 knots. One fatality and 22 injuries were reported. A few hours later, on the 15th, a tornado touched down at Bell City, Missouri, and passed through Mesler, Oran, Illmo, and Scott City killing one person and injuring 26.

Additional information is contained in the tables and tornado track chart on the following pages.

TORNADO SUMMARY 1971

STATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
ALABAMA													
Number	2	6	5	2		1			5			1	22
Days	1	1	4	1		1			2			1	13
Deaths		1											1
Injuries		14	2									1	17
ALASKA													
None													
ARIZONA													
Number							2	1	3	1			7
Days							2	1	2	1			6
Deaths													0
Injuries							2	41					43
ARKANSAS													
Number	1	2	1	1	4		1		2			4	16
Days	1	1	1	1	2		1		1			2	10
Deaths													0
Injuries	13				5							12	27
CALIFORNIA													
Number		1		1									2
Days		1		1									2
Deaths													0
Injuries													0
COLORADO													
Number		1		3	2	5	3			2			16
Days		1		1	1	3	2			1			9
Deaths													0
Injuries										9			9
CONNECTICUT													
Number							2						2
Days							2						2
Deaths													0
Injuries													0
DELAWARE													
(None)													
DIST OF COLUMBIA													
(None)													
FLORIDA													
Number	1	6	8	1	9	6	10	7	4	1	1	5	59
Days	1	2	2	1	5	5	10	5	3	1	1	1	37
Deaths													0
Injuries		113						1	1			10	125
GEORGIA													
Number	12	10	1	14	4	2	3						46
Days	4	3	1	4	2	1	1						16
Deaths	1			1									2
Injuries	13	8		27									48
HAWAII													
Number	1					1						2	4
Days	1					1						2	4
Deaths													0
Injuries	4												4
IDAHO													
(None)													
ILLINOIS													
Number		2	1	1	3	2	1	2			2	2	16
Days		1	1	1	2	2	1	2			1	2	13
Deaths				1									1
Injuries		2		20			0	2				24	48
INDIANA													
Number		1	5	2	4		1		1	1			15
Days		1	2	1	2		1		1	1			9
Deaths					1								1
Injuries		2	7	2	3				1				15
IOWA													
Number					22	5	5			1			33
Days					5	2	1			1			9
Deaths						1							1
Injuries					13	4	10						27

STATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
KANSAS													
Number		2			18	11	3	1		4			39
Days		1			9	7	3	1		1			22
Deaths													0
Injuries					3	3				7			13
KENTUCKY													
Number		1		7	2		2					4	16
Days		1		1	2		2					1	7
Deaths				9									9
Injuries				151									151
LOUISIANA													
Number		2	1		4	3			8			2	20
Days		2	1		2	2			2			1	10
Deaths		11	1										12
Injuries		19	7		2				9				37
MAINE													
Number						1	4	2		1	3		11
Days						1	2	1		1	1		6
Deaths													0
Injuries							1						1
MARYLAND													
Number							2		1				3
Days							2		1				3
Deaths													0
Injuries													0
MASSACHUSETTS													
Number							3		1		2		6
Days							2		1		1		4
Deaths													0
Injuries							3						3
MICHIGAN													
Number					1	4	1	2					8
Days					1	3	1	1					6
Deaths													0
Injuries					1	3		1					5
MINNESOTA													
Number					4	8	6	2	1				21
Days					1	3	4	1	1				10
Deaths													0
Injuries								1					1
MISSISSIPPI													
Number		20	1	1	7	2		2	3	1		4	41
Days		4	1	1	4	2		2	1	1		2	18
Deaths		117			1								118
Injuries		1524			8							7	1539
MISSOURI													
Number		2	2	1	8	6	4	1			2	4	30
Days		1	2	1	5	5	3	1			1	2	21
Deaths					1							2	3
Injuries					84	1	6					53	144
MONTANA													
Number					1	6	1						8
Days					1	3	1						5
Deaths													0
Injuries													0
NEBRASKA													
Number				1	18	22	8			3			52
Days				1	4	7	5			2			19
Deaths													0
Injuries					1								1
NEVADA													
Number								1					1
Days								1					1
Deaths													0
Injuries													0

TORNADO SUMMARY 1971-Continued

STATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
NEW HAMPSHIRE													
(None)													
NEW JERSEY													
Number						2	1						3
Days						1	1						2
Deaths													0
Injuries													0
NEW MEXICO													
Number			1	4		1	1	1	2				12
Days			1	2		2	1	1	2				9
Deaths													1
Injuries													0
NEW YORK													
Number						2	3						5
Days						1	3						4
Deaths													0
Injuries													0
NORTH CAROLINA													
Number	1	1	1		1								4
Days	1	1	1		1								4
Deaths		2											2
Injuries		64											64
NORTH DAKOTA													
Number						10	5	1					16
Days						4	1	1					6
Deaths													0
Injuries						1	1						2
OHIO													
Number		3			4	2	3	1	1	1			15
Days		2			3	1	4	1	1	1			13
Deaths													0
Injuries		7			3		5			1			16
OKLAHOMA													
Number		2	2	8	13	8	1			1		4	39
Days		2	1	3	8	4	1			1		1	21
Deaths													0
Injuries		1	4	7	1								13
OREGON													
Number					1								1
Days					1								1
Deaths													0
Injuries													0
PACIFIC													
(None)													
PENNSYLVANIA													
Number						1	1		1				3
Days						1	1		1				3
Deaths													0
Injuries							4						4
PUERTO RICO													
(None)													
RHODE ISLAND													
(None)													
SOUTH CAROLINA													
Number		1	1		1				1				4
Days		1	1		1				1				4
Deaths													0
Injuries													0

STATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
SOUTH DAKOTA													
Number						35	9			1			45
Days						12	6			1			19
Deaths													2
Injuries													0
TENNESSEE													
Number		2	1	2	6	3	1					1	16
Days		1	1	1	3	2	1					1	10
Deaths					1								1
Injuries		36		6	164		6					1	213
TEXAS													
Number		20	13	24	27	13	7	10	3	10	4	23	196
Days		3	3	6	11	13	6	9	5	4	1	1	62
Deaths			1		1								2
Injuries			10	54	49	20	10			8		19	170
UTAH													
Number									1				1
Days									1				1
Deaths													0
Injuries													0
VERMONT													
(None)													
VIRGIN ISLANDS													
(None)													
VIRGINIA													
Number								1			1		2
Days								1			1		2
Deaths													0
Injuries											11		11
WASHINGTON													
Number								1		1		1	3
Days								1		1		1	3
Deaths													0
Injuries													0
WEST VIRGINIA													
Number							1						1
Days							1						1
Deaths													0
Injuries													0
WISCONSIN													
Number					3	15	5		5	1	1		30
Days					1	8	4		3	1	1		18
Deaths							1						1
Injuries						5	2		11		1		19
WYOMING													
Number				2	1	4							7
Days				2	1	3							6
Deaths													0
Injuries													0
TOTAL													
Number	18	*83	*40	75	*165	199	100	50	47	18	16	57	*888
Days †	7	12	13	14	24	28	30	21	15	12	7	9	192
Deaths	1	131	2	11	7	1	1	0	0	0	0	2	156
Injuries	27	1790	30	267	335	37	50	46	22	25	12	129	2170

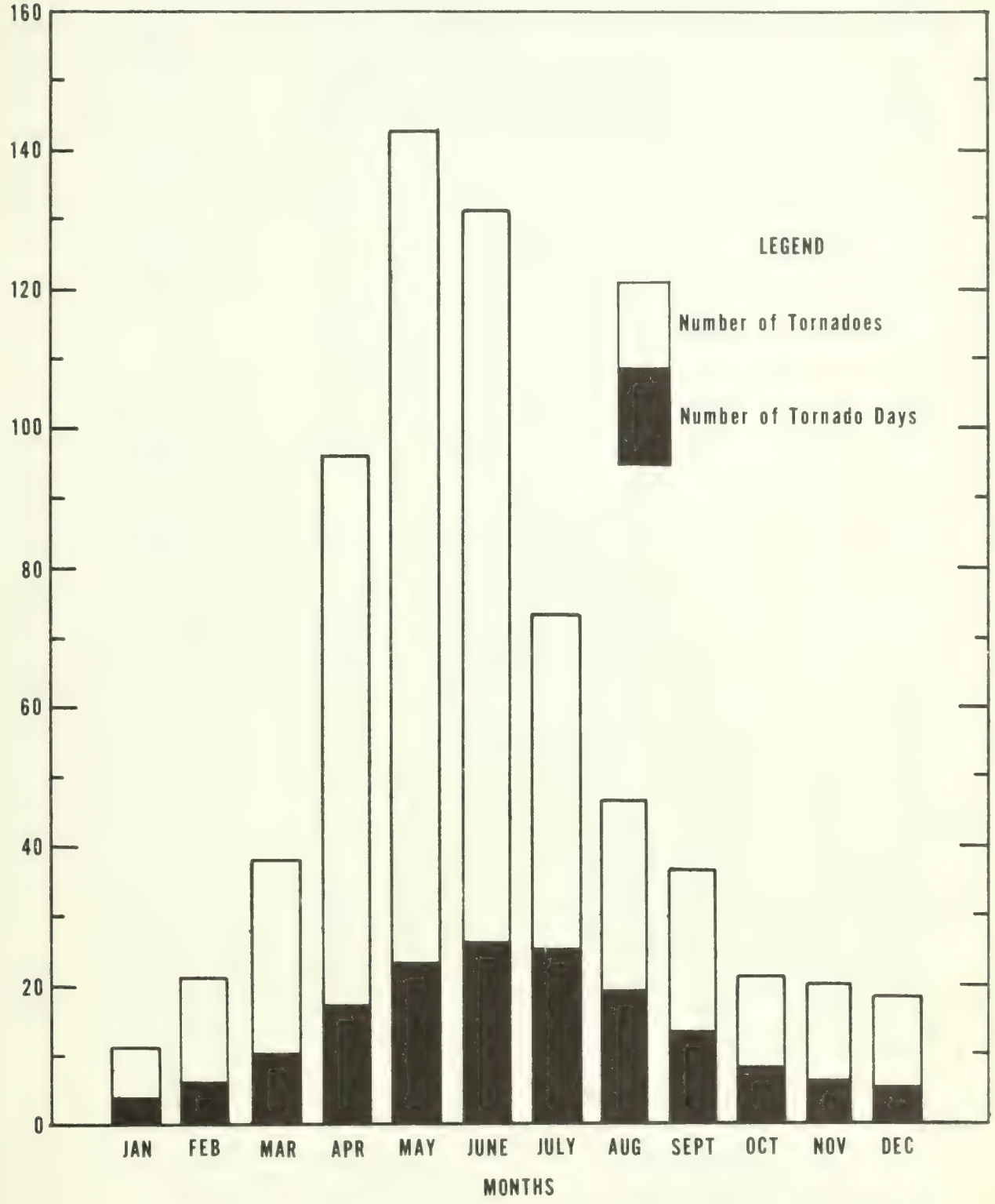
*Corrected for boundary crossing tornadoes.
†Tornado days for country as a whole

NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS BY MONTHS, 1953-71

	JANUARY			FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY			AUGUST			SEPTEMBER			OCTOBER			NOVEMBER			DECEMBER			ANNUAL		
YEAR	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS	NUMBER	DAYS	DEATHS
1953	14	6	0	17	3	3	40	10	24	45	16	34	99	21	162	116	24	244	40	19	0	26	15	0	5	4	0	6	4	0	11	6	0	20	8	49	437	136	516
1954	2	1	0	19	9	2	69	13	10	117	22	3	97	22	8	101	26	5	46	23	0	46	21	1	20	10	3	15	8	2	2	2	0	16	3	1	549	159	35
1955	2	2	0	4	3	0	41	15	4	101	18	7	150	26	103	148	28	2	50	21	5	34	18	0	16	8	2	23	7	1	20	4	1	3	2	0	593	153	125
1956	2	2	0	47	12	8	31	7	1	87	15	67	88	24	4	66	21	0	101	26	1	43	20	2	19	10	0	30	8	0	8	6	0	10	4	0	532	155	83
1957	17	3	13	5	3	0	39	7	1	216	21	29	226	26	87	148	25	14	54	19	0	26	14	0	17	10	2	17	11	2	61	11	25	38	4	18	864	154	191
1958	12	7	0	20	5	13	15	10	0	78	19	4	69	21	0	128	27	42	119	30	1	45	20	1	24	14	1	9	6	4	45	6	0	1	1	0	565	166	66
1959	15	2	3	19	5	21	42	11	9	30	12	1	225	28	8	73	25	2	62	24	0	37	18	0	54	15	14	19	10	0	11	4	0	2	2	0	589	156	58
1960	9	4	0	28	10	0	27	10	0	70	20	7	200	26	34	123	27	3	48	22	1	48	23	1	21	13	0	18	10	1	25	6	0	1	1	0	618	172	47
1961	1	1	0	31	8	0	121	17	7	73	19	3	135	25	23	101	23	2	77	27	0	25	16	0	53	16	15	13	5	0	36	7	1	16	5	0	682	169	51
1962	11	3	1	25	7	0	37	9	17	41	8	1	201	22	3	173	29	0	75	26	0	49	21	6	27	11	0	12	10	0	5	4	0	2	2	0	658	152	28
1963	14	5	1	6	3	0	49	12	8	82	14	16	69	21	1	93	23	0	62	26	0	27	13	2	33	13	3	14	5	0	12	6	0	0	0	0	461	141	31
1964	14	3	10	2	2	0	36	11	6	161	23	15	135	20	16	144	24	0	61	23	0	79	23	2	24	10	0	24	4	22	15	8	0	18	5	2	713	156	73
1965	21	11	0	29	4	0	33	9	2	130	20	264	271	25	19	149	28	6	86	26	0	60	23	2	63	21	0	15	4	0	35	6	5	7	4	0	899	181	298
1966	1	1	0	23	5	0	10	6	58	81	20	12	98	17	0	124	28	20	92	27	3	58	21	0	23	13	0	29	6	6	20	3	0	11	3	0	570	150	99
1967	40	4	7	8	5	0	40	14	3	146	18	73	112	25	3	205	28	8	88	25	1	29	16	2	139	16	5	34	7	4	8	5	0	63	10	10	912	173	116
1968	5	3	0	7	3	0	28	8	0	104	15	40	146	26	72	137	27	11	54	22	2	69	23	2	24	14	0	14	9	0	41	12	3	32	9	1	661	171	131
1969	3	1	32	5	5	0	8	2	1	67	15	2	144	25	4	136	28	7	99	27	0	68	21	15	20	11	4	26	10	0	5	3	0	23	7	1	604	155	66
1970	9	5	0	15	3	1	25	12	2	117	16	29	88	19	26	134	24	6	79	26	3	54	21	0	54	20	0	50	13	6	10	4	0	14	8	0	649	171	73
1971	18	7	1	83	12	131	40	13	2	75	14	11	165	24	7	199	28	1	100	30	1	50	21	0	47	15	0	38	12	0	16	7	0	57	9	2	888	192	156
TOTAL	210	71	68	393	107	179	731	196	155	1821	325	618	2718	443	580	2496	493	373	1393	469	18	873	368	36	683	244	49	406	149	48	386	110	35	334	87	84	12444	3062	2243
MEAN	11	4	4	21	6	9	38	10	8	96	17	33	143	23	31	131	26	20	73	25	1	46	19	2	36	13	3	21	8	3	20	6	2	18	5	4	655	161	118

AVERAGE NUMBER OF TORNADOES AND TORNADO DAYS EACH MONTH IN THE UNITED STATES

(Based on 12,444 Tornadoes That Occurred from 1953 — 1971)



NUMBER OF TORNADOES, TORNADO DAYS AND RESULTING LOSSES BY YEARS, 1916-71

YEAR	Number Tornadoes	Tornado Days	Total Deaths	Most Deaths in Single Tornado	PROPERTY LOSSES BY CATEGORY†			
					Total	Category 5	Category 6	Category 7 and Over
1916	90	36	150	30	6	7	1	0
1917	121	38	509	101	7	21	9	0
1918	81	45	135	36	7	20	5	0
1919	64	35	206	59	7	10	2	0
1920	87	50	498	87	7	14	10	0
1921	105	55	202	61	7	22	3	0
1922	108	64	135	16	7	27	5	0
1923	102	59	109	23	6	21	1	0
1924	130	57	376	85	7	26	11	1
1925	119	65	794	689	7	34	2	1
1926	111	57	144	23	6	28	0	0
1927	163	62	540	92	7	42	9	1
1928	203	79	92	14	7	40	7	0
1929	197	74	274	40	7	48	4	0
1930	192	72	179	41	7	38	6	0
1931	94	57	36	6	6	14	1	0
1932	151	67	394	37	7	23	1	1
1933	258	96	362	34	7	46	9	0
1934	147	77	47	6	6	10	3	0
1935	180	77	70	11	6	29	0	0
1936	151	71	552	216	7	17	5	1
1937	147	75	29	5	6	24	0	0
1938	213	76	183	32	7	29	6	0
1939	152	75	87	27	7	21	3	0
1940	124	62	65	18	7	13	2	0
1941	118	57	53	25	6	24	1	0
1942	167	66	384	65	7	42	10	0
1943	152	61	58	5	7	28	8	0
1944	169	68	275	100	7	50	9	0
1945	121	66	210	69	7	21	10	1
1946	106	65	78	15	7	29	7	0
1947	165	78	313	169	7	46	7	1
1948	183	68	140	33	7	62	11	2
1949	249	80	212	58	7	54	13	0
1950	199	88	70	18	7	47	9	0
1951	272	113	34	6	7	35	11	2
1952	236	98	230	57	7	53	19	0
1953	437	136	516	116	8	63	18	7
1954	549	159	35	6	7	63	8	1
1955	593	153	125	80	7	74	13	1
1956	532	155	83	25	7	83	24	1
1957	864	154	191	44	8	129	26	3
1958	565	166	66	19	7	70	8	1
1959	589	156	58	21	7	70	4	1
1960	618	172	47	16	7	65	11	1
1961	682	169	51	16	7	103	21	1
1962	658	152	28	17	7	51	10	0
1963	461	141	31	5	7	77	15	1
1964	713	156	73	22	7	113	17	5
1965	899	181	298	44	8	126	30	11
1966	570	150	99	58	8	79	13	4
1967	912	173	116	33	8	125	33	8
1968	661	171	131	34	8	82	26	6
1969	604	155	66	32	8	98	16	3
1970	649	171	73	26	8	97	24	6
1971	888	192	156	58	8	71	30	5
Means: 1953-71	655	161	118	---	-	86	18	3

NOTE: -- The above estimated losses are based on values at time of occurrence.

† Storm damages in categories:

5. $50,000 to $500,000
6. $500,000 to $5 million
7. $5 million to $50 million
8. $50 million and over.

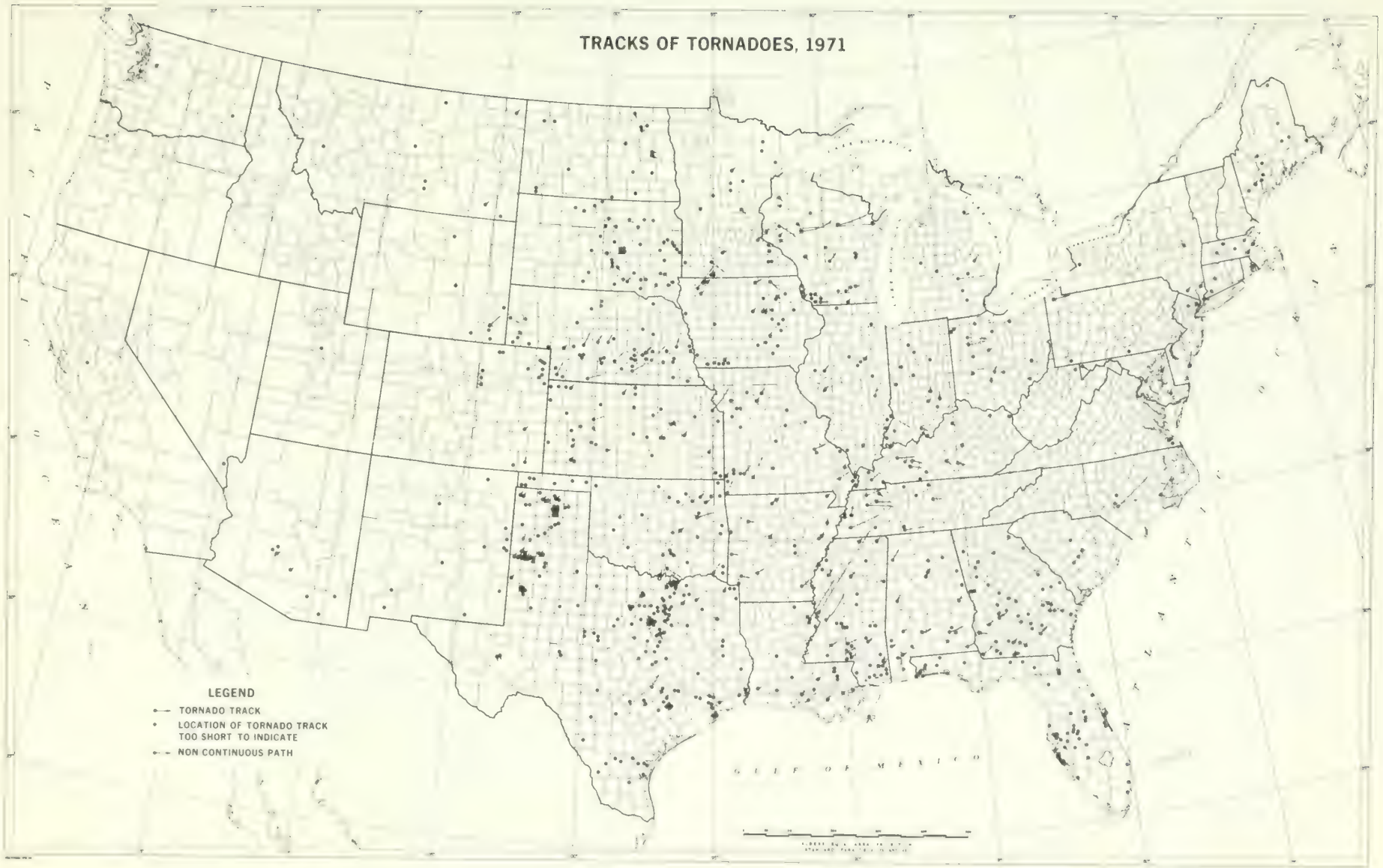
NUMBER OF TORNADOES, TORNADO DAYS, AND DEATHS BY STATES, 1953-71

STATE	TORNADOES							DAYS		DEATHS		
	TOTAL	AVERAGE	GREATEST	YEAR	LEAST	YEAR	Per # 10,000 Sq.Mi.	TOTAL	AVERAGE	TOTAL	AVERAGE	Per @ 10,000 Sq.Mi.
Alabama	314	17	45	1957	5	1956	3.20	176	9	84	4	16
Alaska	1	0	1	1959	0	1971+	.00	1	0	0	0	0
Arizona	57	3	7	1971	0	1965+	.26	51	3	2	0	0
Arkansas	311	16	37	1961	2	1969+	3.08	173	9	91	5	17
California	46	2	10	1958	0	1968+	.15	37	2	0	0	0
Colorado	263	14	38	1965	1	1959	1.33	186	10	3	0	0
Connecticut	24	1	3	1968+	0	1969+	2.53	22	1	1	0	2
Delaware	13	1	4	1967	0	1971+	3.26	12	1	0	0	0
District of Columbia	0	0	0	-	0	-	0	0	0	0	0	0
Florida	540	28	59	1971	13	1965	4.85	376	20	40	2	7
Georgia	365	19	46	1971+	7	1960	3.26	224	12	42	2	7
Hawaii	9	1	4	1971	0	1970+	.74	8	0	0	0	0
Idaho	22	1	5	1956	0	1971+	.14	21	1	0	0	0
Illinois	404	21	42	1957	6	1953	3.79	212	11	109	6	19
Indiana	411	22	48	1965	6	1953	5.98	199	10	147	8	40
Iowa	421	22	54	1964	7	1955	3.94	220	12	36	2	6
Kansas	944	50	94	1964	17	1969	6.04	431	23	131	7	16
Kentucky	116	6	16	1971	0	1953	1.51	79	4	25	1	6
Louisiana	304	16	30	1957	3	1955	3.30	194	10	73	4	15
Maine	61	3	11	1971	0	1964	.97	50	3	1	0	0
Maryland	36	2	5	1967	0	1970+	1.79	32	2	1	0	0
Massachusetts	85	4	12	1958	0	1959	5.39	61	3	93	5	112Ø
Michigan	209	11	24	1956	1	1959	1.89	125	7	218	11	37
Minnesota	320	17	34	1968	7	1963+	2.00	184	10	67	4	8
Mississippi	352	19	41	1971	5	1964	3.88	200	11	292	15	61
Missouri	563	30	71	1967	7	1953	4.25	277	15	101	5	14
Montana	66	3	10	1962	0	1967+	.23	56	3	0	0	0
Nebraska	637	34	54	1958	10	1966	4.34	316	17	40	2	5
Nevada	9	0	4	1964	0	1969+	.04	8	0	0	0	0
New Hampshire	45	2	9	1963	0	1971+	2.54	39	2	0	0	0
New Jersey	25	1	5	1960	0	1969+	1.69	22	1	0	0	0
New Mexico	172	9	17	1957	0	1953	.74	126	7	2	0	0
New York	49	3	7	1969	0	1953	.52	47	2	1	0	0
North Carolina	135	7	12	1964	2	1970	1.35	103	5	9	0	2
North Dakota	252	13	41	1965	2	1961	1.87	154	8	15	1	2
Ohio	218	11	32	1965	3	1966+	2.78	135	7	100	5	24
Oklahoma	1131	60	106	1957	30	1963	8.52	466	25	127	7	18
Oregon	14	1	6	1964	0	1969+	.08	13	1	0	0	0
Pacific	0	0	0	-	0	-	0	0	0	0	0	0
Pennsylvania	105	6	23	1954	0	1964+	1.22	84	4	4	0	1
Puerto Rico	4	0	2	1969	0	1971+	.62	4	0	0	0	0
Rhode Island	0	0	0	-	0	-	0	0	0	0	0	0
South Carolina	175	9	22	1965+	1	1970	2.96	119	6	8	0	3
South Dakota	431	23	64	1965	1	1958	2.95	220	12	7	0	1
Tennessee	159	8	17	1957	1	1962	1.98	99	5	24	1	6
Texas	2070	109	232	1967	49	1953	4.08	868	46	286	15	11
Utah	30	2	5	1970	0	1960+	19	25	1	0	0	0
Vermont	21	1	5	1962	0	1971+	12	17	1	0	0	0
Virgin Islands	0	0	0	-	0	-	0	0	0	0	0	0
Virginia	79	4	12	1959	1	1963+	1.02	62	3	13	1	3
Washington	18	1	3	1971	0	1968+	.14	17	1	0	0	0
West Virginia	29	2	5	1967	0	1960+	.63	27	1	0	0	0
Wisconsin	334	18	33	1964	3	1953	3.13	190	10	49	3	9
Wyoming	111	6	17	1962	0	1970	.60	94	5	1	0	0
United States	12444*	655	912	1967	437	1953	1.81	3062†	161	2243	118	6

\+ Also in earlier year(s).
* Corrected for boundary-crossing tornadoes.
† Tornado Days for country as a whole.
Ø Ninety deaths in Worcester tornado of June 9, 1953.
\# Mean annual tornadoes per 10,000 square miles.
@ Number of deaths per 10,000 square miles — 1953-71.

NUMBER OF FUNNEL CLOUDS IN 1971

STATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANN
Alabama		1	2				2						5
Alaska													0
Arizona			2	1				1		1			5
Arkansas			2		3	1	2	1				3	12
California		5								2		1	8
Colorado				2	8	4	5						19
Connecticut													0
Delaware									1				1
District of Columbia													0
Florida	3	14	5	3	16	44	26	25	14	21	4	2	177
Georgia				5	3	1	1	2		1			13
Hawaii	6			2	1		6		1	1	3	1	21
Idaho													0
Illinois				4	17	19	3	1	2			1	47
Indiana		2		3	3	13		1				3	25
Iowa		1			34	40	8						83
Kansas		1			25	35	3	1		1	1		67
Kentucky				1	16	15	12	1	2			3	50
Louisiana		1	5		4	12	22	14	2		1		61
Maine							1	1					2
Maryland						1							1
Massachusetts					1								1
Michigan						6	8						14
Minnesota					4	29	10	3	1				47
Mississippi	1	32	9	5	8	7	6	9	2			6	85
Missouri		1	2		18	11	4				2		38
Montana						5	1						6
Nebraska					7	29	20		2				58
Nevada							1						1
New Hampshire													0
New Jersey													0
New Mexico					2	4	2	5					13
New York					1			1			1		3
North Carolina			1	1		1		1	1				5
North Dakota					1	25	16	1	5				48
Ohio					3	11	2	2	2				20
Oklahoma		1	2	10	28	21	7	2	1				72
Oregon					1			1		2			4
Pacific		1					2		2				5
Pennsylvania						1							1
Puerto Rico													0
Rhode Island													0
South Carolina					1	1	2						4
South Dakota					1	38	9	3					51
Tennessee				3	10	1	1		1			1	17
Texas		6	10	28	49	80	28	95	22	13		9	340
Utah						5	2	1	1				9
Vermont													0
Virgin Islands													0
Virginia													0
Washington			2		1								3
West Virginia													0
Wisconsin						5	1	14	1				21
Wyoming					3	6							9
TOTAL	10	66	42	68	269	471	213	186	63	42	12	30	1472


TRACKS OF TORNADOES, 1971
LEGEND
TORNADO TRACK
LOCATION OF TORNADO TRACK TOO SHORT TO INDICATE
NON CONTINUOUS PATH
GULF OF MEXICO

HAILSTORM LOSSES FOR PAST YEARS

Year	Property (exclusive † of crops)	Crops †	Total †
1933	-	-	7
1934	-	-	7
1935	-	-	7
1936	6	7	7
1937	6	7	7
1938	6	7	7
1939	5	6	6
1940	6	7	7
1941	6	7	7
1942	6	7	7
1943	6	7	7
1944	7	7	8
1945	6	7	7
1946	7	7	7
1947	6	8	8
1948	7	8	8
1949	7	7	7
1950	7	7	7
1951	7	7	8
1952	7	7	7
1953	7	7	7
1954	7	8	8
1955	7	7	8
1956	7	8	8
1957	7	8	8
1958	7	8	8
1959	6	7	7
1960	7	8	8
1961	8	8	8
1962	9	8	9
1963	8	8	8
1964	8	8	8
1965	8	8	8
1966	8	8	8
1967	8	8	8
1968	8	8	8
1969	8	8	8
1970	8	8	8
1971	7	8	8

* Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50	4	$5,000 to $50,000	7	$5 million to $50 million
2	$50 to $500	5	$50,000 to $500,000	8	$50 million to $500 million
3	$500 to $5,000	6	$500,000 to $5 million	9	$500 million to $5 billion.

NOTE --The above estimated losses are based on values at time of occurrence.

WINDSTORM LOSSES FOR PAST YEARS

(Windstorms other than tornadoes)

Year	Total loss of life	Total property loss †
1916	65	7
1917	25	6
1918	79	7
1919	344	7
1920	42	6
1921	65	7
1922	133	7
1923	[illegible]	7
1924	78	7
1925	88	7
1926	357	8
1927	64	7
1928	1,947	8
1929	46	7
1930	49	7
1931	17	7
1932	306	7
1933	156	8
1934	109	7
1935	461	7
1936	121	7
1937	43	7
1938	630	8
1939	60	6
1940	251	7
1941	43	7
1942	68	7
1943	61	7
1944	448	8
1945	85	7
1946	70	7
1947	117	8
1948	52	8
1949	102	8
1950	210	8
1951	289	8
1952	137	8
1953	118	8
1954	292	9
1955	301	8
1956	196	8
1957	553	8
1958	129	8
1959	145	7
1960	85	8
1961	64	8
1962	134	9
1963	54	9
1964	64	9
1965	107	8
1966	74	8
1967	48	8
1968	49	8
1969	194	9
1970	64	8
1971	76	8
Total	10,033	

* Storm damages are placed in categories varying from 1 to 9 as follows:

1	Less than $50	4	$5,000 to $50,000	7	$5 million to $50 million
2	$50 to $500	5	$50,000 to $500,000	8	$50 million to $500 million
3	$500 to $5,000	6	$500,000 to $5 million	9	$500 million to $5 billion.

NOTE.--The above estimated losses are based on values at time of occurrence.

NORTH ATLANTIC TROPICAL CYCLONES, 1971

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The 1971 North Atlantic tropical cyclone season will be remembered for several reasons. It featured the longest-lived hurricane on record--Ginger. Two storms had double lives; Chloe and Irene became Lily and Olivia in the eastern North Pacific. And during the Texas floods of Fern, a horse drowned in the living room of one home while a pig survived in the bathroom of another.

From the 4th of July to the 21st of November, 12 tropical cyclones came to life in the North Atlantic region; five became hurricanes; five crossed the U. S. coast. In the United States, there was an estimated $212.58 million damage and eight persons lost their lives. Hurricane Edith produced the highest sustained wind of 140 knots and the lowest pressure of 943 millibars. Both occurred off the Nicaraguan coast. Six tropical cyclones formed in September, and from the 11th to the 13th, five were going at the same time. During the past 30 years, the average tropical cyclone season has lasted from July 6 through October 30 with an average of 10 tropical cyclones, six of which have become hurricanes. An average of three to four tropical cyclones have crossed the U. S. coast each year.

TROPICAL STORM ARLENE, JULY 4-7

Arlene formed from an extratropical frontal low which had developed about 100 miles south of Cape Hatteras. On the 5th, satellite pictures revealed a circular cloud system completely detached from the frontal cloud mass. A reconnaissance crew found 45-knot winds, a 1002-millibar pressure center, and a warm tropical core. The MOBIL MERIDIAN encountered 40-knot winds and 16-foot seas about 60 miles west of the developing storm's center on the 4th. The next day, four ships encountered 35- to 45-knot winds and 6- to 8-foot seas within 150 miles of Arlene's center. They were the BALTIMORE, ECLIPSE, MARINE FIDDLER, and FREDERICK LYKES. The storm was moving northeastward. Arlene reached peak intensity on the evening of the 6th when her central pressure dropped to 1000 millibars. The highest wind was 52 knots from a ship south of Newfoundland. On the 7th, Arlene gradually turned extratropical off Newfoundland.

HURRICANE BETH, AUGUST 10-17

Beth was spawned by an upper-level low off the east coast of Florida. As a depression, she paralleled the coast from the 10th to the 13th. During this period, conditions were unfavorable for development. However, once east of Cape Hatteras, Beth deepened rapidly. Early on the 14th, she reached tropical storm strength with a 995-millibar central pressure, and 10 hours later Beth was a hurricane generating 68-knot winds around a 990-millibar central pressure. The Norwegian ship ATLANTIC FOREST encountered gales on the 14th and 15th. The first time she was about 120 miles southeast of the storm's center, and 24 hours later, she was about 280 miles southeast of the rapidly moving hurricane. The ship was running in 13- to 17-foot swells. The ATLANTIC COGNAC at 0600 on the 15th recorded a 983-millibar pressure with 65-knot winds. The hurricane attained her greatest intensity some 200 miles off Cape Cod on the 15th when her pressure fell to 977 millibars and surface winds were estimated at 75 knots. Cooler sea and air temperatures weakened Beth as she approached Nova Scotia. She passed just off Halifax and made landfall during the afternoon of the 16th near Copper Lake where a 983.6-millibar pressure was reported at 1730 on the 16th.

Beth continued north-northeastward passing just west of Sydney, Cape Breton Island. In her extratropical stage, Beth moved across the Cabot Strait and along western Newfoundland.

Beth was responsible for record rainfall amounts in parts of Nova Scotia. Halifax recorded 9.37 inches in 39 hours. A 24-hour total of 7.28 inches was second only to a 9.40-inch total on September 21, 1942, in a similar situation. These heavy rains were responsible for damage in excess of $1 million. Elsewhere totals ranged from 3 to 5 inches, and lesser amounts fell over New Brunswick, Prince Edward Island, and Newfoundland. Winds were light throughout the area. Sustained winds of 30 knots were recorded on Prince Edward Island.

Damage to crops due mainly to flooding was extensive. Sections of highways and bridges were washed out. Fresh water supplies at Dartmouth remained contaminated for days following the storm because of excessive runoff into the supply lakes.

Total damage in Nova Scotia was estimated at $3.5 million. No fatalities were reported.

TROPICAL STORM CHLOE, AUGUST 18-25

Satellites tracked a tropical disturbance, from the African coast on the 13th, as it moved rapidly westward (20 knots) across the Atlantic. An Air Force reconnaissance crew penetrated the storm early on the 18th, some 400 miles east of Barbados, and found a 1007-millibar central pressure with 30-knot winds in the northeast quadrant. The depression reached St. Lucia on the morning of the 19th and then moved into the western Caribbean. Winds were about 25 knots with gusts to 45 to 50 knots on Barbados, Dominica, and Martinique. Heaviest rains were 5.78 inches in 13 hours at Husbands, Barbados, and 4 inches in 24 hours on Martinique. Once into the Caribbean the, as yet unnamed, depression slowed to less than 15 knots and turned toward the north-northwest. Late on the 19th, the depression became Tropical Storm Chloe as central pressure dropped to its lowest point, 1004 millibars. This intensity was confirmed the next morning by the MOBILGAS and reconnaissance aircraft as they encountered 47- to 55-knot winds. Later on the 20th, the JOSEPH P. GRACE and then the CORANTIJN encountered 50-knot winds in 20-foot seas within 100 miles to the northeast of Chloe's center. A short time later Chloe began to weaken as pressure rose to 1007 millibars and maximum sustained winds fell to 30 knots in the northeast quadrant.

On the 21st, Chloe was downgraded to a tropical depression moving west-southwestward. The depression

turned west-northwestward and moved across Swan Island on the 23d. On the 25th, she moved into British Honduras. It is believed that the remnants of Chloe developed into what was to become Hurricane Lily in the eastern North Pacific.

TROPICAL STORM DORIA, AUGUST 20-29

Doria was spawned by an African disturbance which had migrated across the Atlantic. Interest in the system was spurred by satellite pictures early on the 20th. These pictures showed an organized cloud pattern about 1,000 miles east of the Windward Islands. Reconnaissance aircraft reached the newly formed tropical depression later in the day. There was little change in this second stage of development as Doria moved west-northwestward through the Leeward Islands on the 23d and into the Bahama Islands on the 25th. Conditions improved on the 25th. The storm became better organized and generated 30- to 35-knot squalls northeast of its center. On the afternoon of the 26th, a definite 1008-millibar center was found about 100 miles north of the Bahamas. The depression was named Doria, and a few hours later, was a tropical storm. She plodded northward and deepened 20 millibars in 24 hours.

Early on the afternoon of the 27th, Doria crossed the North Carolina coast, west of Morehead City (near Emerald Isle). Just prior to landfall, her central pressure reached its lowest point, 989 millibars. About this time, the DOCUMONTE encountered 50-knot winds about 60 miles south of the storm's center. Doria pounded eastern North Carolina with gales and driving rain as she moved across the State and into southeastern Virginia that evening. The Outer Banks and the shores of Pamlico and Albemarle Sounds were pelted by 4- to 5-inch rains, lashed by 50-knot wind gusts, and inundated by 1- to 2-feet tides. At Atlantic Beach, close to Doria's point of landfall, winds reached 60 knots in gusts, tides were 3 to 4 feet above normal and pressure dropped to 995 millibars. Heaviest rains fell ahead of the storm, and the 4-inch totals were confined to eastern sections of the State. Damage throughout North Carolina was minor, and total property and crop estimates were set at about $150,000. There were no reports of storm-related deaths.

The day before Doria reached North Carolina, a stationary frontal trough hung over the east coast bringing rain from North Carolina to New England. The combination of this trough and Doria produced the high rainfall totals that occurred during the 2-day period. The storm rainfall amounts refer to this combination of factors.

Doria accelerated and moved northward along the Virginia-Maryland-Delaware shore during the night of the 27th. Winds over the open waters of the Atlantic were higher than those along these coasts. This was attested to by the ESSO HONDURAS which battled 50-knot winds in 20-foot seas about 100 miles east of the storm's center at 0000 on the 28th. At about the same time Norfolk, right in the storm's path, was being buffeted by 45-knot winds. Tides rose to 3.6 feet above normal at Portsmouth Navy Yard and 2 to 4 feet above normal elsewhere along the eastern shore.

Rains in the three-State area were greatest in eastern Maryland where totals of up to 9.80 inches fell near La Plata and in Delaware where Talleyville recorded 7.96 inches. Over the western Piedmont section of Virginia and most of eastern Maryland and Delaware 4- to 6-inch totals were common. A tornado touched down near Norfolk Regional Airport causing some $250,000 damage. Doria caused some additional $125,000 damage in southeastern Virginia. Damage in Delaware and Maryland was termed light. One storm-related death occurred in northern Virginia.

In the early morning hours of the 28th, Doria made her way up the Jersey shore toward New York City. It was in New Jersey that she wrought the most damage. Excessive rainfall had occurred over most of New Jersey and southeastern Pennsylvania during the 24 hours preceding Doria. Although the rainfall which could be directly attributed to Doria was less than that from the front, the combined fall in a short period of time produced devastating floods in central and northeastern communities of New Jersey and minor flooding in the southeastern counties of Pennsylvania. In the Pennsylvania counties of Chester, Delaware, Montgomery, Philadelphia, and Bucks, flash floods closed streets and caused power failures. Rainfall totaled over 6 inches in parts of the area with a 6.57-inch fall in Philadelphia and an unofficial 7.5-inch report at Kennett Square near the Delaware border. The strongest reported wind was a 63-knot gust in Philadelphia. One person was killed by a falling limb in Chester County. Damage in Pennsylvania was estimated around $300,000.

The hardest hit New Jersey communities were Bound Brook, Manville, and Elizabeth. Trenton set a 24-hour record with 7.55 inches of rain and had an 8.09-inch total. The old Trenton record was 5.42 inches during a 24-hour period in October 1903. New 24-hour marks were also set at New Brunswick and Newark. Newark was deluged with 8.01 inches of rain. Streets and highways became flooded in many areas, and mudslides blocked some roads in Middlesex County. New York to Philadelphia railway service was interrupted for some 29 hours when water flooded the Trenton station. The American Cyanamid Co. at Bridgewater suffered severe flooding. Total damage in New Jersey was estimated at $138.5 million. Of this amount $53.5 million was done to bridge, water, and sewer systems and $85 million was a result of damage to other private and industrial property. Minor damage and beach erosion resulted from the 20- to 40-knot winds and 2- to 4-feet above normal tides along the coast. Three people drowned in New Jersey.

Come Saturday morning, early-rising New Yorkers awoke to the sound of 15- to 25-knot winds and a second straight day of driving rain. Stronger winds of 30 to 35 knots with gusts to near 45 knots had occurred earlier in the morning. Before the storm was finished 5.96 inches of rain fell at Central Park, 3.69 inches at Kennedy Airport, and 5.49 inches at LaGuardia. At LaGuardia 2.29 inches fell in 1 hour on the afternoon of the 27th. The early morning tide at the Battery was 4.7 feet above normal. Out on Long Island, at Bridgehampton, winds gusted to 52 knots but rain totaled only 0.41 inch.

Heaviest precipitation occurred from New York City northward up the Hudson River Valley to the Poughkeepsie-Kingston area. Amounts ranged from 6 to 8 inches over the 27th-28th. Staten Island recorded 7.86 inches and Glenham in southwestern Dutchess County reported 7.81 inches. Suffern Water Works in western Rockland County recorded 8.55 inches. Rain totaling 4 to 5 inches fell as far north as Lake George and 2.5- to 3.5-inch totals were reported as far west as Sullivan, Delaware, and Otsego Counties, as well as in the eastern Mohawk Valley and northward through Essex County. Precipitation decreased eastward across Long Island

from the 6- to 8-inch totals around New York City to 2.5 to 3.5 inches in Nassau and northwestern Suffolk County to less than 1 inch on the eastern end of the island.

Streets, highways, and subways were flooded in New York City, and all surface transportation was greatly hampered. Similar flooding occurred on western Long Island and over much of the Hudson River Valley with small streams and creeks overflowing. Wind damage was light, and downed limbs and powerlines represented the primary source of trouble. Some 25,000 homes were without power on Long Island. Agricultural losses were light; some fruit was dislodged from trees and some corn blown over. Total damage in New York was estimated at $4.32 million.

Doria began to weaken as she headed inland over western Connecticut and western Massachusetts on Saturday morning. However, her forward speed increased to 30 to 35 knots. Strongest winds were east of her center. Bridgeport experienced a 65-knot gust. At Boston, gusts were reported at 50 knots and on top of Blue Hill at Milton, Mass., a 75-knot gust was recorded during the morning of the 28th. As far north as Concord, N. H., winds gusted to 45 knots.

While the storm surge produced tides up to 5 feet above normal, tides at the time were near their low and coastal flooding was minimal. However, high surf did batter some homes and swamp some small boats. Sightseers were out in force to admire the pounding surf. At Marblehead, Mass., a young man was drowned after rescuing two others who had been caught by the high surf.

Rain in New England was heaviest mainly west of Doria's center. The combination of the frontal system and the tropical storm produced a 5- to 6-inch band of rain from Pittsfield, Mass., to north of Brattleboro, Vt., and 6-inch totals in southwestern Connecticut. Northwestern Connecticut, western Massachusetts, and Vermont had 2 to 4 inches of rain. In eastern Connecticut, northwestern Rhode Island, central Massachusetts, New Hampshire, and central and western Maine, 1- to 2-inch totals were common; some sections of New Hampshire had 2 to 3 inches. Elsewhere totals were less than 1 inch.

In Connecticut and throughout most of New England, east of the storm's center, the ground was littered with leaves, branches, and often whole trees. Utility lines were knocked down in some areas. Some 150,000 homes were without electricity in Connecticut. Autos and buildings were damaged by fallen limbs. Vermont got little wind, but rain washed out several bridges. Total damage estimates for Connecticut and New England run from $4 to $5 million.

During the afternoon of the 28th, Doria started to turn extratropical as she tore across western Maine. That evening she raced into Canada and across the St. Lawrence River, blasting St. John, New Brunswick, with 50-knot winds; on the 29th, Gander, Newfoundland, recorded a 55-knot gust.

Total storm damage in the United States was $147.35 million, mostly the result of flooding. Six people lost their lives; three in New Jersey, one in Massachusetts, one in Pennsylvania, and one in Virginia.

HURRICANE EDITH, SEPTEMBER 5-17

From the depths of the Tropics came the season's most potent hurricane. Developing farther south than most September storms, Hurricane Edith made landfall three times during her lifetime. Nicaragua and Honduras felt her blow first and worst. Then British Honduras and the Yucatan Peninsula were stung. Finally, Edith swept ashore for the last time in Louisiana.

The powerful storm gave first indications of life near 11.5° N., 57.0° W., on the 5th. It was at this time that an exploratory reconnaissance team found a closed circulation. The normal stillness of a tropical evening on Grenada, and other islands in the southern Windwards, was shattered by torrential downpours riding 30-knot winds. The following day, coastal residents of Venezuela saw cloudiness and felt rain associated with the depression as it skimmed westward across the southern Caribbean. Edith became a tropical storm and was christened on the 7th. Less than 24 hours later, some 150 miles north of Barranquilla, Colombia, pressure fell to 993 millibars, winds reached 65 knots, and Edith became a hurricane. The real fireworks came on the 9th as the storm moved predictably west-northwestward toward Nicaragua. It was on this day that Edith, unpredictably and explosively, intensified to a great hurricane (central pressure less than 950 millibars for at least 24 hours). Her central pressure plummeted to 943 millibars. Her winds spiraled to an estimated 140 knots. She was described by reconnaissance crews as extremely turbulent. With a small, perfectly formed eye, just 5 miles in diameter, Edith was likened to a giant tornado.

Around midday on the 9th, Cape Gracias, Nicaragua, felt the awesome power of this superstorm. A decade had elapsed since this region had known the fury a hurricane could bring. Edith made her way across Honduras. As she took her toll, the land took its toll, and when Edith entered the Gulf of Honduras, early on the 10th, she was weak. A 1-day journey across the Gulf brought a minimal hurricane to the shores of British Honduras near Belize. Coastal winds surged to 45 to 50 knots on some keys, but as Edith moved ashore, her strength dwindled rapidly. She made an uneventful trip across Mexico's Yucatan Peninsula and limped into the Gulf of Mexico near Campeche on the night of the 11th. The beaten storm headed toward Mexico and showed no signs of improvement until the 13th. Then the life-restoring powers of the Gulf of Mexico began to take effect and Edith once again started to deepen. However, it looked like the end as the tropical storm headed inland near Soto La Marina, Mexico, but like a woman, she changed her mind and turned north-northeastward back out to sea. After this moment of indecision, Edith accelerated, intensified, and headed for the Louisiana coast. She regained hurricane status about 100 miles northeast of Brownsville, Tex., on the 15th. Her 978-millibar pressure center crossed the Louisiana coast in Cameron Parish, between Grand Chenier and the Rockefeller Wildlife Refuge, at about 0800 c.s.t., on the 16th. Edith moved rapidly across south, central, and eastern Louisiana during the next 6 hours. The eye passed near Lafayette at about 1000 c.s.t., 12 to 15 miles northwest of Baton Rouge shortly after noon, and into southern Mississippi near McComb by early afternoon. The storm slowed and weakened as she moved through Mississippi and across central Alabama on the 17th. By the next morning, she gave out over northern Georgia.

Edith was responsible for widespread damage in a remote and sparsely populated area of Nicaragua.

In this area, at least 28 persons lost their lives and 1,876 were left homeless. Poor roads and flooding isolated many of the villages. Food and relief supplies were flown in by United States helicopters and aircraft, in addition to the Nicaragua effort.

The Texas coast felt the fringe effects of Hurricane Edith as she moved through the Gulf of Mexico toward Louisiana. She generated tides up to 6 feet above normal in the Sabine Pass area and buffeted Freeport and Port Arthur with sustained 35-knot winds. Gusts reached 45 knots at Galveston, and pressure dropped to 1000 millibars at Brownsville. Rainfall was heaviest at Sabine Pass where 3.50 inches fell. Total damage in Texas was estimated at $180,000 of which $105,000 was to properties and $75,000 was to crops. Most property damage was in the Port Arthur area. Winter vegetables and rice, mainly in Cameron and Jefferson Counties, suffered from the rains.

As Hurricane Edith moved toward Louisiana on the night of the 15th, winds and tides increased. Highest sustained winds measured on shore were 60 knots with gusts to 83 knots at Cameron. The lowest reported pressure was 985.8 millibars at Lafayette. Storm rainfall, accumulating over a 2-day period, ranged from near 2 inches over extreme southeast Louisiana to 6 to 8 inches near and to the north of Edith's track from the west Louisiana coast northeastward to West Feliciana Parish. Two-inch totals were also common in sections of southwest, central, and northeast Louisiana, which were on the fringe of the storm.

The fast forward movement of Edith as she approached the coast caused only a moderate buildup of Gulf waters in the low-lying coastal areas. Tides ranged from near 5 feet to more than 8 feet above mean sea level. Highest storm tides were reported in Vermilion and Cote Blanche Bays.

As one of the stronger hurricane rainbands swept across southern Louisiana during the morning of the 16th, several tornadoes were reported. One moved along an intermittent 7-mile path through eastern sections of Baton Rouge, damaging two schools, a shopping center, and some residences.

Edith's damages were mostly light to moderate throughout southern Louisiana. Trees were uprooted, windows broken, billboards toppled, and mobile homes damaged. In many areas, wind and rain did considerable damage to crops. The greatest losses were to sugarcane, soybeans, rice, cotton, pecans, sweet potatoes, and vegetables. The Louisiana Wildlife and Fisheries Commission reported damage to levees, roads, and water control structures on the Rockefeller and Marsh Island Wildlife Refuges. Total damage in Louisiana was estimated at $25 million, including $20 million in crop damage and $5 million in property damage. These figures include tornado damage.

In Mississippi, maximum sustained winds along the coast and in the southeast were 40 knots with gusts to 60 knots. Storm rainfall was heaviest in the southwest where amounts of 5 to more than 6 inches were recorded. Most of this resulted from an area of heavy thunderstorms in the Liberty-Brockhaven area during the morning of the 16th. Tides along the coast were 2 to 4 feet above normal. Wind damage was light, but there was some property and crop damage in areas of heavy rainfall. Several tornadoes were reported. One substantiated tornado was seen at about 1000 c.s.t. in Attala County. A motorist saw a small funnel dip down about 1 mile northeast of Ethel. The rope-like funnel caused intermittent damage along a 600-foot path some 25 to 50 feet wide.

Rain fell on Alabama Thursday night and Friday. Totals ranged from 1 to 3 inches with heaviest amounts in the central and southern parts of the State. Except for southeastern and extreme northwestern Georgia, rainfall was 2 inches or more over that State. There were 4-inch totals over Wilkinson, Washington, Johnson, and Laurens Counties in central Georgia and over the west-central counties of Muscogee, Chattahoochee, and Stewart. Rain began on the morning of the 16th in the west, and ended early on the 19th in the east. While there was some overflow of small streams, there was no flash flooding and only minor damage.

HURRICANE FERN, SEPTEMBER 3-13

Hurricane Fern was spawned by a tropical wave that had moved out of the Caribbean in the beginning of the month. Early on the 3d, a tropical depression was located in the Gulf of Mexico near 27.5° N., 87.5° W. This depression moved slowly northwestward to north of Lake Pontchartrain by the morning of the 5th. At this point, the system turned southwestward. The depression drenched the New Orleans area with 6- to 7-inch rains. Once back over warm Gulf waters, the depression began to intensify. Fern reached tropical storm strength late on the 7th as her central pressure dropped to 1000 millibars. The intensifying storm then began to turn, and, by the following day, was heading toward the northwest and was generating hurricane-force winds near her center. Fern's central pressure was down to 987 millibars when she became a hurricane. Gale-force winds were already raking the coast from Galveston to Freeport on the night of the 9th, with Fern's center still 100 miles to the southeast. As the hurricane approached the Texas coast during the daylight hours of the 10th, she began to swing toward the southwest. Her central pressure dropped to its lowest point, 979 millibars, at 0600 c.s.t., on the 10th. Peak winds reached 78 knots. Then part of the eye passed over Freeport. It moved past Port O'Connor, near Seadrift, and was over Matagorda Island by about 1100 c.s.t. The eye continued to hug the coastline until it neared Rockport, where it slowed and began to drift inland. At about 1300 c.s.t., the eye was southeast of Austwell. By 1500, it was east of Bayside. Now a tropical storm, Fern hesitated for a few hours and then around 1910 c.s.t., her eye moved into Aransas Pass. At 2030 c.s.t, Aransas Pass recorded a 983.4 millibar pressure. By 2135, the eye had moved over Corpus Christi Bay and was drifting southwestward. At 0254 c.s.t., on the 11th, Corpus Christi recorded a 981.4-millibar pressure. The lowest reported pressure by a land station was 979.34 millibars at Ingleside. About 2-1/2 hours after eye passage, Aransas Pass was belted with an east wind of 48 knots with gusts to 68 knots. Indications are that the storm accelerated and by early morning was just south of Hebbronville. Later, the tropical storm crossed the Mexican border near Zapata. On the 13th, she finally broke up in the mountains north of Monterey.

Hurricane Fern produced only moderate tides and winds, but her heavy rainfall was responsible for destructive floods. Maximum sustained winds of 57 knots were recorded at Corpus Christi. Sustained winds ranged up to 75 knots at Port O'Connor, where a wind gage was blown away when gusts reached 87 knots. Gale-force winds were experienced from just north of Galveston to near Brownsville. Gusts of 50 knots or more were reported from Galveston to south

of Corpus Christi. Tides from Port Arthur to Brownsville ran 2 to 6 feet above mean sea level, with 5- to 6-foot levels confined to the Galveston-Freeport area. A tide 6 feet above mean sea level was observed at the U. S. Coast Guard Station at Freeport at 0800 c.s.t., on the 10th.

Fern produced heavy rains in an area north and west of Corpus Christi. Downpours from 15 to 26 inches soaked Bee, Refugio, and San Patricio Counties. Highest totals were 26.0 inches 2 miles south-southeast of Beeville, 25.8 inches 3 miles north of Skidmore, and 21.5 inches at Papalote. Totals of 10 tc 15 inches fell over Calhoun, Aransas, Matagorda, Golidad, and Dural Counties. Along the coast from Galveston to Rockport, rainfall amounts increased from 5 inches up to 12 inches. Five-inch totals extended inland as far as Houston. Amounts dwindled rapidly to 1.07 inches near Port Arthur in the north and to a paltry 0.02 inch at Brownsville. Fern was still potent as she made her way into Mexico; Laredo, some 75 miles north of the center, recorded 8.28 inches.

While dumping 10 to 26 inches of rain on the Coastal Bend area, Fern caused the worst flooding in south Texas since hurricane Beulah in September 1967. Numerous towns were isolated, and many were flooded. The heavy rainfall sent floodwaters crashing over Wesley Seale Dam at Lake Corpus Christi, causing major flooding along the lower Nueces River. Considerable flooding also occurred on the Frio, Lavaca, Navidad, San Antonio, Guadalupe, Mission, and Aransas Rivers. Waters inundated most sections of Robstown, where a levee broke in two places. Water was 2 to 3 feet deep in some houses at Sinton. Some rural areas suffered the worst flooding of this century. In the Alice area, creeks reportedly rose to about the same height as during Beulah, but rose more rapidly and consequently caused more damage.

Five small tornadoes were observed during Hurricane Fern. Two occurred at Texas City on the 10th, one near Riveria on the 11th, one near Falfurrias on the 11th, and one near Orange Grove on the 12th. Total tornado damage was estimated at $18,000. There were no injuries. Six funnel clouds aloft were observed.

Property damage in Texas was estimated at $25.17 million, bringing the total storm damage to $30.23 million ($5.06 million crop damage). Hurricane Fern was directly responsible for two deaths in Texas. One swimmer drowned at the Corpus Christi City marina on the 11th, and another person drowned near Refugio on the 12th.

HURRICANE GINGER, SEPTEMBER 5-OCTOBER 5

At midday on September 10, the National Hurricane Center proclaimed that Tropical Storm Ginger had been born, some 275 miles south of Bermuda. At midday on October 5, a bulletin was issued that Ginger was dying some 420 miles northwest of the same island. These reports marked the beginning and the end of the longest-lived hurricane to ever roam the North Atlantic Ocean. It was probably the world's longest-lived tropical cyclone. For almost the entire month of September and into October, Ginger owned a large piece of the North Atlantic, threatening any trespassing ships with hurricane-force winds and dangerous seas.

Ginger, detected as a depression on the 5th near 25.5° N., 71.5° W., wound-up slowly and it wasn't until 1200 on the 10th that she reached tropical storm strength. However, the next day near 27.9° N., 63.3° W., Ginger was a hurricane. Her well-defined eye had a 991-millibar pressure at this time. She continued on an east-northeasterly heading at about a 10-knot speed. On the 12th, the ship ADONIS was whipped by 50-knot winds some 100 miles south of the storm's center. Winds near the center were about 75 knots. On the 13th, Ginger continued to grow and intensify as her 959-millibar center turned eastward; this was the lowest pressure in Ginger's long life. Maximum sustained winds were up to 90 knots. Suddenly, Ginger slowed and reversed her field. By the 14th, she was moving westward. While her intensity abated somewhat, Ginger remained big and strong as she meandered westward. On the 15th, the VICTORIA encountered 75-knot winds about 50 miles east of Ginger's center. Winds of 70 knots or more buffeted the ship for 6 hours. On the 16th, 45-knot winds lashed the ATHELDUKE some 90 miles north of Ginger's center and the DALILA some 100 miles to the west.

Ginger's central pressure continued to rise on the 17th and 18th as she turned southeastward. On the 19th and 20th, she completed a counterclockwise loop near 32° N., 52° W. After these acrobatics, the hurricane began a definite westward trek. On the 22d, Ginger crossed her path of 10 days before. At this time, her rising central pressure topped out at 995 millibars, and Ginger was a large loosely organized storm with gales out to 200 miles. On the night of the 22d, gales and heavy surf began to pound Bermuda. Early the next day, Ginger slipped by Bermuda about 100 miles to the south. Ginger's large circulation was also creating heavy surf along the north coast of Puerto Rico, Hispaniola, the Bahamas, and along the southeast coast of the United States.

Ginger slowed again and turned southward by the night of the 24th. At the same time, her central pressure began to fall. On the 25th, the BORNHEIM battled 50-knot winds, 150 miles northwest of the deepening pressure center. Winds rose to 75 knots near the center as swells continued to fan out and pound distant coastal areas. On the 26th and 27th, the ORE-SATURN and URSHALIM both within 60 miles of Ginger's eye encountered 50- to 60-knot winds. During this period, the storm underwent another change in direction as she swung around toward the northwest. On the afternoon of the 27th, Ginger's central pressure dropped to a secondary minimum of 969 millibars. Maximum sustained winds were near 85 knots. Early on the 25th, the empty 11,007-ton tanker PLAGIOLA on a run from Portland, Maine, to Curacao encountered 45-knot easterly winds some 180 miles northeast of the storm's center. The PITTSBURGH encountered 60-knot winds on the 14th, as did ORE-SATURN on the 26th. Winds of 50 knots were encountered by the MOSTANGER on the 17th and the EDWARD L. STEIMER on the 27th.

Ginger accelerated on the 29th, but then slowed the following day as she approached the North Carolina coast. She came ashore near Morehead City late on the 30th; this was close to where Tropical Storm Doria had moved inland just 1 month before. Once inland, the large storm weakened rapidly. It was just a dissipating depression by October 1. On the 2d, the weakening storm moved northward into southern Virginia, then turned eastward and moved back out into the North Atlantic near the mouth of the Chesapeake Bay. On the 5th, the remnants of Ginger were seen at 36° N., 70° W., heading east-southeastward.

As Ginger moved toward the North Carolina coast, wind gusts up to 80 knots were reported at Atlantic Beach. Gusts from 35 to 65 knots were common along the Outer Banks and the shores of Pamlico Sound. Maximum sustained winds were less than 45 knots over eastern

North Carolina and southern Virginia. Ocean tides ran 2 to 4 feet above normal from Norfolk to Morehead City. Tides on Pamlico Sound and its estuaries ran 4 to 7 feet above normal. At Washington, Aurora, New Bern, and Cherry Point, tides were all 6 feet or more above normal.

Rain was heaviest along the shores of Pamlico Sound, where 10 to 13 inches doused several east-central North Carolina counties. It was here that crops suffered heavily. Thousands of acres of corn and soybeans were seriously affected; damage was estimated at $10 million. This was the greatest economic impact of any hurricane on North Carolina since Donna in September 1960. Rainfall totals of greater than 10 inches were reported at Bayboro, Belhaven, Aurora, and on Roanoke Island. Property damage was minor in most areas. In areas of flooding, it was termed light to moderate.

Rainfall was moderate in southern Virginia. Norfolk reported a storm total of 7.61 inches between September 30 and October 3. Totals throughout the southeastern part of the State generally exceeded 2 inches, and many exceeded 5 inches. Along the Maryland-Delaware eastern shore, rainfall totals of 0.5 inch to 2 inches were common. A maximum sustained wind of 24 knots was reported at the Indian River Coast Guard Station.

No deaths or injuries were reported anywhere, and there were no tornadoes associated with Ginger.

TROPICAL STORM HEIDI, SEPTEMBER 10-14

Tropical Storm Heidi developed from the fifth tropical depression spawned by a persistent trough of low pressure which hung over the southwestern Atlantic for nearly 2 weeks. Although Heidi had a warm core, she never acquired all the characteristics of storms born deep in the Tropics. As a depression, she was first positioned 250 miles east of Great Abaco Island, in the Bahamas, on the 11th. She reached tropical storm strength on the 12th before crossing the 30th parallel on a meandering northward track. Late the following day, Heidi reached her full potential when winds near her 996-millibar center rose to 50 knots. A few hours later, the SUSANNE FRITZEN got caught in 35-knot winds 130 miles east of Heidi's center. Heidi maintained tropical storm intensity as she passed 60 miles east of Cape Cod at 1200 on the 14th. However, when she crossed the Maine coast a few hours later, winds were less than gale force.

Heidi turned extratropical around 0000 on the 15th; she washed out between the northern tip of Maine and the mouth of the St. Lawrence River less than 24 hours later.

HURRICANE IRENE, SEPTEMBER 11-20

Irene was the third African disturbance of the season to reach tropical storm intensity in the Caribbean Sea. The disturbance moved off the African coast on the 7th as evidenced by satellite pictures and the upper air soundings at Dakar. Traveling westward at 18 knots along the southern periphery of the subtropical anticyclone, the disturbance began to decelerate and turn to the west-northwest on the 10th. During this period, ATS-3 satellite movie loops and ship reports gave some evidence of a circulation.

Air Force reconnaissance reports on the 11th gave proof that a weak surface depression existed about 800 miles east of the Windward Islands.

The depression turned westward, then southwestward, and slowed considerably while moving through the Grenadine Islands. Beginning on the 15th, it gradually accelerated while following a track paralleling the South American coast roughly 75 miles offshore. The center moved across Curacao, Netherland Antilles, early on the 16th, and later in the day passed just off the tip of the Peninsula of Guajira in Colombia. During this period, the central pressure remained at 1008 millibars with a broad calm center and maximum sustained winds of 30 to 35 knots well to the northeast of the center. The maximum sustained winds reported were 23 knots at Aruba, Netherland Antilles, and 25 knots with gusts to 37 knots at Barbados. The greatest 24-hour rainfall was 3.35 inches at Trinidad.

The depression moved into the western Caribbean Sea traveling at 13 knots. Moving away from the South American land mass, Irene made another gradual turn to the west-southwest and slowly strengthened. On the morning of the 17th, a Navy reconnaissance plane reported a minimum pressure of 1005 millibars and sustained winds of 45 knots. At this time, tropical storm Irene was named while located about 350 miles east of San Andres.

Irene gradually strengthened during the next 36 hours. Air Force reconnaissance reported the lowest central pressure of 989 millibars and maximum sustained winds of 60 knots. The ATS-3 movie loop for the 18th showed the development of an eye and spiral bands emanating from the Pacific Ocean across the Isthmus of Panama and into the deepening Irene. Based on the above information, Irene was upgraded to a hurricane on the evening of the 18th. Navy reconnaissance reports showed little change in intensity as the center made landfall about 40 miles south of Bluefields, Nicaragua, early on the 19th. Heavy rains affected a large area from Honduras to Panama on the basis of an unusually large rain area to the north and east of the center.

Gale-force winds occurred all day on the 18th at San Andres with maximum winds reaching 40 knots. Bluefields reported 40 knots on the 19th.

No reports of death or damage have been received thus far from the area of strongest winds, but a Navy reconnaissance plane reported visible damage along the sparsely settled coastline and observed the center of Irene over the eastern edge of Lake Nicaragua. By the morning of the 20th, the center had emerged into the Pacific Ocean and was renamed Tropical Storm Olivia. This is the first known Atlantic hurricane to cross into the Pacific with almost immediate regeneration to a tropical storm.

TROPICAL STORM JANICE, SEPTEMBER 21-24

Tropical Storm Janice was first observed as a disturbance moving off the African coast by the ATS-3 satellite on the 16th. The disturbance moved westward at 15 knots and became a tropical depression on the 21st. Aircraft reconnaissance located the depression center, with highest winds of 30 knots some 1,000 miles east of Barbados that evening.

During the 22d, reconnaissance aircraft indicated an increase to storm strength. The wind field was not well organized with maximum sustained winds of 50 to 55 knots well to the north and east of a large area of light winds. The pressure minimum of 1005 millibars in

this light wind area was the lowest reported in Janice at any time. Janice continued west-northwestward at 15 knots and began to weaken on the 23d, finally being reduced to a tropical depression early on the 24th.

The large outflow pattern associated with Hurricane Ginger to the northwest led to 20-knot northwesterly winds over the top of Janice. These winds separated the lower level circulation of Janice from the convective mass of the storm and weakened her in an area normally favorable for intensification.

Depression Janice took a gradual turn to the northwest as it approached the trough extending southward from Hurricane Ginger, located southeast of Bermuda. Reconnaissance aircraft were unable to locate a circulation by the afternoon of the 24th. Thereafter, the remnants of the depression moved north-northwestward as an elongated cloud mass and became absorbed in the circulation around Ginger.

Although the system passed northeast of the Caribbean, a few heavy showers occurred in the Leeward Islands during the late afternoon and evening of the 24th. St. Kitts with a rainfall amount of 4.10 inches, most of which fell in a thunderstorm during the late evening, was the only station to report a large amount. There were no reports of damage in the Leeward Islands.

TROPICAL STORM KRISTY, OCTOBER 17-21

At 0000 on the 18th, a tropical depression formed from a cloud mass some 500 miles northeast of Puerto Rico. Later that day, a reconnaissance flight found a closed circulation with a central pressure of 1009 millibars. The storm was moving north-northeastward at 10 knots. Again the following day, a 1009-millibar pressure was found and winds were measured at 30 knots. Early in the evening of the 19th, Kristy reached tropical storm intensity.

On the 20th, Kristy passed very close to Ocean Station Vessel "E" where pressure dropped to 996.5 millibars and maximum sustained winds reached 40 knots. Later in the day, the British ship POTOSI reported 55-knot winds and a pressure of 992.4 millibars far south of the storm's center. At this time, Kristy was moving at a forward speed of 30 knots. Even as Kristy was named, a rapidly moving cold front sweeping over the North Atlantic began to bring colder, drier air into the storm's circulation. The remnants of Kristy passed through the northern Azores on the morning of the 21st.

TROPICAL STORM LAURA, NOVEMBER 12-22

A tropical depression was spawned along the southern edge of a large cloud mass which had spread northward from Panama. From the 12th through the 14th, the depression moved northwestward and intensified; on the 14th, Tropical Storm Laura was christened. The next day Laura shifted to a northerly track. However, on the 16th, the storm slowed and gradually reversed her field. She came close to western Cuba, but her eye did not cross the coast. On the 17th, Laura completed a loop. It was about this time that she reached her peak when maximum winds were estimated at 60 knots and central pressure was measured at 994 millibars. During this loop, heavy rains extended 150 miles east and north of Laura's center. She doused the Isle of Pines with about 20 inches of rain.

Following her loop, Laura drifted westward for more than 24 hours before turning southward on the 19th and southwestward on the 20th. She had weakened on her westward drift but regained some strength in the southwestern Gulf of Honduras on the 21st just before moving inland near Punta Gorda, British Honduras. Once ashore, Laura broke up over the mountains of Guatemala.

ACKNOWLEDGEMENTS

This report was made possible by information furnished by the National Hurricane Center, Miami, Fla., and by the Climatologists for Texas, Louisiana, Mississippi, Alabama, Georgia, South Carolina, North Carolina, Virginia, Maryland-Delaware, New Jersey, Pennsylvania, New York, and New England. If the reader desires additional synoptic details on these storms, he should refer to the appropriate issue of the Monthly Weather Review containing the seasonal summary prepared by the National Hurricane Center.

NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS

TOTAL NUMBER OF TROPICAL CYCLONES, LOSS OF LIFE AND DAMAGE

	Total Number Tropical Cyclones*		Total Number Hurricanes		Loss of Life		Damage by Categories**	
Year	All Areas	Reaching U.S. Coast	All Areas	Reaching U.S. Coast	Total All Areas	United States	Total All Areas	United States
1942	10	3	4	2	17	8	7	7
1943	10	4	5	1	19	16	7	7
1944	11	4	7	3	1,076	64	8	8
1945	11	5	5	3	29	7	8	8
1946	6	4	3	1	5	0	7	7
	48	20	24	10				
1947	9	7	5	3	72	53	8	8
1948	9	4	6	3	24	3	7	7
1949	13	3	7	2	4	4	8	8
1950	13	4	11	3	27	19	7	7
1951	10	1	8	0	244	0	7	6
	54	19	37	11				
1952	7	2	6	1	16	3	6	6
1953	14	6	6	2	3	2	7	7
1954	11	4	8	3	720+	193	9	9
1955	12	5	9	3	1,518+	218	9	9
1956	8	2	4	1	76	21	8	7
	52	19	33	10				
1957	8	5	3	1	475	395	8	8
1958	10	1	7	0	49	2	7	7
1959	11	7	7	3	57	24	7	7
1960	7	5	4	2	185	65	8	8
1961	11	3	8	2	345	46	8	8
	47	21	29	8				
1962	5	1	3	0	4	4	6	6
1963	9	1	7	1	7,218+	11	9	7
1964	12	6	6	4	266	49	9	9
1965	6	2	4	1	76	75	9	9
1966	11	2	7	2	1,040	54	8	7
	43	12	27	8				
1967	8	2	6	2	68	18	8	8
1968	7	3	4	2	11	9	7	7
1969	13	3	10	2	364	256	9	9
1970	7	4	3	1	74	11	9	8
1971	12	5	5	3	44	8	8	8
	47	17	28	10				
Total	291	108	178	57				
Mean	9.7	3.6	5.9	1.9				

**The Environmental Data Service has for some time recognized that, without detailed expert appraisal of damage, all figures published are merely approximations. Since errors in dollar estimates vary in proportion of the total damage, storms are placed in categories varying from 1 to 9 as follows:

1 Less than $50
2 $50 to $500
3 $500 to $5,000
4 $5,000 to $50,000
5 $50,000 to $500,000
6 $500,000 to $5 Million
7 $5 Million to $50 Million
8 $50 Million to $500 Million
9 $500 Million to $5 Billion

*Including hurricanes

+ Additional deaths for which figures are not available.

NORTH ATLANTIC TROPICAL CYCLONES FOR PAST YEARS—CONT'D

Frequency of Tropical Cyclones (Including Hurricanes) by Months and Years

	Feb.	May	June	July	Aug.	Sept.	Oct	Nov.	Dec.	Total
1942					3	3	3	1		10
1943				1	2	4	3			10
1944				3	2	4	2			11
1945			1	1	4	3	2			11
1946			1	1	1	1	2			6
1947				1	1	3	3			9
1948		1		1	2	3	1	1		9
1949					3	7	2	1		13
1950					4	3	6			13
1951		1			3	4	2			10
1952	(Feb.) 1				2	2	2			7
1953		1			3	4	4	1	1	14
1954			1	1	2	4	1	1	1	11
1955			1		4	5	2			12
1956			1	1	1	4	1			8
1957			2		1	4	1			8
1958			1		4	4	1			10
1959		1	2	2	1	3	2			11
1960			1	2	1	3				7
1961				1		6	2	2		11
1962					2	2	1			5
1963				1	1	5	2			9
1964			1	1	1	4	1	1		12
1965			1		2	2	1			6
1966			1	4	1	4		1		11
1967					1	4	3			8
1968			3		1	2	1			7
1969				1	6	2	3	1		13
1970		1		2	1	3				7
1971				1	3	6	1	1		12
Totals	1	5	16	26	67	108	55	11	2	291

Frequency of Tropical Cyclones Reaching Hurricane Intensity by Months and Years

	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1942				1					1
1943					1	1	1		4
1944			1	1	2	1			5
1945			2	1	3	1			7
1946		1		1	1	2			5
1947			1		1	1			3
1948				2	1	2			5
1949				1	3	1	1		6
1950				2	4	1			7
1951				4	3	4			11
1952	1			2	3	2			8
1953				2	2	2			6
1954				2	3	1			6
1955		1		2	3	1		1	8
1956				3	5	1			9
1957			1	1	1	1			4
1958		1			2				3
1959				3	3	1			7
1960		1	2		3	1			7
1961			1	1	2				4
1962			1		5	1	1		8
1963				1	1	1			3
1964			1	1	4	1			7
1965				2	3	1			6
1966				2	1	1			4
1967		1	3	1	1		1		7
1968				1	3	2			6
1969		1		1		1			4
1970				5	2	2	1		10
1971	1		1		1				3
				1	4				5
Totals	2	7	14	46	70	33	5	1	178

Summary North Atlantic Tropical Cyclones, 1971†

Storm name	Intensity	Date	Coast lines crossed	Highest sustained wind (kt)	Lowest pressure (mb)	U.S. damage (millions $)	Deaths
1. Arlene	Tropical storm	July 4-7		52	1000		
2. Beth	Hurricane	August 10-17	Nova Scotia, Newfoundland	75*	977		Estimated $3 million damage in Nova Scotia.
3. Chloe	Tropical storm	August 18-25	British Honduras	55*	1004		
4. Doria	Tropical storm	August 20-29	North Carolina	55*	989	147.35	United States-6 (New Jersey-3, Virginia-1, Massachusetts-1, Pennsylvania-1)
5. Edith	Hurricane	September 5-17	Nicaragua, British Honduras, Louisiana	140*	943	25.00	Nicaragua-35
6. Fern	Hurricane	September 3-13	Louisiana, Texas	80*	979	30.23	Texas-2
7. Ginger	Hurricane	September 5-October 5	North Carolina	90*	959	10.00	
8. Heidi	Tropical storm	September 10-14	Maine	50*	996		
9. Irene	Hurricane	September 11-20	Nicaragua	67*	989		
10. Janice	Tropical storm	September 21-24		55*	1005		
11. Kristy	Tropical storm	October 17-21		55*	992		
12. Laura	Tropical storm	November 12-22	British Honduras	60*	994		Cuba-1

*Estimates based on reconnaissance reports
†Includes only tropical cyclones that have been named

TROPICAL CYCLONE DATA
TROPICAL STORM DORIA
August 20-29, 1971

Station	Date	Pressure (inches) Low	Time°	Wind (miles per hour) Fastest Mile	Time°	Gusts	Time	Highest Tide (feet) *	Time°	Storm Rainfall (inches)	Remarks
SOUTH CAROLINA	Aug										
Charleston	27	29.77	0500	NW 22	1057			5.7 MLW	1148	T	1.75 in. at Ocean Drive Beach
NORTH CAROLINA											
Wilmington	27	29.68	1201	N 21	1159	N 30	1222	2 AN		2.19	Tide at Cape Fear
Hatteras	27	29.61	1557	SSE 41#	1557	S 54	1600			4.17	
Elizabeth City	27	29.33	1800			60					
VIRGINIA											
Norfolk	27	29.37	1951	NE 52	1837	NNE 71*	1909	3.6 AN		3.09	Tornado confirmed 10 mi west-southwest
Richmond	27	29.79	2158	SE 17	1347					1.40	of Norfolk Regional Airport.
DISTRICT OF COLUMBIA											
Washington National Airport	28	29.77	0100	NW 19	0014	W 26	0844			3.85	
MARYLAND											
Salisbury (FAA)	27	29.39	2330	ENE 36	2210	ENE 50	2210			3.34	
Assateague Island	27			SE 30	2215	50	2215	2 AN		3.58	
Baltimore (WSO)	27	29.75	28/0032	N 18	2347			2.7		4.39	Tide at Ft. Henry
Ocean City (C.G.Station)	27	29.33	28 0000 0100	E 23	2200	E 63	2330				
DELAWARE											
Wilmington	28	29.56	0156					3.2 AN	0000	5.09	Tide at Lewes
PENNSYLVANIA											
Philadelphia	28	29.44	0250	NW 51	0355	NW 73	0430			6.57	
NEW JERSEY											
Atlantic City	28	29.37	0230	SE 35	0055	SE 54	0048	5.3	0050	1.88	
Trenton	28	29.43	0145	NE 43	0159					8.09	7.55 in. rain in 24 hr set record for
Newark	28	29.46	0455	NW 23	0554					8.01	station
NEW YORK											
						NE 48	0335				
New York City (WSO)	28	29.43	0515	SE 32#	0424	SE 48	0424	3.8	0548	5.96	Tide at the Battery
New York City (J. F. K.)	28	29.44	0530	NW 32	0711	ESE 44	0308			3.69	
New York City (LGA)	28	29.43		S 40	0415	F 40	0252			5.49	2.29 in. of rain, 1340-1440 on the 27th.
CONNECTICUT											
Hartford	28	29.51	0745	SE 37	0645	SSE 48	0726			3.12	
RHODE ISLAND											
Providence	28	29.66	1018	SSE 44#	0738	SSE 61	0737	5.9 MLW		0.97	
MASSACHUSETTS											
Boston	28	29.62	1056	SSW 45	1018	SE 56	0857			0.83	
MAINE											
Portland	28	29.63				45					

° e.s.t.
One minute wind speed
* Anemometer at 60 ft
+ Tide above mean sea level unless noted
AN - above normal
MLW - above mean low water

HURRICANE EDITH
September 5-17, 1971

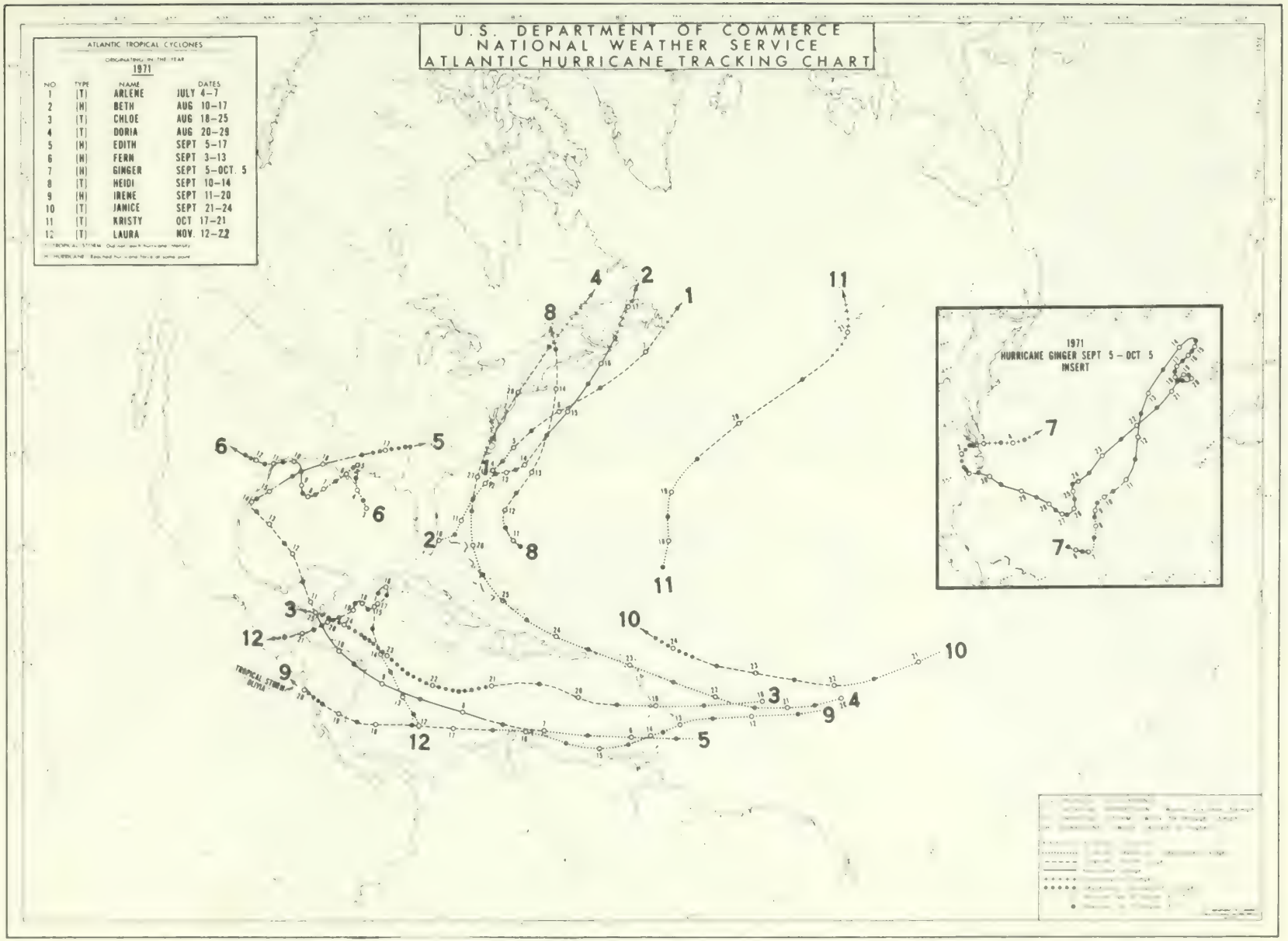
Station	Date	Pressure (inches)		Wind (miles per hour)				Tide (feet)#		Storm Rainfall (inches)	Remarks
		Low	Time·	Fastest Mile	Time·	Gusts	Time+	Highest	Time+		
TEXAS											
Brownsville (WSO)	15	29.53	0600	NW 27	0958	W 32	1604	1.8	0515	2.34	
Corpus Christi	15	29.60	1620	NE 21	1213	NE 28	1318	2.2	0900	0.57	Tide at Port Aransas.
Freeport	16	29.54	0600	NNE 40	0500	NE 45	0500	3.0	0500		
Galveston (WSO)	16	29.54	0300	NE 35	15/2314	NE 53	15/2317	4.0	0150	0.82	
Houston (WSO) IAH	16	29.69	0155	ENE 18	15/2329	E 25	15/2209	3.3	15/1500	T	
Port Arthur (WSO)	16	29.54	0507	E 40	0443	NE 47	0443			3.02	Damage estimated at $125,000.
Sabine Pass	16	29.58	0300	NE 35	0300	NE 40	0200	4.0	0200	3.50	
LOUISIANA											
Baton Rouge (WSO)	16	29.25	1207	SE 46	1106	S 64	1122			4.31	Tornado reported in eastern residential suburbs.
Boothville	16	29.79	1500	SW 28	1234	SSW 58	1215			2.03	Tornado reported at Venice.
Cameron	16	29.39	0600	NNE 69	0700	NNE 96	0700	4.7	0400		
Lafayette	16	29.11	1014	ESE 46	0939	ESE 69	0939			5.15	
Lake Charles	16	29.49	0702	NNE 47	0803	NNE 58	0737			2.99	
Morgan City	16	29.60	1035	WSW 30	1115	SSE 72	1030	5.8	1215		Tide at Cypremort Point was 9.7 ft.
New Orleans (WSO)	16	29.71	1250	SSE 32	1105	SE 51	0921			4.64	
St. Francisville	16	29.51	1240	WNW 50	1135	WNW 61	1144			4.10	
MISSISSIPPI											
Bay St. Louis	16			SW 45	1230	SW 65	1230			2.85	
Columbia	16	29.61	1530	SE 42	1500	SE 55	1500			1.18	
Hattiesburg	16	29.74	1455	NW 45	1455	NW 70	1455				
Jackson (WSO)	16	29.71	1822	NE 33	1934	NE 49	1702			4.77	
							1806				
Liberty	16									6.15	
McComb	16	29.00	1400	WNW 21	1600	SSE 40	1300			2.85	
Tylertown	16	29.34	1500	SE 35	1500	SE 48	1500			3.45	
ALABAMA											
Mobile (WSO)	16	29.83	1645	SSE 29	1405	S 43	1403	2.7	1900	2.33	
Birmingham (WSO)	17	29.90	0300	NE 18	16/2319	E 31	16/2301			1.94	
FLORIDA											
Pensacola (WSO)	16	29.88	1658	S 21	1759	S 30	1759	0.8		0.53	Tornado reported near Pensacola.

· Time is C.S.T.
Tide above m.s.l.

HURRICANE GINGER
September 5 - October 5, 1971

Station	Date	Pressure (inches)		Wind (miles per hour)				Tide (feet)#		Storm Rainfall (inches)	Remarks
		Low	Time+	Fastest Mile	Time+	Gusts	Time+	Highest	Time+		
NORTH CAROLINA											
Atlantic Beach	30	29.56	0130			NW 92	0305	4.0 AN			
Hatteras	30	29.43	1157	SE 44	0857	SE 70	0912			9.68	Ocean tides 2-3 ft above normal.
Topsail	30	29.35	1600			WNW 58	1600				
Holden Beach	30	29.52	1700			WNW 35	1700				
Wilmington	30	29.46	1901	NW 32	1200	WNW 44	1122			1.19	
Raleigh	01	29.67	0500	NNW 32	30/1709	N 46	30/1444			3.50	
Charlotte	01	29.82	1359	N 22	30/1150	NNE 30	30/1256			2.21	
VIRGINIA											
Norfolk	30	29.77	1430	NE 49	0935	NNE 50	0920	2.5 AN	1830	7.61	Near North Carolina border tides 3-4 ft above normal.
Richmond	02	29.76	1355	NE 21	30/1500	N 25	30/1320			1.83	
MARYLAND											
Salisbury (FAA)	02	29.82	0000	SSE 13	1430	SSE 26	1200			0.82	
Indian River Inlet	03	29.91	0200	NE 28	0200			2.3	1934		
Ocean City	03	29.71	0300	E 26	0700					0.33	
DELAWARE											
Dover AFB	02	29.83	1555	ENE 23	01/1406	ENE 29	01/1420			0.18	

+ Time is e.s.t.
Tide m.s.l.



Tracks of North Atlantic tropical cyclones, 1971

TROPICAL CYCLONES IN THE EASTERN NORTH PACIFIC, 1971

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The disturbance which developed into Hurricane Agatha appeared on May 21, opening the hurricane season in the San Francisco area of responsibility--east of 140° W. The season ended November 28, as the remains of minor Tropical Storm Sharon dissipated. Advisories, issued at 6-hr. intervals, ascribed hurricane intensity in 125 instances and tropical storm intensity in 185. Bulletins, ascribing depression intensity, numbered 89. Scheduled release time for advisories and bulletins were 0300, 0900, 1500, and 2100 G.m.t. The advisories and bulletins were broadcast on regular schedule by several CW marine radio stations and a voice recording by the forecaster over marine radio station KMI. Radio ham, Julio Erenata, of San Diego relayed advisories of special interest in Mexico to a Mexican Emergency Warning Net operated by radio amateurs, as he has for the past several years.

TWELVE HURRICANES, A NEW RECORD

Twelve cyclones were judged in postseason analysis to have attained hurricane intensity, and six others are considered to have had maximum intensity as tropical storms. The average number of hurricanes and tropical storms per year, as recorded during the preceding 5 years, was 15.4 tropical storms, including 5.4 hurricanes. No more than seven hurricanes are on record for years prior to 1971, though presumably in pre-satellite days many that occurred escaped detection. Hurricane days totaled 48, and tropical storm days 47, counting 2 days for a day with two storms. Five of the hurricanes had winds of 100 knots or more, and some of the others may have had. Carlotta was handled on advisories as no more than a 60-kt. tropical storm but was reclassified to a hurricane after a postseason review of information from U. S. Air Force (USAF) reconnaissance on July 3 and 4. The seasonal distribution of tropical cyclones by month of beginning is shown in table 1.

The 1971 count of 12 hurricanes and six tropical storms makes a combined average of 15.8 per year (table 2) for the 6 years of full operational satellite coverage. It makes an average of 6.5 hurricanes per year (table 3) for the same period beginning in 1966.

It can be seen from the track charts (figs. 5-6) that the heavily traveled shipping lanes off the coast of Mexico and Central America were affected by storm and hurricane activity on many days of the season. Most ships plying those lanes managed to avoid dangerous and damaging winds and seas. However, several ships were caught up in the hurricane-force winds of Lily on August 31, when the hurricane turned toward the Mexican coast sooner than expected. Hurricane force winds were also reported by one ship each in Agatha, Bridget, Olivia, and Tropical Storm Katrina. The one report in Katrina told of a severe tropical line squall with force 12 winds; it was judged to have been a short-duration wind.

Twelve fatalities in Mexico were charged to Lily. The heavy damage caused by Agatha near Playa Azul, Bridget at Acapulco, and Katrina in the Los Mochis area is detailed in summaries of the individual cyclones.

BASIC INFORMATION

Satellite pictures and ship reports in combination provided most of the clues as to the beginning of storm development. With few exceptions, the USAF 9th Weather Reconnaissance Wing provided daily reconnaissance on tropical storms and hurricanes, and on areas where there was a good reason to suspect storm development. When a reconnaissance report was available, usually for a 2100 advisory, it was ordinarily the basis for the stated position and intensity of the storm or hurricane.

Twice daily fixes were usually provided on storms within 200 miles of Baja California, done by one flight with 3 to 5 hours between fixes. Most of the flights were in WC-135 aircraft, because of the need for long-range capability from the home base at Sacramento, Calif., or a need to stop overnight and refuel WC-130 aircraft. Some flights were made in WC-130's by the 55th Weather Reconnaissance Squadron, and a few of those went into Acapulco overnight. Other WC-130 flights were made from Panama by Atlantic Hurricane Hunters; that was when Olivia and Priscilla were near the Central American Coast southeast of Acapulco.

Flights in the WC-130's regularly penetrated all storms and hurricanes at 9,000 to 10,000 feet, making frequent measurements of wind and temperature. Most WC-135 flights were able to penetrate to the eye near their 30,000-ft. flight level, despite quite limited tolerance for turbulence. Many of the WC-135 flights descended in the storm center in order to gather more information when conditions permitted. A few found unbroken wall clouds too high for safe penetration by their aircraft, and could furnish only radar and visual information from the outside.

Satellite pictures were available for direct reception at San Francisco from ESSA 8, ITOS 1, and NOAA 1 at the beginning of the season, but only from ESSA 8 after Hurricane Bridget. NOAA 1 nighttime infrared pictures were the basis for upgrading Bridget to hurricane, but were not available later in the season. The National Environmental Satellite Service regularly provided timely information from ESSA 9 pictures and from ATS 1 and ATS 3 time-lapse motion pictures. ATS 3 was nonfunctional for a few weeks at the peak of the hurricane season, but during other parts of the season it did provide the first information of the day several times. ESSA 8 and 9, in polar orbit, provided pictures in midforenoon and early afternoon (local time), respectively. ATS 3 was stationary relative to the earth 22,000 miles above equatorial South America, and ATS 1 was geostationary at the same altitude over Christmas Island. Time-lapse motion pictures from ATS 3 were usually made starting shortly after sunrise on the hurricane, and those from ATS 1 were made in the afternoon.

Some of the more important ship reports are mentioned in the summaries of individual tropical cyclones which follow. Their tracks are shown in figures 5-6, and cyclone highlights are summarized in table 4. All times are G.m.t. unless otherwise stated.

HURRICANE AGATHA, MAY 21 TO 24

Agatha, the first hurricane of the season, developed rapidly beginning May 21. Evidence of increasing winds around a new low-pressure center was first apparent 250 miles south-southeast of Salina Cruz as seen on time-lapse motion pictures made by the National Environmental Satellite Service shortly before 1800. Tropical storm intensity was reached a few hours later.

Two ships, the steamers GERDT OLDENDORFF and PRESIDENT MADISON, encountered 50-kt. winds at 0600 the next day near the storm center, 190 miles south-southwest of Salina Cruz. Seas had increased to 13 feet by that time, as observed from the PRESIDENT MADISON. (See the "Letter to the Editor" column on page 212 of the July 1971 issue of the Mariners Weather Log for more details on the PRESIDENT MADISON's encounter with Agatha.)

The new storm moved west-northwestward at 10 knots parallel to the coast for about 24 hours, while strengthening to a hurricane. Hurricane Agatha turned north-northwest toward the coast early on the 23d, passing 100 miles southwest of Acapulco with its forward speed decreasing to 5 knots. The HISPANIOLA had 60-kt. northerly winds, and the TORENIA had 85-kt. easterly winds, as the small vicious hurricane was shown by the TORENIA's radar around an eye at 17° 10' N., 102° 00' W., at 1200 on the 24th. The hurricane continued on the north-northwesterly course and regained 10 knots of forward speed as it moved onto the Mexican mainland 80 miles northwest of Zihuatanejo about noon (local time) of the 24th. Half of the homes in the village of Playa Azul were destroyed, and the entire banana harvest, 60 percent of the mango crop, and 15 percent of the coconut crop were lost.

HURRICANE BRIDGET, JUNE 14 TO 20

Hurricane Bridget developed during a 48-hr. period beginning on June 14 from a collection of heavy showers that had persisted west of Costa Rica and Nicaragua for a few days. The developing storm system began to move at about 10 knots on a west-northwesterly track from a point near 11° N., 91° W., on the 14th. The initial depression strengthened to a tropical storm by 0000 on the 15th, as revealed by a report from the RITA MAERSK. Bridget became a hurricane about 30 hours later, as estimated from a nighttime infrared picture made by the NOAA 1 satellite. The hurricane moved toward the west-northwest, edging slightly toward the coast as its forward speed increased to 14 knots during the day of the 16th. The Liberian tanker ADAMANTIA felt the full-hurricane fury of 75-kt. winds while between the hurricane center and the coast at 1800 on the 16th. At this time, Bridget's maximum winds were estimated at 85 knots.

The eye of the hurricane passed an estimated 30 miles offshore from Acapulco about 0200 on the 17th. Wind gusts as strong as 90 knots were measured at Acapulco International Airport, adjacent to the ocean southeast of the city. Damage from the hurricane winds and torrential rains was officially estimated at $40 million. Twenty boats, plus the flagship of the Admiral of the Mexican Navy, were sunk in the Bay. Many house roofs, outdoor advertising signs, and windows were lost.

The eye of Bridget remained 30 miles or more offshore through 1200 of the 17th, and continued up the coast with a forward speed of about 16 knots. It then moved onto land about 85 miles southeast of Manzanillo shortly before 1800. The hurricane winds were tamed abruptly by friction over the rugged Mexican terrain. A residual low-pressure center, with winds less than 20 knots, moved westward over water from near Manzanillo shortly before 0600 on the 18th. It was followed on satellite pictures until it dissipated 200 miles south of Cape San Lucas around 0000 on the 20th.

HURRICANE CARLOTTA, JULY 1 TO 8

The SHEAF TYNE provided early information on the disturbance that developed into Hurricane Carlotta. Weather reports from the vessel at 0000 and 0600 on July 1 revealed that a weak 1008-mb. low pressure center had formed in a showery area centered about 100 miles east of Clipperton Island. Winds encountered by the ship, which passed near the incipient storm center, were only 15 knots. The weak LOW became a tropical storm during a 24- to 30-hr. period, while moving westward at 8 knots. The intensifying new storm was centered near 11° N., 112° W., and was turning toward the northwest by 1800 on the 2d. Movement was toward the northwest at 11 knots through the 4th.

Carlotta was never called more than a tropical storm in operational advisories. A postseason review of USAF reconnaissance reports and satellite pictures for July 3 and 4 led to the conclusion that hurricane intensity prevailed for nearly 24 hours. The reconnaissance found a closed circular eye 15 miles in diameter on the 3d, measured eye pressure at 980 mb., and saw winds as strong as 60 knots on a partially observed sea surface on the 4th.

Carlotta began to weaken on the 4th, turned toward the west-northwest, and accelerated. Winds were no stronger than 45 knots on the 5th; they were an estimated 30 knots on the 6th when Carlotta was downgraded to a depression near 18° N., 126° W.

HURRICANE DENISE, JULY 2 TO 13

Denise, one of the stronger east Pacific hurricanes of recent years, began to develop on July 2 in an area of showers centered around 11.0° N., 99.5° W. A low-pressure circulation, with winds as strong as 25 knots and a minimum pressure of about 1009 mb., was present near 12° N., 103° W., the next day. Tropical storm intensity, with winds to about 45 knots around a center at 14° N., 108° W., was estimated from an ESSA 8 satellite picture made at 1737 on the 4th. The new storm then intensified steadily for the next 4 days while moving toward the west. Her speed was initially 10 knots, but she speeded up to 16 knots on the 7th. Hurricane intensity was attained on the 6th, apparently a few hours after the ROBIN HOOD passed near the center reporting a northerly wind of 36 knots and a 999.5-mb. pressure at 0600 (see page 288 of the September 1971 issue of the Mariners Weather Log). Winds as strong as 110 knots were seen on the partially observed sea surface around the eye of Denise, upon penetration by USAF weather reconnaissance on the 8th. Near 9,000 feet, flight-level winds were measured as strong as 118 knots and the eye pressure was 951 mb., suggesting maximum surface winds of about 125 knots.

The strong hurricane then turned gradually toward the west-northwest, with a forward speed of 15 knots and little change in intensity for the next 2 days. Denise then began to weaken late on the 10th, after a fix at 15° N., 139° W., at 1800, and turned toward the west. She was only a 40-kt. tropical storm when 300 miles southeast of Hilo, Hawaii, on the 12th. Denise dissipated to a 20-kt. depression upon passing 150 miles south of the Big Island the next day.

TROPICAL STORM ELEANOR, JULY 6 TO 11

A weak low-pressure center appeared near 12° N., 106° W., at about 1800 on July 6. It then moved slowly westward and evolved to Tropical Storm Eleanor near 13° N., 115° W., by 1800 on the 8th, as seen on an ESSA 8 satellite picture. Eleanor strengthened to an estimated 50-kt. storm during the following 24 hours, while moving toward the west at 16 knots. Eleanor

then began to slow down and weaken. She turned toward the west-southwest from 15° N., 127° W., at about 1800 on the 10th, and was a dissipating depression centered near 13° N., 133° W., 24 hours later.

HURRICANE FRANCENE, JULY 17 TO 23

An incipient low-pressure circulation with showers appeared near 12° N., 104° W., on July 17. Depression bulletins were begun the next day from a satellite picture, placing the 1800 position near 12° N., 108° W. Francene was named as a new tropical storm 6 hours later when the British ship PELEUS encountered 35-kt. west-southwesterly winds about 50 miles south-southwest of the center.

The new storm moved toward the west-northwest at 14 knots for the first 24 hours, while intensifying to a hurricane. It then slowed down, promptly began to weaken, and was no longer a hurricane when studied by USAF weather reconnaissance at 1800 on the 20th. Tropical storm Francene then moved westward at 9 to 12 knots through the 22d. The storm continued to weaken, and crossed the 125th meridian near 16.5° N. at about 1200 on the 22d. The remains of the weakening storm crossed about 110 miles ahead of the ship FORELAND on the 23d, with no noticeable effects at the ship, as related in a 2200 radio message from 16° N., 129° W. Francene had then dissipated, for practical purposes.

TROPICAL STORM GEORGETTE, JULY 20 TO 27

Showers grouped around the point 14° N., 112° W., could be seen to be organizing into a tropical depression from satellite pictures of July 22. USAF weather reconnaissance investigated at 1800 the next day and found new Tropical Storm Georgette with winds as strong as 45 knots around a center at 16.3° N., 115.6° W. Georgette was a 50-kt. maximum windstorm for most of the next 3 days, moving northwestward at 6 knots for 24 hours before speeding up to 9 knots. She turned west-northwestward on the 25th and began to weaken, although her forward speed continued to increase. Maximum winds were 45 knots as found by USAF reconnaissance in fixing the center at 21.4° N., 126.2° W., at 1800 on the 26th, but the storm's cloud system had begun to evaporate. The remains of the storm had diminished to a harmless and rapidly dissipating depression some 300 miles farther west the next day.

HURRICANE HILARY, JULY 26 TO AUGUST 7

Hilary developed rapidly in the vicinity of Clipperton Island on July 26. An ESSA 8 picture revealed the incipient hurricane center near 10° N., 111° W., at 1800. Winds had increased to 55 knots when USAF weather reconnaissance fixed the center at 11.3° N., 114.0° W., 24 hours later. A full hurricane with maximum winds of about 80 knots was found by the reconnaissance flight of the 28th, and winds of at least 65 knots were reported by daily flights through August 2. Movement was toward the west-northwest at about 6 knots through July 30. Then there was a turn toward the west-southwest lasting about 24 hours. Hurricane Hilary turned abruptly toward the northwest on August 1, crossing the 15th parallel toward colder water near 124° W. Weakening then began, and maximum winds had decreased to 40 knots as the storm was crossing the 135th meridian near 19° N. on the 4th. The dissipating storm was then moving westward at about 8 knots. Final dissipation was completed west of 140° W., by early on the 7th.

There were no reports from ships telling of encounters with strong winds from Hurricane Hilary, even though she was a full hurricane for nearly a week. However, the British ore carrier CHIYODA reported swells higher than 20 feet for more than 36 hours, while overtaking and passing the hurricane about 200 miles north of the center between July 29 and the 30th.

HURRICANE ILSA, JULY 30 TO AUGUST 8

Ilsa, the seventh tropical storm and the fifth hurricane to start in the eastern North Pacific during July, was first seen on ESSA 8 satellite pictures as a disturbance near 12.0° N., 97.5° W., on July 30. It became a rapidly strengthening depression the next day near 12.5° N., 101.0° W., and was a hurricane near 13.5° N., 104.0° W., at 0600 on August 1.

The ship IRISH ELM was caught up in the rapidly developing and large hurricane. At 0300 on the 1st, the ship was moving westward at 20 knots about 90 miles north of the center. Winds were only 20 knots, and pressure 1005.5 mb. Three hours later, the easterly winds had picked up to 50 knots, and they were up to 60 knots at 0900. The ship turned toward the north at about 0600 to struggle out of the hurricane, which was moving toward the west-northwest at 15 knots, but winds of 50 knots or stronger were encountered until after 1800. The reports from the IRISH ELM were a principal basis for upgrading Ilsa to a hurricane.

The size of Ilsa was illustrated at 0000 on the 2d when the ESSO WASHINGTON battled 40-kt. east-southeasterly gales and 30-ft. seas and swells nearly 200 miles north of the center. Ilsa continued to strengthen through the 2d but then began to weaken. USAF weather reconnaissance went into the hurricane eye at 2223 on the 3d, locating it at 18° 32' N., 112° 04' W., seeing winds as strong as 65 knots on a partially observed sea surface, and reporting other information indicating maximum winds in the 70- to 75-kt. range. Figure 8 shows Ilsa off the Mexican west coast late the next day.

The hurricane turned from its slow northwestward movement to a faster west-northwesterly course early on the 5th and had diminished to a 55-kt. tropical storm by 1800. Dissipation to a depression was abrupt during the following 24 hours. No low-pressure circulation could be detected by USAF weather reconnaissance investigating the residual cloud mass near 22.7° N., 122.0° W., at 1800 on the 6th.

TROPICAL STORM JEWEL, AUGUST 6 TO 11

The early stages of Tropical Storm Jewel first came to attention through reports from the PRESIDENT JACKSON. The ship had 20-kt. southeasterly winds near 15.5° N., 95.5° W., at 1800 on August 5; 6 hours later, winds had increased to 30 knots from the east-southeast as the ship moved 160 miles to the west-northwest. The ship AURALIS revealed tropical storm intensity at 1800 on the 7th, in telling of easterly winds of force 7 to 8, a very rough sea, falling barometer, and heavy rain squalls. A concurrent ESSA 8 satellite picture indicated the new storm center to be near 15.5° N., 102.0° W. USAF weather reconnaissance found the storm centered at 16° 10' N., 106° 15' W., and rather poorly organized at 2045 on the 7th. The mini-

mum pressure in the eye was 1000 mb. The area affected was large, however. The OCEAN PRIMA had 45-kt. winds some 190 miles northeast of the center and 50 miles off the Mexican coast. Jewel was still a large loosely organized storm on the 8th, although her central pressure was down to 993 mb. By the next day, the central pressure had risen to 1002 mb. and weakening had begun. Winds in the weak tropical storm range were still apparently present in squally areas in the outer part of the storm until early on the 10th. Dissipation of the residual cloud system could be followed on satellite pictures through August 11.

TROPICAL STORM KATRINA, AUGUST 8 TO 12

Katrina was a very small storm which developed in the southeastern fringe of the large low-pressure circulation around Tropical Storm Jewel. Because of her small size and the prevalence of numerous thunderstorms which could have had strong winds, it is not possible to establish with assurance a time and place of her initial development.

It is thought that the OCEAN PRIMA had an encounter with Katrina on August 8 at 1800, shortly after she developed. At that time, the ship reported 35-kt. south-southeasterly winds and a 4-mb. pressure rise in 3 hours, while moving southeastward at 20 knots to 14.5° N., 97.4° W. About 24 hours later, the ESSA 8 picture showed a small oval cloud mass which might have been Katrina near 15° N., 102° W.

The NEGO ENTERPRISE at 0542 on the 10th sent a message which was the basis for warnings of dangerous weather, and which apparently told of an encounter with Katrina: "WARNING ELFW IN POSITION 16° 40' N., 103° 00' W. OFF CAPE TELMO COURSE 115 PASSED THROUGH SEVERE TROPICAL LINE SQUALL AT 0400 GMT WITH HURRICANE FORCE TWELVE WINDS AND ZERO VISIBILITY AT FRONT PASSING NE TO SW AND MOVING NW DIRECTION." A picture from ESSA 8 about 12 hours later revealed extensive heavy cloudiness in the area, with a possible small tropical storm embedded in the cloud mass near 18.5° N., 106.0° W. The cloud mass was confirmed as being a tropical storm by a 2100 report from the CAP COLVILLE at 20.1° N., 106.6° W. It told of estimated 40-kt. east-southeasterly winds with a pressure of 1010 mb., and falling 5 mb./3 hours, as the ship moved southeastward at 15 knots fighting seas higher than 20 feet. The POLARLICHT reported 3 hours later, and 24 miles to the west, telling of southerly winds of 52 knots along with a pressure of 1007.5 mb., which was beginning to rise, as the ship moved southeastward at 15 knots.

Katrina moved north-northwestward from there, passing through the Gulf of California about halfway between La Paz and Mazatlan. Her strong winds died down before she moved onto the Mexican mainland near Los Mochis the night of the 11th-12th. Up to 9 inches of rain fell in the Los Mochis area as the storm was moving in, and there were heavy showers on and off through the next 5 days. Resultant floods washed out sections of roads and railroads, and destroyed 20 homes, three bridges, and a railroad trestle. Seventy other homes and five bridges were damaged, and crops were ruined.

HURRICANE LILY, AUGUST 28 TO 31

A collection of heavy showers which were over the Gulf of Tehuantepec on August 27 organized around a loose low-pressure center by early the next day. The depression was near 14° N., 96° W., at 1800 on the 28th, as seen on a picture from the ESSA 8 satellite. The depression intensified to a tropical storm during the following 24 hours, while moving west-northwestward at 11 knots.

New Tropical Storm Lily then turned gradually toward the Mexican coast, while slowing down and strengthening to a hurricane. She was moving northwestward at 5 knots as a young hurricane late on the 30th, but turned north-northwestward and speeded up during the night.

The center of Lily moved inland 30 miles northwest of Manzanillo about 0800 (local time) on the 31st. Wind gusts were estimated as strong as 90 knots, with sustained winds of 80 knots and seas as high as 30 feet at that time. Nine people drowned as a boat capsized off a beach between Manzanillo and Puerto Vallarta, and there were three other fatalities in Mexico because of the hurricane. Heavy rains fell over a large area from the coast inland to the plateau of central Mexico.

Several ships were caught up in the strong winds and rough seas. Some felt the full fury of hurricane-force winds and high seas. Among those were the TURRIALBA, the RICHARD, the JAG SHANTI, the SHINSEI MARU NO. 5, and the ITALIA. Extracts from the deck log and the Ship's Weather Observations of the TURRIALBA are reproduced on page 354 and 355 of the November 1971 issue of the Mariners Weather Log.

HURRICANE MONICA, AUGUST 28 TO SEPTEMBER 4

Hurricane Monica began to form on August 28 in a heavy shower area of the intertropical convergence zone about 100 miles north of Clipperton Island. An ESSA 8 satellite picture at 1730 on the 29th revealed a young tropical storm near 12° N., 112° W. Tropical storm Monica then moved northwestward at 5 to 8 knots for 2 days while strengthening to a hurricane. Hurricane Monica turned north-northeastward late on the 31st from 16° N., 115° W. She was described by USAF reconnaissance on September 1 as being among the strongest hurricanes they had observed in the eastern North Pacific. At that time, the hurricane center, containing 100-kt. plus winds, was located about 25 miles south-southeast of Clarion Island.

Monica then turned north-northwestward at 4 knots for about 24 hours and began to weaken. Maximum winds on the 2d diminished to 75 knots at 1624 and to 65 knots by 1955, as seen by USAF reconnaissance. The storm moved slowly northward and weakened rapidly after that. It was packing winds no stronger than 40 knots at 1600 on the 3d, and was practically dissipated with 25-kt. winds around a residual center at 23° N., 115° W., 24 hours later.

No ships reported being caught in the hurricane-force winds of Monica. The FORT SAINTE MARIE and the JAPAN PINE did encounter gale-force winds and rough seas in the southeast quadrant of the developing hurricane on the 31st. Both ships made a change of course from northwest to southwest to pass around the south side of the storm.

HURRICANE NANETTE, SEPTEMBER 2 TO 9

Nanette began to develop over the warm waters south of Tehuantepec, Mexico, on September 2. The PRESIDENT ARTHUR reported 20-kt. southeasterly winds and a 1009-mb. pressure 160 miles south-southeast of Salina

Cruz at 0000 on the 3d. Winds had held the same direction over the preceding 6 hours, while the ship was on a course toward the southeast. Information at that time was inadequate to fix an exact position of the developing low-pressure center, and it continued so for 36 hours.

An intensifying tropical storm was apparent from an 1800 report on the 4th from the MORNING LIGHT. That report told of easterly winds of 35 knots with a pressure of 1008 mb. at a point 50 miles south of Acapulco. The center of Nanette was then visible on an ESSA 8 satellite picture some 90 miles south of the ship. Nanette moved west-northwestward parallel to the coast at 9 knots for the next 24 hours and continued to intensify. The storm then turned toward the northwest at about the same speed and was soon a hurricane. The northwesterly track took the hurricane center to a point 50 miles southwest of Cape Corrientes late on the 6th. Maximum winds at that time were 80 knots, as determined by USAF reconnaissance. The PRESIDENT MADISON reported 50-kt. winds, 20-ft. waves, and 24-ft. swells on the 6th, about midway between the hurricane center and the coast.

The hurricane took a broad turn toward the west upon entering the mouth of the Gulf of California, and began to weaken. Nanette was reduced to a weakening tropical storm shortly after passing 75 miles south of Cape San Lucas at 1600 on the 7th. Weakening continued as the storm proceeded along its westerly track. Nanette was a dissipating depression 200 miles northwest of Clarion Island 2 days later.

HURRICANE OLIVIA, SEPTEMBER 20 TO 30

Hurricane Olivia was known as Hurricane Irene in the Caribbean and Nicaragua. Irene moved over southern Nicaragua from the Caribbean Sea on September 19, and weakened to a depression while crossing the relatively low terrain to Lake Nicaragua and the Pacific.

The depression promptly regenerated to 50-kt. Tropical Storm Olivia. Its center was about 50 miles west of Managua at 1516 on the 20th based on an ESSA 8 satellite picture. Olivia reached hurricane strength 24 hours later, while she moved to a position some 60 miles south of San Jose, Guatemala. The hurricane continued along a westerly track at 8 to 16 knots, pulling slowly away from the coast and strengthening steadily until the 25th. Olivia was a 100-kt. hurricane on the 25th. Its center passed 200 miles southwest of Manzanillo, turned toward the northwest, and threatened to turn northward into the mouth of the Gulf of California.

A change in atmospheric steering turned the hurricane back toward the west on the 26th, and 90-kt. winds were found around a center fixed by USAF reconnaissance 75 miles northeast of Socorro Island at 2200. The westward movement lasted only about 24 hours, and Olivia continued as a powerful hurricane. The influence of a middle latitude low-pressure trough on the hurricane steering again became effective late on the 27th, and the center made a broad turn toward the north from a point 100 miles northwest of Socorro Island.

Water temperatures west of Baja California were not warm enough to support a hurricane, so Olivia weakened rapidly. She was only a minor tropical storm when seen on ESSA 8 satellite pictures about 275 miles southwest of Magdalena Bay at 1811 on the 28th. The remains of the storm were centered 150 miles west of Magdalena Bay on a picture 24 hours later. Maximum winds were in the depression category. All indications of a low-pressure circulation had disappeared from the remaining cloud mass seen over Baja California, east of Punta Eugenia, on the satellite pictures of the 30th.

Ships were successful in circumnavigating Olivia most of the 10 days she was a tropical storm or hurricane. As the storm was reorganizing off Nicaragua on the 20th, the LETITIA LYKES had 35-kt. winds 100 miles southwest of the center. The unexpected turn toward the west on the 26th caught several ships in strong winds and rough seas. Among the less fortunate were the HORIZON and the KYOKEI MARU. The HORIZON near 18° N., 111° W. fought 50- to 70-kt. winds and 30- to 45-ft. waves for nearly 12 hours in passing southeastward around the west side of the hurricane on the 26th and 27th. The KYOKEI MARU near 19° N., 113° W., had 50- to 55-kt. winds, 10- to 16-ft. seas, and swells of at least 30 feet for several hours, while on a similar track around the west side of the hurricane on the 27th.

The British cruiser HMS BLAKE, enroute to San Francisco for "British Week" festivities, had the hurricane center on its radarscope for more than 8 hours on the 27th.

HURRICANE PRISCILLA, OCTOBER 6 TO 12

A minor disturbance that crossed the Isthmus of Panama on October 4 developed slowly during the following 2 days. It became a tropical depression, with sustained winds up to 30 knots, near 10.5° N., 90.0° W., at 1200 on the 6th.

The depression strengthened to 40-kt. Tropical Storm Priscilla by daybreak the next day, while moving west-northwestward at 8 knots. Winds of 35 to 40 knots and rough seas were encountered at 1500 about 100 miles from the center in the northeast quadrant by the IVAN TOPIC and the AMERICAN LARK.

The HAMMONIA was buffeted by 50-kt. winds on the north side of the intensifying Priscilla at 1200 on the 8th. USAF reconnaissance then found maximum winds to be 70 knots around a 40-mi.-diameter hurricane eye centered at 13.1° N., 96.8° W., at 1734 the same day.

The established movement parallel to the coast and toward the west-northwest at 8 knots continued, simplifying circumnavigation of the strengthening dangerous hurricane. Maximum winds as strong as 90 knots were estimated around a center at 14.6° N., 100.4° W., at 1800 on the 9th, based on a USAF reconnaissance report and an ESSA 8 satellite picture. The reconnaissance had found a central pressure of 960 mb., down 24 mb. in 24 hours.

Priscilla was at her maximum strength 24 hours later when the next USAF reconnaissance mission found surface winds as strong as 110 knots around an 18-mi.-diameter eye containing a central pressure of 951 mb.

The hurricane then began to weaken and turn slightly toward the coast. Maximum winds had diminished to 80 knots and central pressure had risen to 972 mb., when the Air Force made the 1800 fix on the 11th 140 miles south-southwest of Manzanillo. Priscilla weakened after that, following a track turning progressively toward the north and eventually northeast. The CALMAR was caught in 50-kt. winds and 16-ft. waves between the hurricane center and the coast at 0000 on the 12th. At the same hour, the FERNDALE fought 48-kt. winds 35 miles northwest of the CALMAR near 20° N., 106° W. Visibility was cut to 200 yards by heavy rain. A few hours afterward, Priscilla was centered about 40 miles west of Cape Corrientes and was turning toward the northeast. She moved onto the Mexican mainland near San Blas around daybreak of the 12th. At landfall strongest winds were thought to be about 50 knots.

TROPICAL STORM RAMONA, OCTOBER 28 TO 31

Ramona was first seen on an ESSA 8 satellite picture taken at 1703 on October 28. The storm had appeared overnight, since no evidence of storm development had been seen in the area on pictures of the preceding day. Strongest winds in the new storm were estimated to be at least 45 knots around a center near 11.3° N., 104.0° W., from its appearance in the picture.

About 24 hours later, USAF reconnaissance found no storm organization to the cloud system, and the clouds shown by the ESSA 8 picture of the 29th had little indication of a rotating storm. It was concluded that a weak storm had developed on the 28th but had weakened promptly to a depression.

The residual depression dumped heavy rain whipped by 25-kt. easterly winds at 15.0° N., 110.6° W., at 0900 on the 30th, as encountered by the GUAVACORE. It dissipated completely during the next 24 to 30 hours, while remaining in the same area.

TROPICAL STORM SHARON, NOVEMBER 25 TO 28

Weak late-season Tropical Storm Sharon began to develop on November 25. The beginnings of the storm were detected near 9.5° N., 100.5° W., on an ESSA 8 satellite picture made at 1551. A U. S. Navy ship reporting 50 to 75 miles on the northeast side of the low-pressure center 8 hours later told of 25-kt. easterly winds, a 1008.8 mb. pressure, 4.5-ft. seas, and an 8-ft. easterly swell. Strengthening was indicated by the ESSA 8 picture of the 26th. A report from USAF weather reconnaissance on the 27th together with the satellite pictures of the 26th and 27th gave reason to believe that a weak storm had been present at picture time on the 26th. Winds up to 30 knots were estimated by the reconnaissance of the 27th, and concurrent pictures indicated considerable weakening from the previous day. The weakening continued to complete dissipation on the 28th.

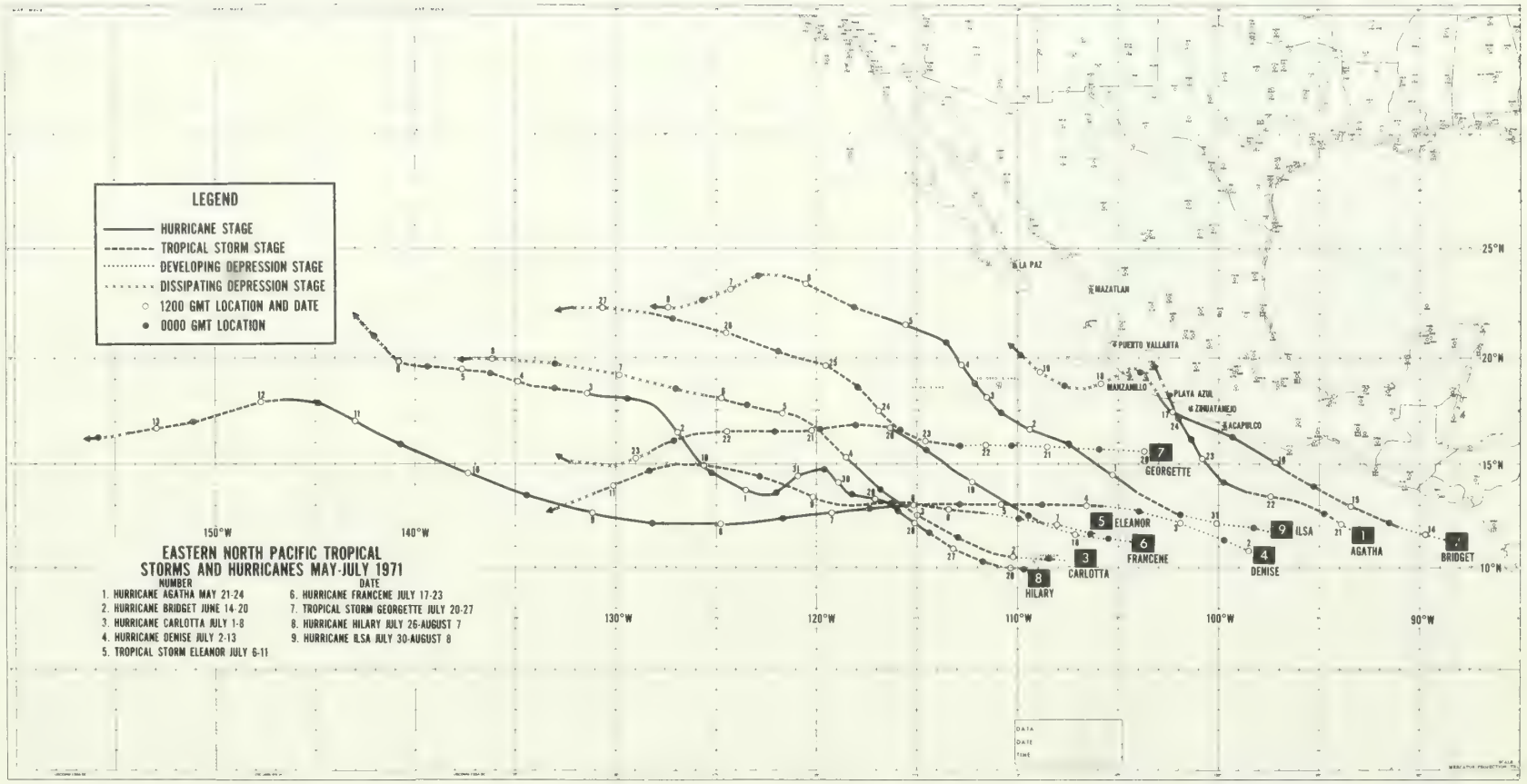


Figure 5. --Tracks of eastern North Pacific tropical storms and hurricanes, May-July 1971.

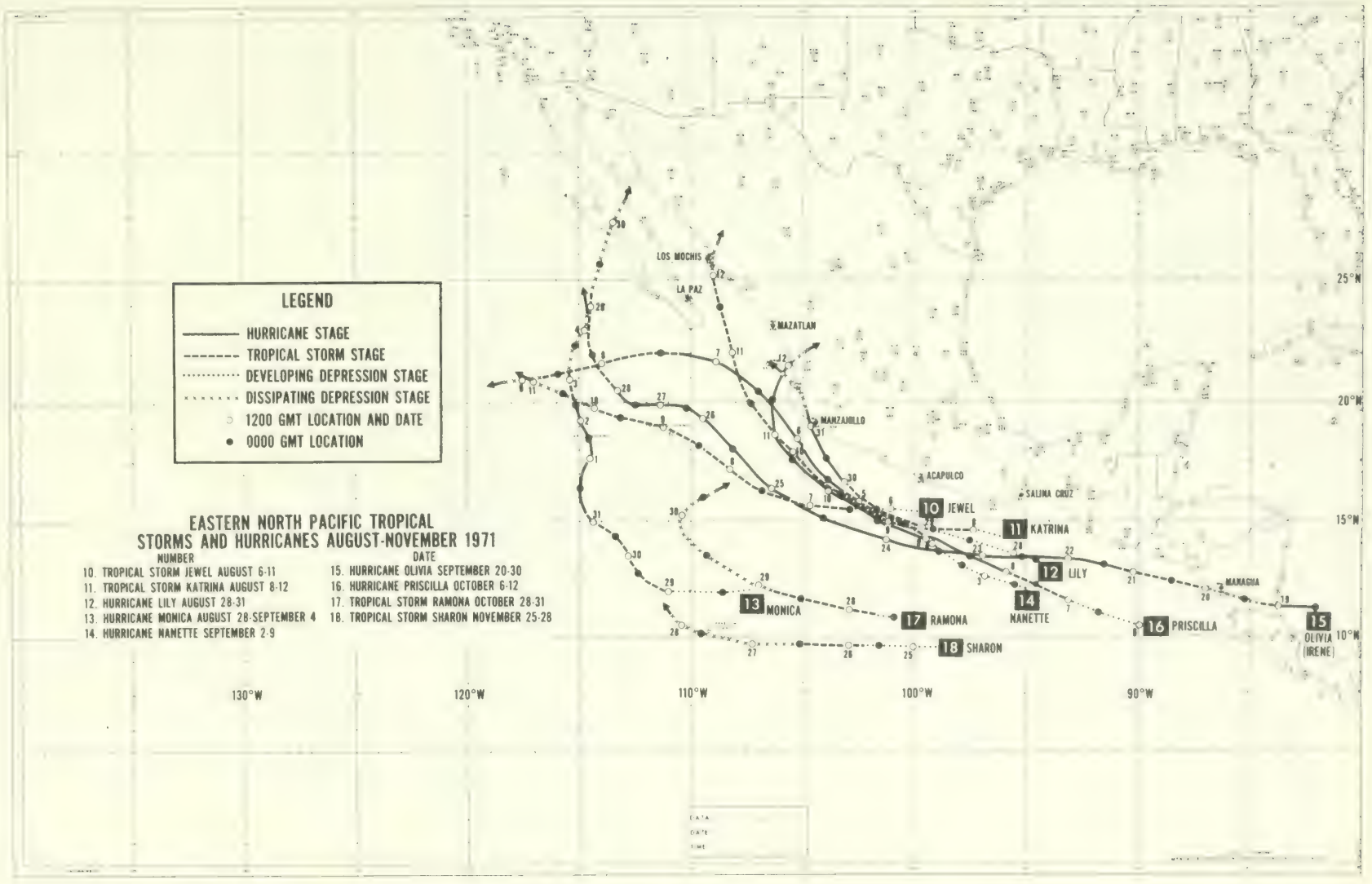


Figure 6. --Tracks of eastern North Pacific tropical storms and hurricanes, August-November 1971.

Table 1. --Monthly distribution of tropical storms and hurricanes, 1971

	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
Tropical storms*	0	0	2	2	0	1	1	6
Hurricanes*	1	1	5	2	2	1	0	12
Total	1	1	7	4	2	2	1	18

* Tropical cyclones counted for the month in which they formed.

Table 2. --Frequency of tropical storms (including hurricanes) by months and years

	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
1966	0	1	0	4	6	2	0	13
1967	0	3	4	4	3	3	0	17
1968	0	1	4	8	3	3	0	19
1969	0	0	3	2	4	1	0	10
1970	1	3	6	4	1	2	1	18
1971	1	1	7	4	2	2	1	18
Totals	2	9	24	26	19	13	2	95
Avg.	0.3	1.5	4.0	4.3	3.2	2.2	0.3	15.8

Note: Tropical storms have not developed before May and after November since full operational satellite coverage began in 1966. Only those storms which had their origins east of 140° W. are included in this table.

Table 3. --Frequency of tropical storms reaching hurricane intensity by months and years

	May	June	July	Aug.	Sept.	Oct.	Nov.	Total
1966	0	1	0	4	2	0	0	7
1967	0	1	0	2	1	2	0	6
1968	0	0	0	3	2	1	0	6
1969	0	0	1	1	1	1	0	4
1970	1	0	1	1	0	1	0	4
1971	1	1	5	2	2	1	0	12
Totals	2	3	7	13	8	6	0	39
Avg.	0.3	0.5	1.2	2.2	1.3	1.0	0	6.5

Name and greatest intensity	Dates	Origin* (N, W)	Coastlines affected	Dissipation (N, W)	Highest reported wind (kt)	Lowest maximum (kt)	Lowest reported pressure (mb)	Remarks
Hurricane Agatha	[illegible]	[illegible]	Mexico, northwest of Zihuatanejo	[illegible]	[illegible]	[illegible]	972 USAF recon	[illegible] crops lost.
Hurricane Bridget	[illegible]	[illegible]	Mexico, 150 mi southeast of Acapulco to 50 mi southeast of Manzanillo	[illegible]	[illegible]	[illegible]	ADAMANTIA	[illegible]
Hurricane Carlotta	July 1-8	10, 107	None	20, 137	60 USAF recon	[illegible]	USAF recon	[illegible]
Hurricane Denise	[illegible]	11, [illegible]	None	16, 156	110 USAF recon	[illegible]	951 USAF recon	
Tropical storm Fleming	July 6-11	11, 106	None	[illegible]	40 USAF recon	[illegible]	[illegible]	
Hurricane Francene	[illegible]	11, 105	None	15, 132	100 USAF recon	[illegible]	USAF recon	Eye pressure not observed on day winds were 100 kt.
Tropical storm Georgette	July 20-27	15, 104	None	22, 132	50 USAF recon	[illegible]	990 USAF recon	
Hurricane Hilary	July 26-August 7	10, 110	None	22, 143	[illegible] USAF recon	[illegible]	964 USAF recon	[illegible] greatest strength because of aircraft's limited tolerance for turbulence.
Hurricane Ilsa	July 30-[illegible]	[illegible]	Islas de Revillagigedo	22, 128	[illegible] USAF recon	[illegible]	USAF recon	No recon in eye on day of greatest strength because [illegible]
Tropical storm Jewel	[illegible] 11	16, 100	Islas de Revillagigedo	21, 117	[illegible] OCEAN PRIMA	[illegible]	USAF recon	
Tropical storm Katrina	August 8-12	11, 96	Mexican mainland near Los Mochis	near Los Mochis	[illegible] [illegible] EN ENTERPRISE	[illegible]	1007.5 [illegible]	Much flood damage in Los Mochis area. Force 12 wind reported by NEGO ENTERPRISE but called a [illegible]
Hurricane Lily	August 28-31	13, 93	Mexican mainland near Manzanillo	Northwest of Manzanillo	80 SHINSEI MARU NO. 5	[illegible]	978 SHINSEI MARU [illegible]	[illegible] in hurricane winds and seas August 31.
Hurricane Monica	August 28-September 4	12, 108	Clarion Island	23, 115	75 USAF recon	[illegible]	1001 [illegible]	USAF reconnaissance described as strongest seen in area. Unable to penetrate August 31 or September 1 because of "walls" of tall turbulent clouds.
Hurricane Nanette	September 2-9	12, [illegible]	None	22, 115	85 [illegible]	[illegible]	[illegible] [illegible]	Eye passed within 75 mi of Manzanillo and Cape San Lucas and 50 mi off Cape Corrientes.
Hurricane Olivia	September 20-30	12, 87	Nicaragua (as Irene) Islas de Revillagigedo	28, 113	100 USAF recon	[illegible]	948 USAF recon	Was called Irene in Caribbean and Nicaragua. Surface low-pressure center dissipated before reaching Baja California coast.
Hurricane Priscilla	October 6-12	10, 90	Mexican mainland near San Blas	near San Blas	110 USAF recon	[illegible]	951 [illegible]	Had weakened to an estimated 50-kt maximum wind storm upon moving inland. No damage reports available.
Tropical storm Ramona	October 28-31	11, 100	None	16, 109	[illegible] GUAVACORE	[illegible]	1008.5 GUAVACORE	No positive confirmation of having had tropical storm intensity.
Tropical storm Sharon	November 25-28	10, [illegible]	None	11, 111	30 USAF recon	[illegible]	1008.8 A U.S. Navy ship	No positive confirmation of having had tropical storm intensity.

† Includes only tropical cyclones that have been named

* Origin is taken as the first apparent center of enhanced shower activity or low pressure, however slight.

‡ Maximum wind speed estimates are those arrived at in postseason study. USAF reconnaissance and shipboard wind measurements [illegible] than [illegible] any day.

^ Several of the cyclones are thought to have had pressures 10 mb or more lower than the lowest reported.

‡ A weak low-pressure center residual from the dissipated hurricane Bridget could be traced from Manzanillo to 20° N., 110° W.

TYPHOONS OF THE WESTERN NORTH PACIFIC, 1971

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The 1971 typhoon season was the most active since 1967. A total of 35 tropical storms tracked the waters of the western North Pacific, commencing in January with Sarah and terminating with Judy in November. The 24 storms which generated to typhoon strength topped the climatological average by six and ranked 1971 along with 1962 for the second largest number of typhoons on record. Tables 1 and 2 contain the statistics on the storms for past years.

1971 was marked by two abnormally active periods. The usually quiet period of April and May, averaging less than two storms, exploded for a total of seven storms. On May 3-4 there were three tropical storms--Wanda, Amy, and Babe--in existence simultaneously. The month of July was recordbreaking with a total of eight storms, bettering the previous high of seven set in 1964.

Six typhoons reached the 130-kt. superstatus, which compares closely with the mean (1959-70) of 5.8. Irma was the most intense with sustained winds exceeding 150 knots, while Lucy, Nadine, and Wendy were the largest with their circulations dominating 600 miles or more of radius.

The most disastrous typhoon in 1971 was Rose which struck Hong Kong in August. Approximately 130 people were killed, 5,000 persons were left homeless, and 28 ocean-going vessels were run aground or sunk. Hester, which struck the Vietnam coast near Chu Lai in October, was probably the most destructive storm in terms of U. S. military damage during the entire war.

The 1971 typhoons are described in the following summary. Local time is used in each narrative. Tropical storm summaries can be found in the appropriate Smooth Log of the Mariners Weather Log. Damage and casualty statistics are given, when available.

Table 3 contains the vital statistics for all the 1971 storms. The storm tracks and maximum winds are based on poststorm analysis. Times in table 3 and in storm track charts are in G.m.t. Beginning and ending dates on the legend of the storm tracks and in table 3 correspond to the period when the storm possessed sustained winds of 34 knots or greater and was tropical in nature or in the process of losing its tropical characteristics, but not completely extratropical. The dates along each individual storm track correspond to dates on which bulletins or advisories were issued. These dates do not always agree with those in the legend.

VERA

Originating from a circulation situated in the central Carolines, Vera was destined to become the season's first typhoon. By April 12, while on a west-northwesterly heading at 8 knots in the Philippine Sea, reconnaissance aircraft reports indicated the system had developed to a tropical storm. Shortly after reaching typhoon intensity, by the early morning of the 14th, Vera began to slow in forward speed. Taking a temporary westerly excursion, the typhoon reached her peak intensity of 90 knots about 250 miles west of Escarpada Point on Luzon during the 15th. With an abrupt shift in course later in the day, the typhoon headed slowly northeastward and gradually diminished in intensity. On the 17th, Vera had accelerated in forward speed while paralleling the Ryukyu Island chain and weakened to tropical storm force. Encountering the westerlies, the storm shifted to a more easterly course on the 18th and became extratropical as she merged with a frontal zone south of Japan later that day.

WANDA

Wanda, followed by Amy and Babe, heralded the greatest outbreak of tropical storm activity in any spring on record. Developing to tropical storm force 150 miles east of Samar in the central Philippines, the storm tracked across the island near the Leyte Gulf with sustained winds of 50 to 60 knots. The coastal city of Tacloban registered a peak gust of 84 knots during passage. Wanda then passed over the Visayas and into the Sulu Sea, crossing Palawan Island the morning of April 26. The typhoon left 56 people dead in the Philippines with 39 reported missing. Damage to public and private property was estimated near $700,000 (U. S.).

Upon entering the South China Sea, Wanda slowed in forward speed to 3 to 4 knots for a 24-hr. period and weakened to a depression. At this point chances for her to regain strength were considered slight. Surprisingly, during the evening of the 29th, Wanda regained her tropical storm status. In the meantime, the storm had swung to a northwesterly course.

Continuing to intensify, typhoon force was attained less than 60 miles off the Vietnam coast southeast of Qui Nhon. Reaching a peak intensity of 75 knots, the typhoon paralleled the coastline for 30 hours on May 1-2, the eye barely touching ashore near Quang Ngai.

Wanda weakened to tropical storm force upon leaving the Vietnam coastline and struck Hainan Island on the 3d with winds of 45 knots. Emerging from Hainan 24 hours later as an extratropical system, the remains of Wanda drifted on an easterly course before finally collapsing in the northern South China Sea.

Typhoon Wanda was the first significant storm in more than 20 years to affect the coast of Vietnam during April or May. At Chu Lai AB maximum winds of 35 knots with gusts to 63 knots were reported. Landing Zone "English" sustained 50-kt. winds and gusts were estimated near 70 knots. A total rainfall of 7.5 inches and 8.25 inches was dumped on Landing Zone "English" and Duc Pho, respectively. Over 23 people were killed in the Quang Ngai Province, and over 10,000 homes and buildings were partly or completely destroyed.

AMY

As Wanda was targeting in on the Vietnam coast, a disturbance in the Truk-Ponape area of the central Carolines gave birth to Tropical Storm Amy on April 29. As Amy moved northwestward, she intensified quickly into a typhoon. By daybreak of May 1, the eye crossed Moen in the Truk Islands with the weather station reporting 65-kt. winds with peak gusts to 98 knots and a minimum pressure of 974.8 mbs. Amy continued to intensify as she crossed Namonuito Atoll, packing peak winds of 115 knots. She completely destroyed the weather station on the atoll.

There was 80 percent damage sustained in the Truk District with over 2,250 homes demolished. Thousands of persons were made homeless. A total of $4.5 million damage was sustained in the private and public sectors. One death and several injuries were reported. An additional $1 million was lost because of damage incurred by small businesses, crops, boats, equipment, etc. Hardest hit in the Truk District was Namonuito

Atoll. Inspection of damage at Namonuito depicted a scene as if the atoll had been struck by fire. Little foliage was left and bark was stripped from the few remaining trees.

By noon of the 2d, aircraft penetration revealed that Amy's central pressure had deepened explosively with a 51-mb. drop in 15 hours to 899 mbs., ranking Amy as the season's first supertyphoon. By that afternoon, maximum sustained winds of 150 knots were concentrated around a tight circular eye 10 miles in diameter. After passing within 84 miles of Guam, the typhoon began to slow and start a slow drift to the northwest about 120 miles west of Guam on the 3d. She then commenced to track northeastward at 11 knots, west of the Mariana Islands. Maximum winds had diminished slightly to 120 knots.

Highest winds reported on Guam were 51 knots with a gust to 68 knots at the Fleet Weather Central, while Anderson AFB on the northern end of the island sustained winds of 36 knots with gusts to 60 knots. The accompanying torrential rainfall totaled up to 15.26 inches at the National Weather Service during the passage of Amy. Damage on Guam amounted to over $900,000 in public and private property. In the northern Marianas, minor damage was sustained mostly to the copra and banana trees. The weather station on Pagan reported a maximum wind of 28 knots with gusts to 47 knots.

Amy continued on a northeasterly course, passing the northernmost island of the Marianas (Maug) on the evening of the 5th at a forward speed in excess of 20 knots. She kept a northeasterly heading through the 6th while weakening to minimal typhoon strength. By the 7th, Amy had decreased to tropical storm intensity and accelerated to more than 40 knots in forward speed. After crossing the 35th parallel, the storm was overtaken by a cold front early on the 8th.

DINAH

Tracking among the central and western Carolines since May 20, the embryo of Dinah was followed by aircraft reconnaissance and satellite pictures for several days. By the 26th, satellite pictures showed the Dinah system was springing to life west of Yap. The fact that Dinah was in the process of developing rapidly was verified by the Liberian freighter KONKAR RESOLUTE which crossed near the center and reported 60-kt. north-northwesterly winds and a minimum pressure of 988 mbs. The storm continued to intensify to 90 knots before striking the northern coast of Samar. She traversed the central Philippines and exited near Lubang Island. A peak gust of 93 knots was reported at Legaspi City in southern Luzon while Tayabos recorded a minimum pressure of 979.2 mbs. Dinah left in her wake 13 people dead and 44 missing in addition to 6,500 homes destroyed.

Emerging into the South China Sea, Dinah dropped briefly below typhoon strength for a 12-hr. period before intensifying to 80 knots. North of the Parcel Islands, she diminished to tropical storm force before striking eastern Hainan with 45-kt. winds. Dinah dissipated rapidly after entering southern China west of the Luichow Peninsula on the 30th.

FREDA

Freda was the first in a succession of six storms to cross the Philippine archipelago in a period of less than 4 weeks.

Freda developed to a tropical storm some 300 miles east of central Luzon on June 14. Her initial stages were traced back to the vicinity of the Palau Islands. Heading on a west-northwesterly track, Freda intensified to 65 knots just before she struck near Palanan Point, on northeastern Luzon, on the afternoon of the 15th. Gusts of 80 knots were reported at Vigan on the west coast when the center was emerging back out to sea, while 8.15 inches of rain fell at Baguio. Damage was considerable over northern Luzon but no estimates are available.

Moving into the South China Sea, the storm remained near minimal typhoon strength and began to bend toward the northwest. Freda's center passed 50 miles south of Pratas Island and struck the mainland between Macau and Hong Kong on the 18th with maximum sustained winds of 50 to 55 knots. Wind gusts of 70 knots were experienced at Tate's Cairn and up to 103 knots at the Royal Observatory which also registered a minimum pressure of 984.3 mbs. A total of seven deaths was attributed to Freda, five of which occurred in Luzon, the other two in Hong Kong.

GILDA

After a 700-mile journey, Gilda struck the central Philippines as a newly formed typhoon on the morning of June 25. Gilda's origin dates back to the 18th as a weak circulation south of Yap when the ESSA 9 Satellite photographed her as a suspicious disturbance.

Upon slamming into Samar, Gilda crossed Masbate Island, the Sibuyan Sea, Mindoro, and set out to sea near Lubang Island. Maximum wind gusts of 90 knots were reported at Romblon in the Sibuyan Sea, while the typhoon dumped 7.44 inches of rain at Borongon. In the aftermath, one person was reported killed and over 790 homes were destroyed in the Philippines.

Gilda did not drop below typhoon force during her transit through the Philippines and emerged into the South China Sea with winds of 85 knots on the 26th. Shifting to a more northwesterly track at 15 knots, the typhoon struck northeastern Hainan Island 36 hours later with winds of 90 knots. Gilda moved ashore on mainland China, west of the Luichow Peninsula, before dissipating in the interior.

HARRIET

Harriet, reminiscent of Typhoon Gilda, cut through the Leyte Gulf region of the central Philippines on July 3. Developing from a circulation first noted near Yap, Harriet intensified to tropical storm force some 24 hours before striking Samar Island. Packing 50-kt. winds as she accomplished landfall near Tacloban, the storm emerged from the Philippine archipelago near Mindoro Island 1 day later and rapidly attained the classification of typhoon.

Setting out to sea on a west-northwesterly heading at 17 knots, Harriet began to wind up. Intensification culminated on the 5th when reconnaissance aircraft estimated maximum winds at 125 knots. Unusually strong for a South China Sea typhoon, Harriet began to slow and, fortunately, weaken before reaching the Vietnam coast. By the morning of the 7th, winds dropped to 70 knots as the storm made landfall.

Moving into the DMZ, the typhoon literally washed out the war on South Vietnam's northern front. Harriet, preceded by day-long rains and high winds in the northern provinces, blotted out ground fighting and heavily cut into U. S. air strikes. A maximum 24-hr.

rainfall of 10.16 inches fell at Camp Evans, which also registered sustained winds of 45 knots and gusts to 61 knots in the typhoon's southern quadrant.

In its aftermath, Harriet left one person dead in the Philippines and four dead and 14 missing in Vietnam. Thau-thien Province in Vietnam suffered. Over 2,500 houses and buildings were partly or completely destroyed.

JEAN

As Jean came onto the scene, the Philippines and Vietnam became the target of July's second typhoon. Attaining 50-kt. winds on July 10, Jean weakened temporarily to depression status while describing an erratic track during the 11th. Regaining strength and commencing a west-northwesterly track north of the Palau Islands, Jean's center passed near the British vessel SIMONBURN on the morning of the 13th. The ship reported force 10 winds (48-55 knots), very high seas, and a pressure reading of 987 mbs. Attaining typhoon strength that afternoon about 270 miles east of the Leyte Gulf, Jean followed a similar track across the central Philippines during the 14th and 15th as that taken by Gilda and Harriet. Highest winds reported in the archipelago were 65 knots at Catbalogan, on the western coast of Samar, while gusts of 70 knots were measured at Virac on Catanduanes. Winds up to 38 knots were also experienced in high and exposed areas of the greater Manila area. Over 7 inches of rain fell in a 2-day period over Samar. No reports of casualties and damage are available; however, low-lying areas of Manila encountered local flooding.

Regaining typhoon winds over open water about 24 hours later, the typhoon changed course to a northwesterly heading. Skirting southern Hainan Island on the 17th, Jean's winds dropped to storm status before she struck shore near Vinh on the Indochina coast on the 18th. The storm dissipated over the mountainous terrain of Laos later that day.

LUCY

The second supertyphoon of the year showed her early signs of origin on July 11 as a circulation in the equatorial trough near the Truk Islands. After a 5-day journey which brought the system into the Philippine Sea, Lucy became a tropical storm at a point 750 miles east of Manila.

While Typhoon Jean was churning the waters of the South China Sea, aircraft reconnaissance measurements noted a steady reduction in Lucy's central pressure once she became a typhoon on the 17th. Thirty hours later, a dropsonde reading in the eye indicated Lucy had bottomed out at 915 mbs. the morning of the 19th, indicating that the supertyphoon level (130 knots) had been reached. The typhoon headed for Luzon Strait on a west-northwesterly track of 8 to 9 knots. Navigating the Strait, Lucy weakened slightly and passed 50 miles south of the Bataan Islands on the afternoon of the 20th. The Philippine Weather Bureau station at Basco registered a maximum sustained wind of 103 knots during Lucy's passage. The circulation associated with the typhoon had grown to a diameter of 600 miles by this time. Manila, located 300 miles to the south, came under strong southwesterly winds of 16 to 25 knots with gusts to 30 knots. Lucy not only buffeted northern and central Luzon with destructively strong winds but also dumped heavy rains which caused severe flooding and landslides. Baguio, during this period, reported a 24-hr. rainfall total of 14.92 inches.

In Taiwan, the highest winds reported were at Lanyu (64 knots with gusts to 85 knots). Rainfall was considerably less in Taiwan with a maximum 24-hr. amount of 4.97 inches measured at Taitung. Casualty reports in Taiwan listed two persons killed and five missing.

Lucy weakened to tropical storm force as she continued on her westerly course for the south China mainland. Striking the coast 15 miles northeast of Hong Kong, gusts of 80 knots were measured at Tate's Cairn in the colony while a minimum pressure of 977.9 mbs. was observed at the Royal Observatory. The storm continued to weaken as it moved inland and finally dissipated in the northern interior of the Luichow Peninsula.

MARY

Detected by satellite, Mary was confirmed by reconnaissance aircraft on July 17 to be of tropical storm force halfway between Wake and Ocean Station Victor (34° N., 164° E.). With Jean in the South China Sea and Lucy in the Philippine Sea, Mary increased the simultaneous storm count in the western Pacific to three.

Reaching minimal typhoon strength the following day, Mary traced a northwesterly course as peak winds near the center reached 80 knots. On the 19th, Mary passed 150 miles west of Ocean Station Victor and diminished to storm status as she shifted to a northerly heading. By the morning of the 21st, Mary was beyond the range of reconnaissance aircraft as she accelerated to a speed of 16 knots. That afternoon satellite pictures indicated that cooler air had taken hold of the storm as it headed northeastward. Shortly thereafter, Mary was an extratropical storm.

NADINE

As Typhoon Lucy was reaching supertyphoon strength in the Philippine Sea, another circulation, destined to be Nadine, formed southeast of Guam on July 16.

During her formative stages the preNadine system dumped 6.05 inches of rain on Guam over a 3-day period, causing local flooding on the island as she passed into the Philippine Sea. Evidence that Nadine was on her way to intensification was provided by the AMERICAN CHARGER which reported northerly winds at 47 knots about 75 miles due west of the center at 2200 G.m.t., on the 20th. Nadine took a track slightly north of Lucy's as the ridge began to build across to the north, dictating a west-northwesterly course of 8 to 10 knots. Quickly reaching typhoon force, Nadine began to grow both in size and strength. The central pressure commenced to plummet rapidly and gale-force winds began to spread. At her height, the minimum pressure reported by reconnaissance aircraft was 898 mbs. some 300 miles northeast of Luzon on the 24th. At this time, maximum winds of 150 knots were packed around Nadine's 20-mi. diameter eye. One hundred-knot winds spread some 100 miles from the center, while gale-force winds encompassed the western Philippine Sea more than 300 miles from the typhoon's eye. As Nadine approached Taiwan, gales were felt as far south as Manila which reported gusts to 33 knots. The Philippine Weather Bureau station on Basco in Luzon Strait measured wind gusts of 127 knots (probably due to channeling in the Strait) as Nadine's center passed 100 miles to the northwest. Nadine's eye landed on the southeast coast of Taiwan between Hsinkong and Taitung during the early morning of the

26th. The typhoon brought torrential rain to southeastern Taiwan with 12.07 inches recorded at Hengehan during its passage. Lanyu recorded maximum winds of 95 knots and gusts to 99 knots.

The toll in Taiwan amounted to 28 people killed with an additional 25 missing. Over 1,250 homes were totally destroyed and some 2,180 dwellings were badly damaged. In addition, the Liberian tanker WARWICK TRADER dragged her anchor and became lodged in the soft sand off the southwestern coast of Taiwan.

OLIVE

Olive climaxed the most active July on record when another in a succession of circulations in the equatorial trough formed east of Guam on July 24. After drifting over Guam, the system took a northward bend. Commencing on a northeasterly drift, the circulation began to grow in size but did not become better organized. By the 29th, a rather complex cloud system was in evidence as viewed by satellite. As the subtropical ridge began to strengthen, the depression began to slowly intensify and start an erratic, meandering, westerly track, reaching storm status early on the 31st. Switching to a northwesterly direction, Olive finally achieved typhoon force the night of August 2. The typhoon reached her peak intensity of 85 knots some 48 hours later as she neared Yaku Shima Island in the northern Ryukyus.

With the approach of a long-wave trough off the coast of China, the typhoon swung to a northerly track with Olive's center driving through western Kyushu, east of Nagasaki, on the 5th. Crossing the Ryukyus, the highest winds and lowest pressure were reported at the Japanese Yaku Shima station--80-kt. winds gusting to 119 knots and a 938.7-mb. pressure.

Torrential rains, measuring up to 59.8 inches in the mountainous regions of Kyushu (Ebino, Miyazaki Prefecture), accounted for numerous landslides and for 69 persons killed, 209 injured, and over 1,700 dwellings partly or completely destroyed. At sea, the 7,935-ton motorship KAMO MARU was forced aground off Hesaki Lighthouse, the 975-ton SHINMEI MARU ran aground 6 miles west of Anami O-Shima, and the 6,248-ton Indian motorship KRISHNA JAYANTI suffered a power failure and steering gear disorders off Kyushu Island as a result of the storm.

Weakened considerably by its traverse of Kyushu, Olive entered the Sea of Japan as a tropical storm and paralleled the Korean coast before turning to a northeasterly course and becoming extratropical.

ROSE

During her early life, Rose was in a class of midget typhoons having an areal extent of 100 to 150 miles. Before her life cycle was spent, however, Rose had the distinction of being the most disastrous typhoon of the 1971 season.

A small circulation was evident in synoptic and satellite data as early as August 7 at a position north of Truk. On the evening of the 9th, the radars at Fleet Weather Central Guam and Anderson AFB, Guam, detected a small circulation with spiraling convection passing just north of Guam. Aircraft investigation the following morning revealed a mini-storm with 35- to 40-kt. winds. By the late afternoon, Rose coiled to minimum typhoon strength with no increase in size and set out on a westerly 14- to 15-kt. course for Luzon. Except for a 12-hr. period during the late afternoon and evening of the 11th, Rose remained at typhoon strength as she navigated the Philippine Sea and gradually generated winds to 110 knots before striking Luzon.

Making landfall north of Palanan Point, Rose crossed the mountainous terrain of northern Luzon and emerged in the South China Sea as a minimal typhoon. While inland, the Philippine Weather Bureau station at Tuguegarao reported maximum winds of 75 knots, and the barometer dipped to 986.5 mbs. during center passage.

Rose had been steered for several days by a strong high cell centered near Shanghai. This cell began to weaken significantly as Rose began her journey in the South China Sea. In response to the synoptic-scale changes, the typhoon shifted to a more northwesterly course and began to slow to 6 to 7 knots in forward movement later on the 15th.

The eye of the storm began to appear on the radar at the Royal Observatory the afternoon of the 16th. A ship report in the vicinity of the eye confirmed that the deepening trend had continued to 950 mbs. At this time, the NUDDEA reported winds of 90 to 110 knots close to the center. Considering the last reports from aircraft penetration of Rose and the continued deepening trend, the typhoon probably peaked near 120 knots before weakening slightly when the eye arrived at Lantau Island off Hong Kong shortly after midnight of the 16th. Moving inland on the 17th, the storm weakened and dissipated northeast of Canton the following day.

Meteorological extremes measured within the colony showed a minimum pressure of 963.2 mbs. at Cheang Chau after midnight while a maximum gust of 121 knots was reported at the Royal Observatory. The 11.34 inches of rain which fell at the observatory during the 24 hours of Rose's passage was the highest value ever recorded in 1 calendar day during August.

Typhoon Rose was probably one of the most intense and violent typhoons that has affected Hong Kong. Twenty-six ocean going vessels went aground and two were sunk. Table 4 lists the name, nationality, and gross tonnage of the affected ships. A total of 130 deaths was attributed to the typhoon and over 5,600 people were made homeless. Also, in the harbor, some 300 small crafts, including 100 pleasure crafts, were sunk or damaged.

The Macao ferry FATSHAN capsized, resulting in the loss of 76 lives, and is regarded as one of the worst maritime disasters in the colony's history.

SHIRLEY

Noted as a disturbance for several days in satellite photographs, the existence of a circulation 300 miles southwest of Marcus Island was confirmed by reports from the HAWAII BEAR on August 11. Aircraft reconnaissance early on the 13th revealed the status of the system as a tropical storm with 55-kt. winds. Shirley was positioned some 250 miles southeast of Iwo Jima.

Situated in a weak area of the subtropical ridge, the storm remained quasi-stationary for 12 hours before it shifted to a northerly course at 5 knots and acquired typhoon strength during the evening of the 13th. Continuing on a northerly course along the western periphery of a high cell centered south of Ocean Station Victor (34° N., 164° E.). Shirley's forward movement gradually increased to 15 knots over the next 4 days. Maximum winds during her lifetime reached 90 knots on the 16th at a position 400 miles east-southeast of Tokyo. As the westerlies began to take hold, Shirley shifted course toward the northeast and accelerated to 40 knots while retaining her in-

tensity. Shirley transformed to extratropical characteristics east of Hokkaido late on the 17th.

Invaluable service was furnished by the Norwegian ship BONNEVILLE which responded to Fleet Weather Central Guam's request for 3-hr. ship reports during the uncertain forecast period from the 12th to the 14th. Peak winds of 42 knots were experienced by the BONNEVILLE early on the morning of the 12th.

TRIX

Spotted by satellite and ship reports some 200 miles southwest of Marcus Island on August 19, the disturbance destined to be Trix quickly generated to tropical storm force by the following day. As steering currents were weak, Trix drifted northward at 6 to 7 knots, and was classified as a typhoon during the night of the 21st 100 miles west of Marcus Island. On the 22d, the storm remained nearly stationary for 24 hours. Then Trix began tracking westward on a heading that took her near Iwo Jima on the morning of the 26th. Winds of 35 knots with gusts of 45 knots were recorded on the island as the typhoon passed 40 miles to the north. The storm then took aim for the northern Ryukyus and began to slowly intensify on the 27th. Trix slowed to 8 knots and her central pressure began to plummet before recurving on the 29th. About 30 miles south of Yaku Shima, aircraft reconnaissance measured maximum sustained winds of 100 knots concentrated around a tight 8-mi. diameter eye. As Trix passed through the northern Ryukyus, the Japanese weather station on Yaku Shima Island reported winds of 66 knots gusting to 96 knots. Trix's center was only 20 miles to the west of Yaku Shima.

Following 3 weeks after Olive, Trix struck Kyushu at Cape Sata during the early morning of the 30th. She then paralleled the Japan coastline emerging from the Boso Peninsula as an extratropical system. The typhoon brought torrential rains to the Japanese islands with as much as 43 inches recorded in the mountainous terrain of Kyushu (Yangitake, Miyazaki Prefecture). The huge rainfall flooded many rivers and streams and caused numerous landslides. In addition, the weather halted the National Railways in Kyushu and paralyzed the nation's air and surface transport systems.

Forty-four deaths were reported, over 1,000 dwellings were partially or completely destroyed, and over 120,000 homes were flooded. A total of $50.6 million (U. S.) was lost in damage sustained to the rice, fruit, and vegetable crops. In addition, a series of tornadoes swept through the coastal port of Chiba City accounting for one death as the weakened extratropical stages of Trix passed back out to sea.

VIRGINIA

Aircraft reconnaissance located newly formed Tropical Storm Virginia some 500 miles northwest of Guam on the afternoon of September 1. Early signs of the system can be traced back on synoptic charts to a circulation which had its origin near the Palau Islands on August 30. Drifting north and then northeast, satellite pictures showed increasing character to the cloudiness of the system before reconnaissance investigation.

Like Trix, Virginia was in an environment of weak steering currents during her early stages, and thus began to drift slowly northward, intensifying to typhoon strength by the afternoon of the 4th. As Virginia passed 270 miles west of Iwo Jima, her winds peaked at 100 knots. Rounding the periphery of the high cell centered north of Marcus Island, the typhoon shifted to a north-northeasterly course during the afternoon of the 6th. On this heading, Virginia's center skirted the Boso Peninsula of Japan during the night of the 7th. As she merged with a frontal zone off of northern Honshu, Virginia weakened to storm force and became extratropical the following day. The strongest wind reported along the Japanese coast was 67 knots with gusts to 95 knots at the Chosi weather station.

Virginia interacted with a weak frontal area along the southern coast of Honshu causing torrential rain (up to 22 inches in a 24-hr. period at Katsuma) to fall along the coast, which triggered landslides and considerable flooding. Approximately 200 houses were totally or partially destroyed while over 13,800 dwellings were flooded. Hardest hit was the Chiba Prefecture where 56 persons were reported killed by the landslides which buried numerous homes.

WENDY

Destined to spend her entire life at sea, Wendy formed from a disturbance first noted by satellite on September 2 east of Wake Island. This system drifted southwestward and became a tropical storm just north of Wake Island on the morning of the 4th. As the storm began a slow drift of 2 to 5 knots in a northwesterly direction during the next 24 hours, winds of typhoon force were acquired. The effects on Wake resulted in 6.24 inches of rainfall during Wendy's passage with a sustained wind of 42 knots measured on the 5th and a gust of 50 knots registered on the 6th.

Intensification of the typhoon proceeded at a rapid pace until late on the 7th when peak winds of 140 knots were reached. Reports from reconnaissance crews at this time described one of the largest and most panoramic eyes of the year, a circular, closed-wall cloud with coliseum-like features encompassing an eye 40 miles in diameter.

After a stall during the 8th, Wendy commenced a northerly and later a northwesterly track. The area dominated by the storm's circulation began to spread to stretch over a vast region of some 900 miles in diameter. Wendy maintained her northwesterly track for 2 days before rounding the periphery of the ridge line. On the 11th, she began to recurve some 400 miles east of Japan. With a trough in the westerlies situated along the coast of Manchuria, the typhoon then began to accelerate in forward speed from 16 knots on the 12th to 37 knots on the 13th. Dropping to storm strength and merging with a frontal system east of Hokkaido, Wendy ended her life as a tropical system on the 13th.

The 9,968-ton Liberian freighter UNION WISDOM, bound from Yokohama to Montreal, was battered by Typhoon Wendy. Heavy damage resulted when the deck cargo shifted, and a 108-ton iron ring was lost overboard.

AGNES

The weak circulation which was to become Agnes had been followed on synoptic charts for close to a week in the west-central Philippine Sea. On September 14, satellite data and aircraft reconnaissance indicated the system was showing signs of development, and by the following afternoon September's third tropical storm had formed.

Guided by an extension of the subtropical ridge to the Ryukyus, Agnes slowly edged northward and then shifted

to a westerly course while she intensified to a typhoon on the 17th. Agnes continued to follow the weak ridge making landfall on Taiwan between Hualein and Ilan early on the evening of the 18th. After crossing Formosa Strait, the storm arrived on the China mainland near Nanchang and dissipated as it moved inland.

Winds of 58 knots gusting to 78 knots were felt on the islands offshore of northeastern Taiwan, while heavy rainfall produced by Typhoon Agnes amounted to 17.4 inches in 48 hours at Anpu in the mountainous terrain of the island. Flooding in Taipei was reported to be extremely serious as much of the lower areas of the city were badly inundated. Over 100 dwellings were partially or totally destroyed by the flooding. One person was reported killed and five others were missing.

BESS

September's fourth typhoon developed from a disturbance which can be traced back by satellite to a position between Wake and Marcus Islands on September 14. Three days later, aircraft reconnaissance located Bess about 300 miles east of the Marianas with associated maximum winds of 40 knots. Bess developed into a typhoon on the 18th, passing near Agrihan Island that afternoon. On the morning of the 20th, Bess had intensified further to be the season's fifth supertyphoon as 140-kt. winds spun around her 30-mi. eye. With the subtropical ridge extending to the Ryukyu chain, Bess proceeded on a steady west-northwesterly track with her forward speed gradually decreasing from 16 to 12 knots as she approached the southern Ryukyus. On the afternoon of the 22d, the typhoon passed a few miles south of Ishigaki Shima and crossed directly over Younaguni Jima. Bess's winds were measured at 91 knots gusting to 124 knots at the weather station on Younaguni Jima while Ishigaki Shima received 9.3 inches of rainfall during the typhoon's passage. The southern Ryukyu Islands reported two persons killed and more than 2,000 people made homeless. The islands were declared a major disaster area.

On the evening of the 22d, Bess--the second typhoon to strike Taiwan during September--moved inland over Taiwan near Ilan, which recorded a minimum sea-level pressure of 955.5 mbs. The eye of the storm, estimated at 40 miles in diameter, passed over Taipei between 2220 and 2305. Highest sustained winds recorded were 108 knots at Pengachiayu, and the maximum gust observed was 130 knots at Keelung. A storm surge of 9.9 feet was experienced at Tanshui on the island's northern coast during the passage of the eye. Bess emerged over Formosa Strait as a minimal typhoon during the early morning of the 23d near Taoyuan, and struck mainland China near Fuichow that afternoon. The storm weakened to depression status over land. Then, drifting northward, she recurved and crossed the Yellow Sea as an extratropical system.

Flooding in Taipei was extreme in places, and all main roads branching out of Taipei were made temporarily impassable by the storm. The torrential rainfall in the mountainous terrain amounted to 18.7 inches at Alishan. The typhoon was also responsible for serious damage to rice, sugarcane, and banana crops. In total, Bess accounted for 30 deaths, six persons missing, and over 2,200 dwellings destroyed.

DELLA

Della cut across northern Luzon on September 27 as an intensifying tropical depression. Early signs of her existence can be traced to the central Philippine Sea near 14° N., 130° E., on the 25th, as evidenced by satellite and ship data. Emerging into the South China Sea, Della was guided on a westerly track by an extension of the subtropical ridge into south China. Della developed to minimal typhoon force (70 knots) late on the 28th, bringing the month's typhoon total to five. After her transit of Hainan Island on the 29th, Della crossed the Gulf of Tonkin on the following day, arriving ashore on the Vietnam coast late in the day near Vinh. The remains of the storm dissipated shortly thereafter over northern Laos.

ELAINE

Elaine became the second storm to generate to typhoon force over the South China Sea within a week. The early stages of Elaine tracked into the Philippine Sea on a 5-day journey from the central Carolines, and developed to minimal tropical storm strength shortly before she skirted the northern coast of Samar Island the evening of October 3.

Crossing the central Philippines at a 13-kt. forward speed, Elaine exited south of Lubang Island 24 hours later. Extensive crop damage was reported to have been caused because of the typhoon's transit of the islands. Maximum winds of 50 knots were registered at the Virac weather station on Catanduanes Island while up to 7.8 inches of rainfall was recorded at Calapan on Mindoro.

Elaine began to slow and stall west of Luzon. As the weak steering currents persisted, the storm slowly drifted in a general northwesterly direction and intensified to 100 knots. By the 7th, the subtropical ridge began to build and Elaine swung back to a westerly track skirting southern Hainan early on the 9th. Dropping to tropical storm status, Elaine traversed the Gulf of Tonkin, driving ashore on the Vietnam coast north of Dong Hoi. She quickly weakened and later dissipated over Laos.

During the time frame when Elaine stalled in the South China Sea, the envelope of gale-force winds expanded in size to 300 miles in radius. Fifty-knot winds extended 200 miles out into the southern quadrant. An extensive southwesterly fetch caused huge waves to strike the western coastal region of the northern Philippines. Close to 10,000 persons had to be evacuated from the shore areas. Destruction from the heavy seas amounted to 2,400 homes completely demolished.

The heavy seas were also responsible for a number of maritime casualties. The Philippine interisland passenger ship TACLOBAN was sunk in Tablas Strait with three persons reported killed. The pump boat SARANEL was capsized by big waves off the coast of Siguigas Island in the Mindanao Sea with only four of its 30 passengers surviving. Immobilized south of the typhoon, the American ship STEEL VENDOR was run aground on the Loaita Bank in the South China Sea. The sinking Panamanian tanker KEELUNG, 240 miles west of Manila, had to be abandoned by its crew in the heavy seas generated by Elaine. In another incident, the 17-man crew of the sinking Formosan fishing boat CHI-SHING TAN abandoned ship during heavy seas in the South China Sea at the height of typhoon Elaine. The crew was rescued.

FAYE

Faye was first sighted as a weak entity in satellite

pictures south of Johnson Island as early as September 27. Ill-defined, the system drifted west-northwestward for a week, making passage near Eniwetok on October 3 as the U. S. Coast Guard station on the atoll reported a sharp wind shift. By the 4th, satellite pictures detected signs of organization in the cloudiness. An aircraft investigation early the following morning located a tropical storm with 50-kt. peak winds some 700 miles east of the Marianas. Faye sailed along at 16 to 21 knots briefly reaching typhoon strength late on the 5th. Returned to tropical storm classification, Faye passed just north of Saipan the following afternoon. Faye continued on a westerly heading during the next 24 hours, gradually weakening and appearing to dissipate late on the 7th. With a rather complex circulation pattern in the Philippine Sea at this time, it is possible that the system may have been absorbed in a larger circulation to the south. However, for the 2-day period of the 8th and 9th, all available reconnaissance, surface, and satellite data indicate a considerable amount of uncertainty in this portion of Faye's track. Redevelopment over the Philippines may possibly not have been retraceable to the initial system.

After regaining minimal storm strength on the 9th in the Lamon Bay region, Faye crossed Luzon on a westerly track north of Manila. Once in the South China Sea, she intensified to typhoon strength but then grinded to a halt on the 11th, 45 miles northeast of Scarborough Shoals. Commencing a highly unusual track toward the southeast, Faye cut across Luzon for the second time, by then weakened to tropical storm force. The storm passed south of Manila. The highest winds reported during Faye's second Philippine transit were 42 knots at Calapan on northern Mindoro. Emerging into Lamon Bay after being greatly modified by cooler air from the north, the remains of Faye slowly moved northeastward and acquired extratropical characteristics as they merged with a weak frontal zone south of the Ryukyus.

The effect of Faye on the city of Manila was considerable as heavy rains flooded much of its lowlying areas. The torrential rainfall from Faye in combination with that of Tropical Storm Gloria, which struck northern Luzon late on the 10th, was responsible for measured 24-hr. amounts up to 10.78 inches at Casiguran. The flooding caused evacuation of many towns in Luzon, leaving thousands homeless. Streams already swollen by rains from Typhoon Elaine and Tropical Storm Gloria overflowed their banks, swept away bridges, and submerged crops and homes. At least 13 deaths with an additional 80 persons counted as missing were reported in the aftermath of Gloria and Faye. Offshore, the heavy seas generated by Faye forced the inter-island vessel JOLO aground near Corregidor at the mouth of Manila Bay, while in Palawan Island a pump boat was reported to have sunk with one of its 11 crewmen counted as missing.

HESTER

One of the most devastating typhoons to strike Vietnam in over a decade developed from a circulation just west of the Palau Islands. Hester attained tropical storm strength late on October 19 about 250 miles east of northern Mindanao. Crossing the southern Visayas, she intensified to typhoon force over the Sulu Sea on the 21st. Later that evening, Hester cut across northern Palawan Island and moved over the South China Sea, leaving behind some six persons killed and two missing in the southern Philippines.

Hester then accelerated to 18 knots in forward speed on a west-northwesterly course, or twice the climatological average for typhoons in that region during October. Hester continued to intensify to 90 knots during her 1-1/2-day track across the South China Sea. Arriving ashore on the Vietnam coast during the morning of the 23d, the typhoon's eye passed just south of Chu Lai. Moving inland, the center tracked south of Hue and diminished in strength. The storm rapidly dissipated over central Laos that evening.

Maximum sustained winds at Da Nang were registered at 60 knots with gusts to 85 knots during Hester's passage. Maximum gusts of 70 and 71 knots were reported at Camp Eagle and Hue, respectively. The lowest pressure of 971 mbs. was measured at Chu Lai where maximum winds of 70 knots gusting to 90 knots were estimated. Heaviest rainfall measured was at Camp Eagle with 5.44 inches.

Extensive damage was suffered at American bases, including Camp Eagle and the air and naval facilities at Da Nang. Heaviest hit was Chu Lai with 75 percent of its structures receiving damage. Thirty-eight helicopters were destroyed and four hangers collapsed, while 87 other aircraft (mostly helicopters) received damage. Three American lives were lost because of flying debris.

Over 200 miles of coastal area were flooded from Quang-tri to Da Nang while 90 percent damage was sustained to houses in Quang Ngai. Severe damage to crops was reported and loss of cattle amounted to close to 900 head. Maritime casualties accounted for some 500 fishing boats reported sunk or destroyed, and the 1,000-ton UNION PACIFIC ran aground north of Chu Lai.

In total, newspaper reports indicate some 85 Vietnamese were killed and over 200,000 rendered homeless because of Hester. The Republic of Vietnam's social welfare department regarded the typhoon as the worst to strike the country since 1944.

IRMA

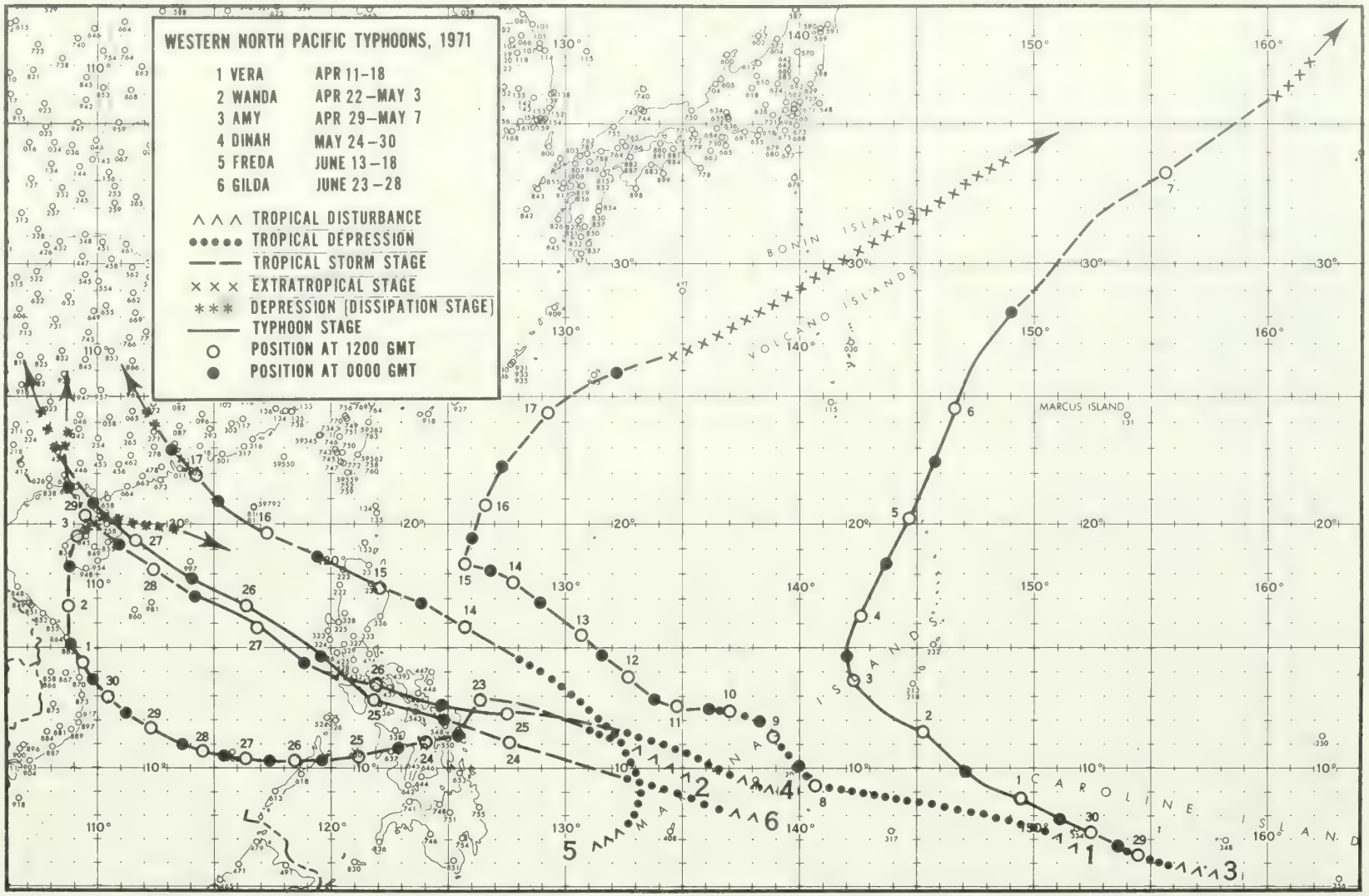
The last and most intense typhoon of the year was first noted on synoptic charts as a quasi-stationary circulation in the western Carolines on November 2. Early on the 8th, the ESSA 8 satellite data showed that the cloudiness associated with the system was showing increased organization--Tropical Storm Irma was born. Later in the afternoon, Woleai Atoll reported winds of 30 knots with gusts to 50 knots as the storm center was located by reconnaissance aircraft 50 miles west of the station. Reports from Eauripik Atoll indicated that high seas had inundated 200 feet inland, and several houses were washed away. Irma's track was erratic for the next 24 hours until she began a northwesterly heading, passing 30 miles west of Ulithi the morning of the 10th. Reports from the atoll indicated 30-kt. winds with gusts to 60 knots and a minimum sea-level pressure of 996.3 mbs. In the Yap district, only Fais and Ulithi atolls had appreciable damage and this was limited to crops. Reaching typhoon force the evening of the 10th, Irma described a smooth northwesterly track, attaining supertyphoon status late on the 11th. The central pressure had plunged drastically during the day as evidenced by a 1600 G.m.t. reconnaissance aircraft measurement of 884 mbs. The observation ranked Irma's central pressure among the lowest on record.[1] Reaching peak winds in excess of 150 knots, Irma remained at supertyphoon strength for a 36-hr. period until she began to recurve around the subtropical ridge at 127° E. Paralleling the Ryukyu Island chain and accelerating in forward speed as she came under the

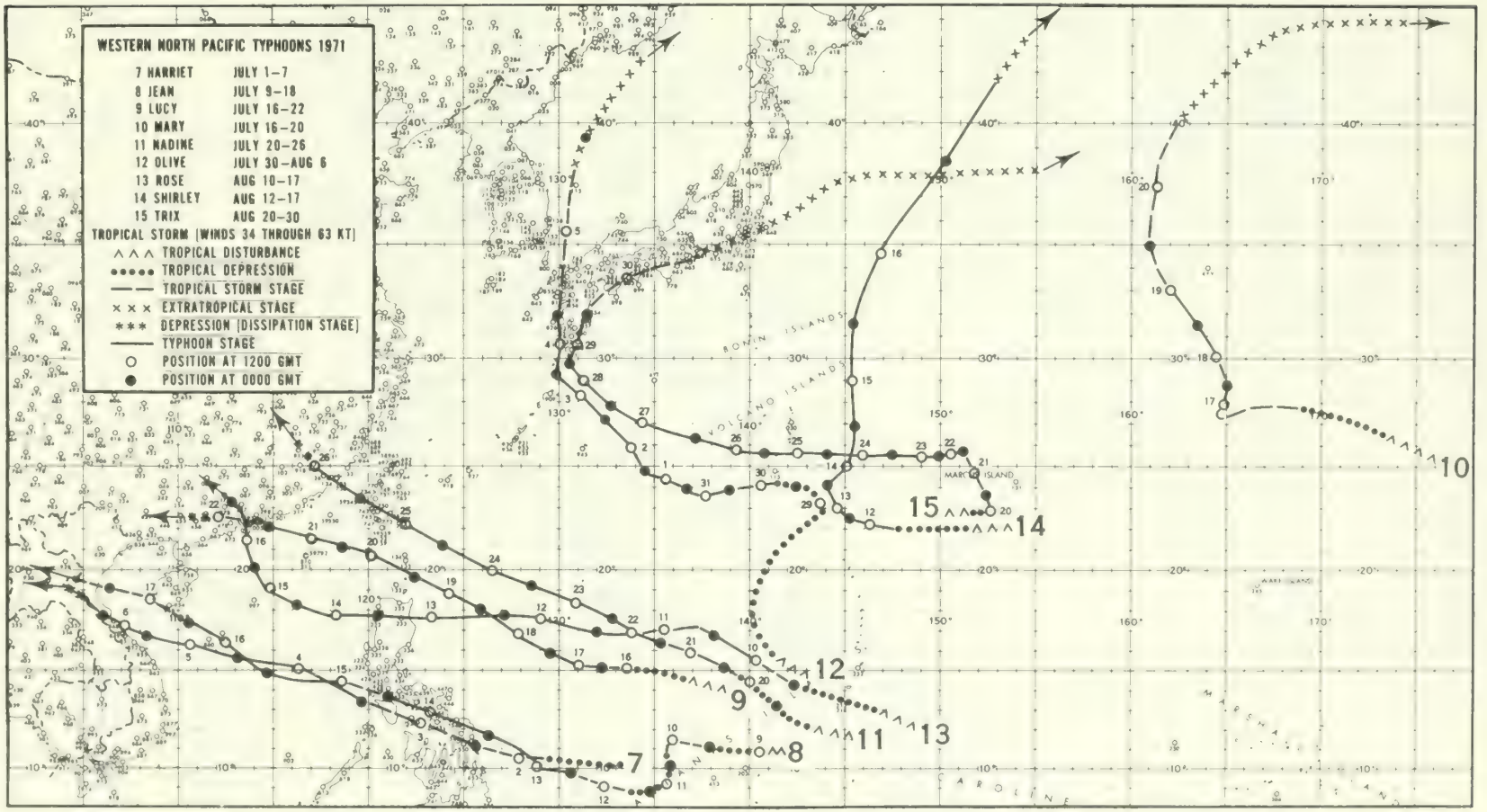
influence of the westerlies, Irma transformed to extratropical characteristics as she sped south of Honshu on the 15th at 35 knots. During the passage of the eye 65 miles east of Okinawa, the highest winds experienced on the island were at Naha which recorded 48-kt. gales, gusting to 80 knots, while Kadena AB reported 45-kt. winds with gusts to 64 knots.

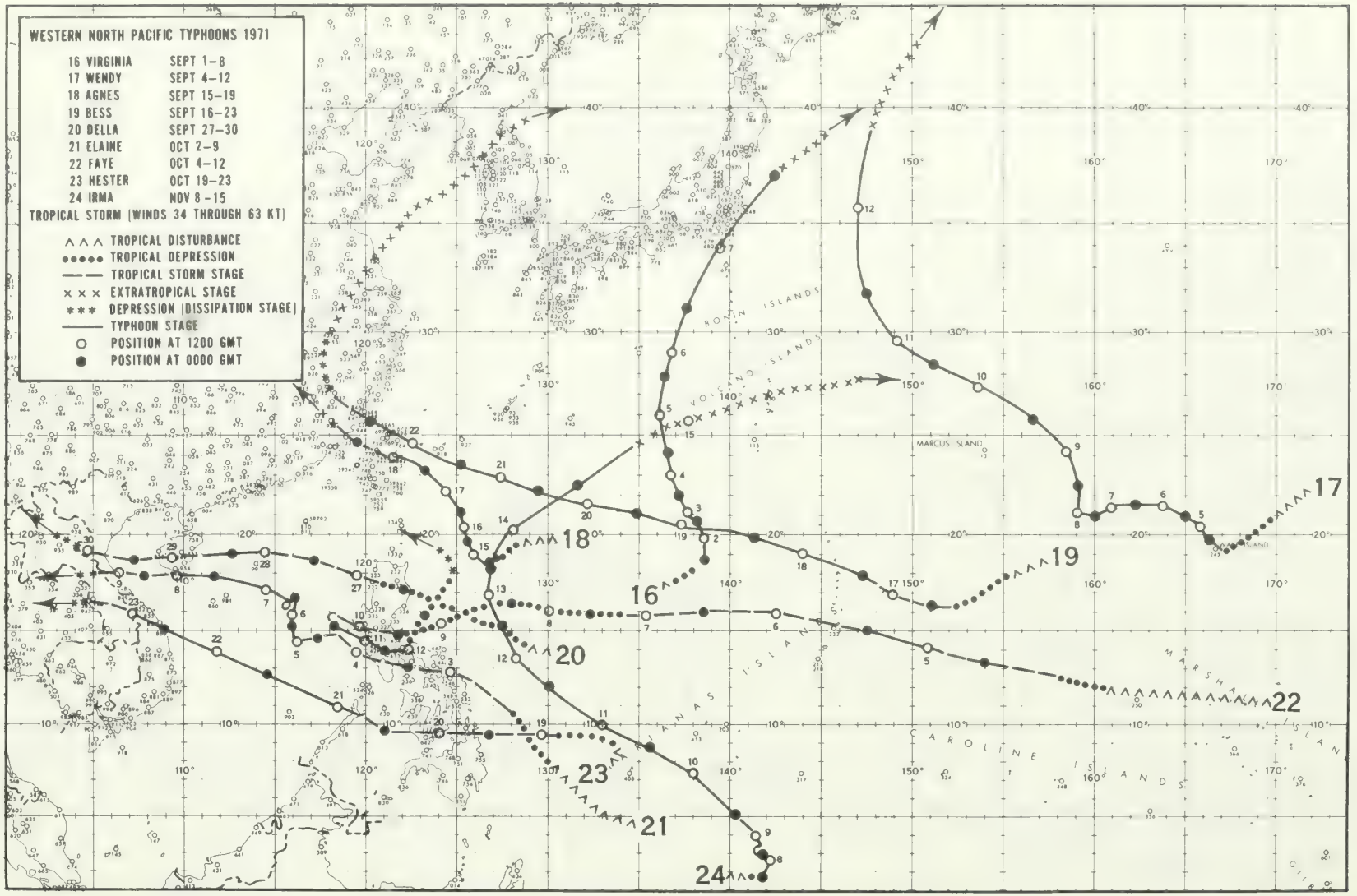
At sea, the 2,474-ton Panamanian HUALIEN was run aground (presumably by heavy swells) at Peng Chia Hsu Island northeast of Taipei. The 13,616-ton Liberian ore carrier BANALUNA, bound from Leyte Island, Philippines, to Tobata, Japan, was reported missing and feared to have gone down during Irma. The 8,151-ton U. S. flagship AMERICAN COURIER, from New York for Subic Bay, reported that she lost one-half the stock of her starboard anchor.

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[1] Minimum pressure on record is 877 mbs. measured by aircraft dropsonde in the eye of typhoon Ida on Sept. 24, 1958.


WESTERN NORTH PACIFIC TYPHOONS, 1971
1 VERA APR 11–18
2 WANDA APR 22–MAY 3
3 AMY APR 29–MAY 7
4 DINAH MAY 24–30
5 FREDA JUNE 13–18
6 GILDA JUNE 23–28
TROPICAL DISTURBANCE
TROPICAL DEPRESSION
TROPICAL STORM STAGE
EXTRATROPICAL STAGE
DEPRESSION (DISSIPATION STAGE)
TYPHOON STAGE
POSITION AT 1200 GMT
POSITION AT 0000 GMT
BONIN ISLANDS
VOLCANO ISLANDS
MARCUS ISLAND
MARIANA ISLANDS
CAROLINE ISLAND


WESTERN NORTH PACIFIC TYPHOONS 1971
7 HARRIET JULY 1–7
8 JEAN JULY 9–18
9 LUCY JULY 16–22
10 MARY JULY 16–20
11 NADINE JULY 20–26
12 OLIVE JULY 30–AUG 6
13 ROSE AUG 10–17
14 SHIRLEY AUG 12–17
15 TRIX AUG 20–30
TROPICAL STORM (WINDS 34 THROUGH 63 KT)
TROPICAL DISTURBANCE
TROPICAL DEPRESSION
TROPICAL STORM STAGE
EXTRATROPICAL STAGE
DEPRESSION (DISSIPATION STAGE)
TYPHOON STAGE
POSITION AT 1200 GMT
POSITION AT 0000 GMT
BONIN ISLANDS
VOLCANO ISLANDS
MARCUS ISLAND
CAROLINE
7
8
9
10
11
12
13
14
15


WESTERN NORTH PACIFIC TYPHOONS 1971
16 VIRGINIA SEPT 1–8
17 WENDY SEPT 4–12
18 AGNES SEPT 15–19
19 BESS SEPT 16–23
20 DELLA SEPT 27–30
21 ELAINE OCT 2–9
22 FAYE OCT 4–12
23 HESTER OCT 19–23
24 IRMA NOV 8–15
TROPICAL STORM (WINDS 34 THROUGH 63 KT)
TROPICAL DISTURBANCE
TROPICAL DEPRESSION
TROPICAL STORM STAGE
EXTRATROPICAL STAGE
DEPRESSION (DISSIPATION STAGE)
TYPHOON STAGE
POSITION AT 1200 GMT
POSITION AT 0000 GMT
BONIN ISLANDS
VOLCANO ISLANDS
MARCUS ISLAND
MARSHALL ISLANDS
CAROLINE ISLANDS
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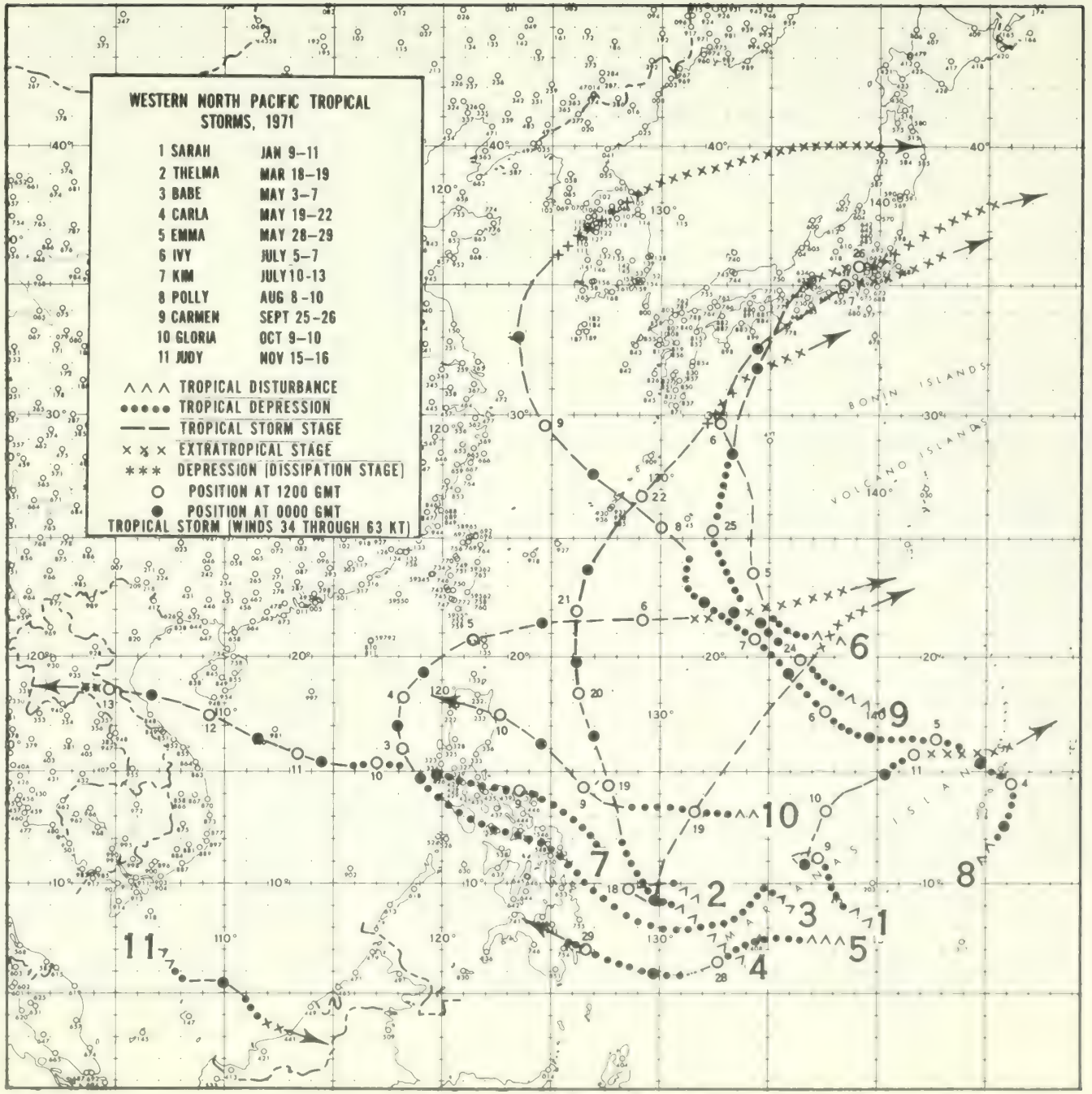

WESTERN NORTH PACIFIC TROPICAL STORMS, 1971
1 SARAH JAN 9–11
2 THELMA MAR 18–19
3 BABE MAY 3–7
4 CARLA MAY 19–22
5 EMMA MAY 28–29
6 IVY JULY 5–7
7 KIM JULY 10–13
8 POLLY AUG 8–10
9 CARMEN SEPT 25–26
10 GLORIA OCT 9–10
11 JUDY NOV 15–16
TROPICAL DISTURBANCE
TROPICAL DEPRESSION
TROPICAL STORM STAGE
EXTRATROPICAL STAGE
DEPRESSION (DISSIPATION STAGE)
POSITION AT 1200 GMT
POSITION AT 0000 GMT
TROPICAL STORM (WINDS 34 THROUGH 63 KT)
BONIN ISLANDS
VOLCANO ISLANDS
MARIANA ISLANDS

Table 1.--Frequency of tropical storms (including typhoons) by months and years

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1945	0	0	0	1	1	2	5	7	6	1	3	0	26
1946	0	0	1	0	1	2	3	2	3	1	2	0	15
1947	0	0	1	0	1	1	3	3	5	6	6	1	27
1948	1	0	0	0	2	2	2	5	5	4	3	2	26
1949	1	0	0	0	0	1	5	3	6	1	3	2	22
1950	0	0	0	0	1	2	3	2	3	3	3	1	18
1951	0	0	1	2	1	1	1	2	2	4	1	2	17
1952	0	0	0	0	0	3	3	4	5	6	3	4	28
1953	0	1	0	0	1	2	2	6	3	4	3	1	23
1954	0	0	1	0	1	0	1	6	4	3	3	0	19
1955	1	0	1	1	0	1	6	3	3	4	1	1	22
1956	0	0	1	2	0	1	2	5	5	2	3	1	22
1957	2	0	0	1	1	1	1	3	5	4	3	0	21
1958	1	0	0	0	1	3	5	3	3	3	2	1	22
1959	0	1	1	1	0	0	3	6	6	4	2	2	26
1960	0	0	0	1	1	3	3	10	3	4	1	1	27
1961	1	1	1	1	3	2	5	4	6	5	1	1	31
1962	0	1	0	1	2	0	6	7	3	5	3	2	30
1963	0	0	0	1	1	3	4	3	5	5	0	3	25
1964	0	0	0	0	2	2	7	9	7	6	6	1	40
1965	2	2	1	1	2	3	5	6	7	2	2	1	34
1966	0	0	0	1	2	1	5	8	7	3	2	1	30
1967	1	0	2	1	1	1	6	8	7	4	3	1	35
1968	0	0	0	1	1	1	3	8	3	6	4	0	27
1969	1	0	1	1	0	0	3	4	3	3	2	1	19
1970	0	1	0	0	0	2	2	6	4	5	4	0	24
1971	1	0	1	3	4	2	8	4	6	4	2	0	35
Total	12	7	13	20	30	42	102	137	125	102	71	30	691
Avg.	.44	.25	.48	.74	1.11	1.56	3.78	5.07	4.63	3.78	2.63	1.11	25.59

Table 2.--Frequency of tropical storms reaching typhoon intensity by months and years

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1945	0	0	0	0	0	1	2	5	3	1	1	0	13
1946	0	0	1	0	1	1	3	1	3	1	2	0	13
1947	0	0	0	0	1	1	0	3	4	5	4	1	19
1948	1	0	0	0	2	0	2	2	4	1	2	1	15
1949	1	0	0	0	0	1	3	3	3	1	1	1	14
1950	0	0	0	0	1	1	1	2	1	3	2	1	12
1951	0	0	1	2	1	1	1	2	2	3	1	2	16
1952	0	0	0	0	0	3	1	3	3	4	3	2	19
1953	0	1	0	0	1	1	2	4	2	4	1	1	17
1954	0	0	0	0	1	0	1	4	4	2	3	0	15
1955	1	0	1	1	0	1	5	3	3	2	1	1	19
1956	0	0	1	1	0	0	2	4	5	1	3	1	18
1957	1	0	0	1	1	1	1	2	5	3	3	0	18
1958	1	0	0	0	1	3	4	3	3	3	1	1	20
1959	0	0	0	1	0	0	1	5	3	3	2	2	17
1960	0	0	0	1	0	2	2	8	0	4	1	1	19
1961	0	0	1	0	2	1	3	3	5	3	1	1	20
1962	0	0	0	1	2	0	5	7	2	4	3	0	24
1963	0	0	0	1	1	2	3	3	3	4	0	2	19
1964	0	0	0	0	2	2	6	3	5	3	4	1	26
1965	1	0	0	1	2	2	4	3	5	2	1	0	21
1966	0	0	0	1	2	1	3	6	4	2	0	1	20
1967	0	0	1	1	0	1	3	4	4	3	3	0	20
1968	0	0	0	1	1	1	1	4	3	5	4	0	20
1969	1	0	0	1	0	0	2	3	2	3	1	0	13
1970	0	1	0	0	0	1	0	4	2	3	1	0	12
1971	0	0	0	3	1	2	6	3	5	3	1	0	24
Total	7	2	5	17	23	30	67	97	88	76	50	20	483
Avg.	.26	.07	.22	.63	.85	1.11	2.48	3.59	3.26	2.81	1.85	.74	17.89

Table 3. --1971 western North Pacific tropical storms and typhoons

Name	Intensity	Date	Maximum surface wind(kt)	Minimum observed sea-level pressure (mb)	Deaths	Missing	Principal areas affected
Sarah	TS	Jan. 9-11	50	989	-	-	Remained over water
Thelma	TS	Mar. 18-19	45	992	-	-	Remained over water
Vera	TY	Apr. 11-18	90	960	-	-	Remained over water
Wanda	TY	Apr. 22-May 3	75	980	79	39	Philippines, Vietnam, Hainan Island
Amy	STY	Apr. 29-May 7	150	895	1	-	Truk District, Marianas
Babe	TS	May 3-7	55	987	-	-	Philippines
Carla	TS	May 19-22	50	989	-	-	Ryukyus
Dinah	TY	May 24-30	90	956	13	44	Philippines, Hainan Island, China
Emma	TS	May 28-29	35	1000	-	-	Remained over water
Freda	TY	June 13-18	65	978	7	-	Philippines, Hong Kong, China
Gilda	TY	June 23-28	90	978	1	-	Philippines, Hainan Island, China
Harriet	TY	July 1-7	125	921	5	14	Philippines, Vietnam
Ivy	TS	July 5-7	60	978	1	-	Japan
Kim	TS	July 10-13	50	984	-	-	Philippines, Vietnam
Jean	TY	July 9-18	85	968	-	-	Philippines, Hainan Island, Vietnam
Lucy	STY	July 16-22	130	915	2	5	Philippines, Taiwan, Hong Kong, China
Mary	TY	July 16-20	80	973	-	-	Remained over water
Nadine	STY	July 20-26	150	898	32	25	Philippines, Taiwan, China, Japan
Olive	TY	July 30-Aug. 8	85	935	69	-	Japan
Polly	TS	Aug. 8-10	40	985	-	-	Ryukyus
Rose	TY	Aug. 10-17	120	950	130	-	Philippines, Hong Kong, China
Shirley	TY	Aug. 12-17	90	955	-	-	Remained over water
Trix	TY	Aug. 20-30	100	915	45	-	Bonin Island, Japan
Virginia	TY	Sept. 1-8	100	955	56	-	Japan
Wendy	STY	Sept. 4-12	140	915	-	-	Wake Island
Agnes	TY	Sept. 15-19	75	975	1	5	Taiwan, China
Bess	STY	Sept. 16-23	140	911	32	6	Northern Marianas, Taiwan, China
Carmen	TS	Sept. 25-26	50	1000	20	-	Japan
Della	TY	Sept. 27-30	70	981	-	-	Philippines, Hainan Island, Vietnam
Elaine	TY	Oct. 2-9	100	963	37	-	Philippines, Hainan Island, Vietnam
Faye	TY	Oct. 4-12	65	984	3	-	Marianas, Philippines
Gloria	TS	Oct. 9-10	45	987	10	80	Philippines
Hester	TY	Oct. 19-23	90	967	94	2	Philippines, Vietnam
Irma	STY	Nov. 8-15	155	884	-	-	Ryukyus
Judy	TS	Nov. 15-16	45	1004	-	-	Remained over water
					638	220	

TS = Tropical storm
TY = Typhoon
STY = Supertyphoon

Table 4.--Listing of vessel casualties incurred at Hong Kong during typhoon Rose

GREEN BAY	United States	11,021
FLYING DRAGON	United States	8,243
REGULUS	United States	--
AMERICAN HAWK	United States	7,909
FATSHAN (ferry)	Great Britain	2,637
RED SEA	Great Britain	7,026
DWARKA	Great Britain	4,851
HUNTSLAND	Great Britain	9,353
EASTERN CAPE	Great Britain	6,205
JADE LILY	Great Britain	11,753
SEA CORAL	Great Britain	10,421
LEE HONG (ferry)	Great Britain	1,127
MACAU (ferry)	Great Britain	3,670
KIM SENG	Great Britain	--
GALLANTRY	Panama	7,582
MONRUBY	Panama	5,312
WINFIELD TRADER	Panama	11,038
KAOHSIUNG	Panama	1,289
TIEN HONG	Liberia	12,417
BILLY	Liberia	8,705
SHONAN MARU	Japan	2,116
KYOHO MARU	Japan	2,998
LAOSHAN	Somalia	10,087
TAIPIENG	Somalia	5,676
NURITH	Israel	6,982
COMMANDANTE CAMILO CIENFUEGOS	Cuba	9,735
WORLD DALE	Greece	15,729
KOTA SENTOSA	Singapore	--
JILIN	China	6,804
FERNBANK	Norway	8,981
GUIMARAS	Philippines	3,555
WATUDAMBO	Indonesia	2,165
TUNG THAI	Taiwan	2,492
WAH FAT	--	--
ARISA	--	--

GENERAL SUMMARY OF FLOOD LOSSES FOR 1970

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Monetary losses from floods in the United States during 1970, estimated at $225 million, was the lowest since 1966. In comparison to 1969, it was 25 percent of the $903 million reported. Flood losses during 1970 were 50 percent of the 20-year (1951-1970) national average flood loss of $450 million (adjusted to the 1970 price index.). Destructive overflows have caused property damage in some years estimated at more than $1 billion.

Total loss of life in 1970 from floods was 135 compared to 297 in 1969. This is the third greatest loss of life reported since 1955 when 302 lives were lost. In comparison with the national average of 83 lives lost during the last 46 years (1925-1970), it was 1.6 times greater.

The most damaging floods during 1970 occurred in the Sacramento Basin in California during January, in the Colorado Basin in Arizona during September, and in Puerto Rico during October.

The largest rise in the Sacramento Basin occurred in the upper portion at Ord Ferry, Calif., where the warning stage was exceeded by over 9 feet. Early warnings by the National Weather Service permitted evacuation of all people and farming equipment from the Yolo Bypass islands before they were flooded. River levels reached on the Sacramento were the highest since the construction of Shasta Dam and natural flows may have been the highest since records began. The total damages in the Sacramento Basin were estimated at $38 million and the loss of life at 18.

Unprecedented flash floods occurred during September in the central mountains of Arizona and in the four corners area of Utah, Colorado, Arizona, and New Mexico. The flooding in central Arizona was of record proportions. Of the 23 lives lost, 14 died attempting to flee the campground just below the Mogollon Rim, about 30 miles northeast of Payson, Arizona. The heavy loss of life, the magnitude of the flooding and the devastation resulting from the unprecedented rains made the Labor Day weekend calamity the greatest natural disaster in the history of the state of Arizona. Damage from the flooding was estimated at over $5 million.

Major floods occurred in the eastern two-thirds of Puerto Rico during the early part of October. This flood was one of the most severe natural disasters to strike Puerto Rico during modern times. It was comparable to some of the famous severe weather disasters that have affected Puerto Rico in recorded history, including the notorious hurricane disasters of September 13, 1928, and August 8, 1899, known as the San Felipe and San Ciriaco hurricanes. The total property damage was estimated at $62 million. At least 50 people lost their lives due to mud slides and the floods.

ANNUAL FLOOD LOSSES FOR UNITED STATES

Annual Flood Losses and Savings for years 1933 to 1947, inclusive, have been published in the Monthly Weather Review as follows:

Year	Issue	Pages
1933	Vol. 62, No. 1, Jan. 1934	25-27
1934	Vol. 62, No. 12, Dec. 1934	465-467
1935	Vol. 63, No. 12, Dec. 1935	362-365
1936	Vol. 65, No. 1, Jan. 1937	28-31
1937	Vol. 66, No. 12, Dec. 1938	426-430
1938	Vol. 68, No. 9, Sept. 1940	262-263
1939	Vol. 68, No. 11, Nov. 1940	329-330
1940	Vol. 69, No. 7, July 1941	217-218
1941	Vol. 71, No. 11, Nov. 1943	185-186
1942 & 1943	Vol. 73, No. 8, Aug. 1945	137-139
1944 & 1945	Vol. 76, No. 6, June 1948	113-116
1946	Vol. 76, No. 9, Sept. 1948	208-210
1947	Vol. 77, No. 9, Sept. 1949	262-265

Beginning with flood losses for the year 1948, annual flood loss data are published in Climatological Data National Summary as follows:

Year	Issue	Year	Issue
1948	August 1950	1960	Annual 1961
1949	Annual 1950	1961	Annual 1962
1950-1951	Annual 1951	1962	Annual 1963
1952	Annual 1952	1963	Annual 1964
1953	Annual 1953	1964	Annual 1965
1954	Annual 1955	1965	Annual 1966
1955	Annual 1956	1966	Annual 1967
1956	Annual 1957	1967	Annual 1968
1957	Annual 1958	1968	Annual 1969
1958	Annual 1959	1969	Annual 1970
1959	Annual 1960		

Prior to 1933 Flood Losses and Savings were published monthly, as a rule, in the Monthly Weather Review.

ESTIMATED FLOOD LOSSES FOR 1970

In Thousands of Dollars

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous *	Unclassified	Total Loss **	Lives Lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public Utilities				
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
HUDSON BAY DRAINAGE																
Souris River and tributaries (N.Dak).	A 46.4	.....	.....	.....	55.1	B 1,093.9	....	.....	.....	.....	162.3	.....	1,313.3	.....	2,671.0	..
Red River of the North (Minn.-N.Dak).	C 2,000.0	.....	.....	.....	....	8,000.0	....	.....	.....	.....	.....	.....	.....	.....	10,000.0	..
Rainy River (Minn.).....	A 350.0	.....	.....	.....	....	.....	....	.....	.....	.....	.....	.....	.....	.....	350.0	..
Total	2,396.4	.....	.....	.....	55.1	9,093.9	....	.....	.....	.....	162.3	.....	1,313.3	.....	13,021.0	..
ST. LAWRENCE DRAINAGE																
Lake Ontario																
Flash Flooding in Broome, Delaware, Tompkins and Schuyler Counties New York.....	.....	.....	.....	.....	....	.....	....	.....	.....	.....	.....	.....	.....	3,100	3,100	..
Total	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	3,100.0	3,100.0	..
ATLANTIC SLOPE DRAINAGE																
Little Beaver Kill and Willowemoc Rivers (N.Y.).....	.....	.....	.....	.....	8.0	.....	....	.....	.....	.....	295.0	.....	.....	.....	303.0	..
Flash Flood in Deposit, N.Y. area....	.....	.....	.....	.....	....	.....	....	.....	.....	.....	.....	.....	.....	500.0	500.0	..
Flash Flooding in Juniata River Basin (Pa.).....	.....	.....	.....	.....	....	.....	....	.....	.....	.....	.....	.....	.....	100.0	100.0	..
Flash Flood at Rocks, Md.....	.....	.....	.....	.....	....	.....	....	.....	.....	.....	.....	.....	.....	15.0	15.0	..
Yadkin River (N.C.).....	60.0	.....	102.0	25.0	....	1,228.0	....	.....	25.0	.....	340.0	.....	158.0	.....	1,938.0	..
Santee and Edisto Basins (S.C.).....	250.0	.....	50.0	.....	50.0	5.0	20.0	3.0	.....	.....	2.0	.....	20.0	.....	400.0	2
Total	A 310.0	.....	152.0	25.0	58.0	1,233.0	20.0	3.0	25.0	.....	637.0	.....	178.0	615.0	3,256.0	2
EAST GULF OF MEXICO DRAINAGE																
Chattahoochee River (Ga.).....	C 11.5	.....	.....	.....	....	67.3	.....	.....	.....	.....	1.2	.....	.....	.....	80.0	..
Flint River (Ga).....	C 67.4	.....	.....	.....	....	183.5	.....	.....	.....	.....	17.2	.....	.....	.....	268.1	..
Apalachicola River (Fla.).....	C 32.8	.....	.....	.....	....	81.6	.....	.....	.....	.....	30.9	.....	.....	.....	145.3	..
Choctawhatchie and Pea Rivers (Ala.).	2.4	.....	.....	.....	....	150.5	.....	.....	.....	.....	71.8	.....	.....	.....	224.7	..
Blackwater and Yellow Rivers (Ala.)..	1.4	.....	.....	.....	....	64.0	.....	.....	.....	.....	42.7	.....	.....	.....	108.1	..
Escambia andConecuh Rivers (Ala.)....	1.1	.....	.....	.....	....	607.1	.....	.....	.....	.....	71.9	.....	.....	.....	680.1	..
Coosa River and tributaries (Ala.)...	.....	.....	.....	.....	....	213.6	.....	.....	.....	.....	14.0	.....	.....	.....	227.6	..
Tallapoosa River (Ala.).....	.....	.....	.....	.....	....	53.0	.....	.....	.....	.....	5.9	.....	.....	.....	58.9	..
Cahaba River (Ala.).....	.....	.....	.....	.....	....	98.1	.....	.....	.....	.....	2.2	.....	.....	.....	100.3	..
Alabama River (Ala.).....	.....	.....	.....	.....	....	95.3	.....	.....	.....	.....	13.8	.....	.....	.....	109.1	..
Flash Flooding on small streams in northern Alabama.....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	5,000.0	5,000.0	1
Black Warrior River (Ala.).....	C 290.0	.....	.....	.....	....	1,053.0	.....	.....	.....	.....	33.0	.....	.....	.....	1,376.0	..
Tombigbee River (Ala.-Miss.).....	C 430.0	.....	.....	.....	....	5,044.0	.....	.....	.....	.....	536.0	.....	.....	.....	6,010.0	2
Pearl River (Miss.).....	.....	.....	.....	.....	....	487.2	.....	.....	.....	.....	94.2	.....	.....	.....	581.4	..
Total	836.6	.....	.....	.....	....	B 8,198.2	.....	.....	.....	.....	934.8	.....	.....	5,000.0	14,969.6	3
MISSISSIPPI SYSTEM																
Upper Mississippi Basin																
Zumbro River (Minn.).....	.....	.....	.....	.....	....	B 2,500.0	.....	.....	.....	.....	1,500.0	.....	.....	.....	4,000.0	3
Cuivre River (Mo.).....	.....	.....	.....	.....	....	160.0	.....	.....	.....	.....	.....	.....	.....	.....	160.0	..
Illinois River Basin (Ill.).....	1,585.4	.....	.....	.....	....	2,280.6	102.0	56.0	110.0	65.0	24.0	59.0	154.0	150.0	4,586.0	..
Mississippi River above Cape Girardeau, Mo.....	.....	.....	.....	.....	....	100.0	.....	.....	.....	.....	150.0	.....	.....	.....	250.0	..
Total	1,585.4	.....	.....	.....	....	5,040.6	102.0	56.0	110.0	65.0	1,674.0	59.0	154.0	150.0	8,996.0	3
Missouri Basin																
Madison River (Mont.).....																
West Gallatin River and tributaries (Mont.).....	16.0	12.0	.....	.....	1.5	23.0	2.2	2.0	22.0	2.0	.....	.....	.....	.....	80.7	..
Flash Flooding in Glacier Natl. Park, Mont.....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	....	200.0	200.0	.
Heart, Cannonball, Knife and other tributaries in Southwestern N.D..	.....	.....	.....	.....	....	.....	.....	.....	200.0	.....	961.2	.....	.....	.....	1,161.2	..
Bear Butte, Whitewood, Spearfish and other creeks in northern Black Hills, S.Dak.....	.....	.....	2.5	.....	16.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	19.0	..
Big Sioux and tributaries and West Branch Floyd River (Iowa).....	75.0	20.0	.....	10.0	563.0	31.0	.....	20.0	32.7	.....	225.0	....	.....	..	976.7	.
Tributaries of North Platte River (Wyo.).....	.....	.....	.....	.....	....	500.0	.....	.....	.....	.....	.....	.....	.....	.....	500.0	..
South Platte River and tributaries (Colo.).....	.....	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	2,000.0	2,000.0	..
Platte and Little Platte Rivers (Mo).	5.0	.....	.....	.....	....	B 301.0	.....	.....	.....	.....	D 20.0	.....	9.0	.....	435.0	..
Prairie Dog and Sappa Creeks (Kans).	.....	.....	.....	.....	8.0	15.0	.....	.....	2.0	.....	2.0	.....	.....	.....	27.0	..

ESTIMATED FLOOD LOSSES FOR 1970 -Continued

In Thousands of Dollars

River and drainage	Urban Property					Rural Property					Other Property					
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public utilities	Miscellaneous *	Unclassified	Total Loss **	Lives Lost
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
Missouri Basin Cont'd																
Smoky Hill Basin (Kans.)	1.0	0.3	.....	1.0	7.3	80.0	4.0	17.5	26.0	1.0	6.0	....	.....	.....	144.1	...
Big Blue and Black Vermillion Rivers (Kans.)	....	....	.....	....	....	15.0	....	....	....	....	....	....	.....	.....	15.0	...
Wakarusa River and Stranger Creek (Kans.)	....	....	.....	....	....	B 496.0	....	....	....	....	D 44.0	....	.....	.....	540.0	...
Blue River (Mo.)	10.0	....	71.0	....	9.0	.....	....	....	....	....	....	....	35.0	.....	125.0	...
Little Blue River (Mo.)	7.9	....	31.2	....	....	B 135.4	....	....	....	....	D 10.5	....	.....	.....	185.0	...
Crooked River (Mo.)	.....	....	.....	....	....	B 64.0	....	....	....	....	....	....	.....	.....	64.0	...
Wakenda River (Mo.)	.....	....	.....	....	....	B 70.0	....	....	....	....	2.0	....	.....	.....	72.0	...
Grand River and tributaries (Mo.)	.....	....	.....	....	....	B1,294.0	....	....	....	....	D 183.0	....	.....	.....	1,477.0	...
Little Chariton Basin (Mo.)	.....	.....	.....	....	....	B 739.0	....	....	....	....	11.0	....	.....	.....	750.0	...
Chariton Basin (Mo.)	.....	.....	.....	....	....	B2,514.0	....	....	....	....	D 46.0	....	.....	.....	2,560.0	...
Blackwater and Lamine Rivers (Mo.)	.....	.....	.....	....	....	B 942.0	....	....	....	....	D 34.0	....	.....	.....	976.0	...
Moniteau Creek (Mo.)	.....	.....	.....	....	....	B 40.0	....	....	....	....	20.0	....	.....	.....	60.0	...
Petite Saline River (Mo.)	.....	.....	.....	....	....	B 26.5	....	....	....	....	0.5	....	.....	.....	27.0	...
Moreau River (Mo.)	.....	.....	.....	....	....	B 13.4	....	....	....	....	....	....	.....	.....	13.4	...
Pottawatomie Creek (Kans.)	.....	.....	.....	....	....	B 254.2	....	....	....	....	15.0	....	.....	.....	269.2	...
Marais des Cygnes River (Kans.)	.....	.....	.....	....	....	B1,303.0	....	....	....	....	188.0	....	.....	.....	1,491.0	...
Little Osage and Marmaton Rivers (Mo.)	.....	.....	.....	4.0	0.5	B1,141.0	....	....	....	....	19.0	....	.....	.....	1,164.5	...
South Grand River and tributaries (Mo.)	.....	.....	.....	....	....	B 384.0	....	....	....	....	7.0	....	.....	.....	391.0	1
Osage River, (Mo.)	.....	.....	.....	....	....	B 898.0	....	....	....	....	47.0	....	.....	.....	945.0	...
Missouri River (Mo.)	25.0	.....	.....	....	....	B5,517.5	....	....	....	....	D 500.0	....	.....	.....	6,042.5	...
Total	139.9	32.3	104.7	15.0	605.8	16,797.0	6.2	39.5	282.7	3.0	2,591.2	....	94.0	2,200.0	22,911.3	1
Ohio Basin																
Allegheny and Monongahela Basins (N.Y.-Pa.-W.Va.)	251.4	1.5	13.5	15.0	16.0	.....	.....	....	....	....	0.2	10.0	45.3	50.0	402.9	...
Flash Flood in Stark County, Ohio	.....	.....	500.0	....	600.0	.....	.....	....	....	....	....	....	.....	.....	1,100.0	...
Hocking River (Ohio)	.....	.....	.....	....	....	.....	.....	....	....	....	....	....	.....	90.0	90.0	...
Flash Flooding in headwaters of New River in N.C.	5.5	.....	.....	2.0	37.0	24.0	.....	3.0	4.0	....	3.0	....	.....	.....	78.5	...
Flash Flooding in Greenbrier, Nicholson, Roane & Mingo Counties, (W.Va.)	27.0	15.0	.....	....	0.1	.....	.....	....	....	....	1.0	....	.....	.....	43.1	1
Guyandot River (W.Va.)	C 234.0	.....	.....	....	.....	.....	.....	....	....	....	....	....	.....	.....	234.0	...
Scioto River (Ohio)	.....	.....	.....	....	.....	.....	.....	....	.....	....	100.0	....	.....	.....	100.0	...
East Fork Little Miami River (Ohio)	80.0	15.0	30.0	15.0	86.0	2.0	4.0	4.0	20.0	8.0	36.0	8.0	6.0	.....	314.0	...
Little Miami River (Ohio)	140.0	40.0	130.0	30.0	105.0	1.0	2.0	1.0	25.0	12.0	90.0	16.0	28.0	.....	620.0	...
Great Miami River (Ohio)	16.0	2.0	5.0	14.0	10.0	1.0	....	1.0	10.0	1.0	10.0	10.0	5.0	.....	85.0	...
Kentucky River Basin (Ky.)	25.1	8.1	12.2	15.3	37.5	10.0	3.0	4.0	28.3	5.1	24.5	10.1	15.3	.....	198.5	1
Green River Basin (Ky.)	.....	.....	.....	....	.....	.....	.....	....	....	....	....	....	.....	509.0	509.0	...
Wabash River Basin (Ind.& Ill.)	0.1	.....	.....	....	.....	44.0	.....	....	....	....	5.0	....	.....	2,717.0	2,766.1	...
French Broad River Basin (N.C.)	0.8	.....	.....	....	4.5	17.0	.....	....	10.5	....	20.0	....	3.2	.....	56.0	...
Flash Flood on Stock Creek near Clinchport, Va.	.....	.....	8.0	....	.....	.....	.....	....	....	....	100.0	.....	.....	40.0	148.0	...
Ohio River and minor tributaries	17.0	1.0	3.0	3.0	6.0	11.0	0.5	....	11.0	4.5	20.0	10.0	9.0	3,317.0	3,413.0	1
Total	796.9	82.6	701.7	94.3	902.1	110.0	9.5	13.0	108.8	30.6	409.7	64.1	111.8	6,723.0	10,158.1	3
Arkansas-White Basin																
White River and tributaries (ARK)	.....	.....	.....	....	.....	100.0	.....	4.0	26.0	....	105.5	....	.....	.....	235.5	...
Flash flood in Rock Creek Canyon. (Colo.)	.....	.....	.....	....	.....	....	.....	....	....	....	....	....	.....	40.0	40.0	...
Ninnescah River Basin (Kans.)	2.0	1.0	.....	.....	12.2	0.6	.....	.....	1.0	1.0	0.4	....	.....	.....	18.2	...
Chikaskia River (Okla.)	.....	.....	.....	.....	25.0	....	.....	10.0	3.5	....	53.0	....	.....	.....	91.5	...
Salt Fork (Okla.)	1.0	1.0	.....	.....	10.0	15.0	5.0	.....	1.0	....	4.7	....	.....	.....	37.7	...
Mingo and Joe Creeks (Tulsa, Okla.)	689.0	.....	70.0	7.0	33.0	....	.....	.....	....	....	....	3.0	40.0	.....	842.0	...
Caney River (Okla.)	.....	.....	.....	.....	.....	15.0	.....	.....	2.0	5.0	10.0	....	.....	.....	32.0	...
Bird Creek (Okla.)	10.0	.....	.....	.....	3.0	1.0	.....	0.5	1.5	....	....	....	1.5	.....	17.5	...
Cottonwood River (Kans.)	.....	.....	.....	.....	.....	50.0	.....	.....	....	1.0	35.0	....	.....	.....	86.0	...
Neosho River (Okla.)	.....	.....	.....	.....	0.5	2.0	.....	.....	0.5	.....	.....	....	.....	.....	3.0	...
Flash flooding on small streams in central Oklahoma	C1,000.0	.....	.....	.....	.....	....	.....	.....	....	.....	.....	....	.....	3,000.0	4,000.0	...
Small Streams in Latimer Co., Okla.	.....	.....	.....	.....	.....	.....	.....	.....	....	.....	135.0	....	5.0	.....	140.0	1
Arkansas River and misc. minor tributaries in Kansas and Oklahoma.	.....	.....	.....	.....	60.0	239.5	.....	0.5	32.5	2.0	61.0	1.0	1.8	.....	398.3	2
Total	1,702.0	2.0	70.0	7.0	143.7	423.1	5.0	15.0	68.0	9.0	404.6	4.0	48.3	3,040.0	5,941.7	3
Red Basin																
Blue River (Okla.)	.....	.....	.....	.....	3.0	11.0	.....	1.2	2.0	4.0	7.0	1.0	3.0	.....	32.2	...
Ouachita River (Ark.)	.....	.....	.....	.....	.....	1.0	.....	.....	....	.....	11.0	....	50.0	.....	62.0	...
Total	.....	.....	.....	.....	3.0	12.0	.....	1.2	2.0	4.0	18.0	1.0	53.0	.....	94.2	...

ESTIMATED FLOOD LOSSES FOR 1970-Continued

In Thousands of Dollars

River and drainage	Urban Property					Rural Property					Other Property		Miscellaneous *	Unclassified	Total Loss **	Lives Lost
	Residential		Commercial		Public	Crops		Livestock	Other		RR's, bridges, Highways, etc.	Public Utilities				
	Fixed	Movable	Fixed	Movable		Growing	Stored		Fixed	Movable						
Lower Mississippi Basin																
Flash flooding in northwest Tenn	.....	.....	...	..	..	12,000 0	...	....	....	....	...	...	...	1,000.0	13.000.0	..
St Francis River (Ark.)	....	....	.....	.....	....	75.0	...	...	....	.....	..	..	.....	6 5	81.5	..
Mississippi River below Cape Girardeau, Mo	1.3	0.6	28.1	3.0	21.5	1,419.0	...	.. ..	3 8	5.5	9.5	2 0	235.5	20 0	1,749.8	1
Total	1.3	0.6	28.1	3 0	21.5	13,494.0	....	...	3.8	5.5	9.5	2.0	235.5	1.026.5	14,831.3	1
WEST GULF OF MEXICO DRAINAGE																
Calcasieu River and tributaries (La.)	....	.....	.....	.....	.....	...	...	... .	.....	.....	.....	.....	.....	1,000 0	1,000.0	...
Trinity River and tributaries (Tex.)	....	.....	.....	.....	.....	....	...	.....	.....	.....	.....	.....	.....	433.0	433.0	5
Flash Flood in Mineral Wells, Tex area	A 50.0	.....	D 30.0	....	150.0	....	...	.....	....	.....	..	....	....	.....	230 0	..
Flash flood in San Marcos, Tex.	C2,000 0	....	.....	....	.....	.....	...	.....	.....	.. .	.....	.....	.....	.....	2,000.0	2
Salado Creek (San Antonio, Tex)	C 10.0	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	.....	.....	.....	10.0	1
Flash flood at Hondo, Tex. and vicinity	60.0	10.0	10.0	20.0	11.0	100.0	....	10 0	5.0	.....	6.0	0.5	....	.....	232.5	...
Atascosa River (Tex.)	.....	.....	.....	.....	.....	....	....	.....	40.0	10.0	30.0	.....	.....	.....	80.0	...
Nueces River (Tex.)	25.0	5.0	10.0	.....	10.0	10.0	....	.....	7.0	2.0	90.0	5.0	.....	....	164 0	...
Total	2,145.0	15.0	50 0	20.0	171.0	110.0	.....	10.0	52.0	12.0	126.0	5.5	.....	1,433.0	4,149.5	8
GREAT BASIN																
Silvies River Basin (Oreg.)	.....	.....	.....	.....	.....	B 10.0	.....	.....	.....	.....	....	. ..	.....	.....	10.0	...
Flash Flooding in Sevier County, Utah	A 120.0	.....	13.0	....	20.0	12.6	... .	.....	3.0	....	33 0	....	5.3	.....	206.9	...
Flash flooding at Elko, Nev. and vicinity	8.0	.....	17.0	.....	.....	63.7	....	.....	.....	.....	.....	....	....	.....	88 7	.
Flash flooding in Nye County, Nev	.....	.....	.....	.....	.....	.. ..	.....	.....	.....	.....	...	...	...	50 0	50.0	...
Total	128.0	.....	30.0	....	20.0	86.3	.....	. ...	3 0	. ...	33.0	....	5.3	50.0	355.6	...
GULF OF CALIFORNIA DRAINAGE																
Colorado Basin																
Flash flood near Flaming Gorge Rec Area, Utah	.....	.....	...	.....	.....	.....	.....	....	.....	.....	15.0	....	.....	.....	15 0	...
Flash floods in Ariz. in July&Aug	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8
Flash flooding in Southeast Utah in September	....	.....	.....	....	.....	.....	.....	...	.....	.....	....	....	....	....	....	2
Flash flooding in Ariz. in Sept	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	...	5,000.0 E	5,000 0 F	23
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	... .	15.0	....	.....	5,000.0	5,015 0	33
PACIFIC SLOPE DRAINAGE																
California.																
Gold Creek and Devil's Canyon (Los Angeles Co)	....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.
Sacramento River and tributaries	AD 2,670.0	....	.....	.....	3,550.0	1,526.5	56.2	53.6	124.0	330 0	1,393.0	115 0	94.0	28,208.0	38,120.3	18
Novato and Sonoma Creeks (San Pablo Bay)	.....	.....	.....	.....	.....	.....	.....	.....	.....	....	... .	...	...	290 0	290 0	...
Russian River	.. ..	.....	.....	.....	.....	.....	....	.....	.....	... .	...	...	...	400 0	400 0	...
Eel, Van Duzen and Smith Rivers	.....	.....	.....	.....	5,914.2	10.0	....	.....	...	.....	2,993 0	....	.....	....	8,917 2	...
Oregon Coastal																
Coquille River and other coastal basins	.....	.....	.....	.....	.....	3.4	.....	.....	.....	.....	4.5	.....	45.0	51.9	104 8	...
Columbia Basin																
Henrys Fork (Idaho)	.....	.....	.....	.....	.....	20.0	.....	.....	.....	.....	.....	.....	.....	.....	20 0	...
Weiser River (Idaho)	.....	.....	.....	.....	5.0	.....	.....	3.0	2.0	.....	8.0	.....	.....	.....	18 0	...
Umatilla River and tributaries	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53 0	.....	50.2	.....	103.2	...
John Day River and tributaries	.....	.....	.....	.....	.....	B 345,0	.....	.....	.....	.....	284.0	.....	10 0	11 0	650 0	...
Willamette River and tributaries (Oreg)	...	....	.....	.....	....	.....	... .	.....	.....	.....	...	.	....	1,538.1	1,538.1	...
Columbia River (Oreg.)	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..	..	...	110 0	110 0	...
Washington Coastal.																
Chehalis River and tributaries	.....	.....	.....	... .	.....	.....	....	.....	.....	.....	.....	.....	.....	380 0	380,0	...
Total	2,670.0	...	.....	....	9,469.2	1,904.9	56.2	56.6	126.0	330.0	4,737 5	115 0	199 2	30,989.0	50 653.6	21
PUERTO RICO AND VIRGIN ISLANDS																
Streams in San Juan P.R. metro area in June	.....	... ..	.....	....	... .	... ..	...	.....	.....	.....	.....	.....	.....	4 500.0	4 500.0	2
Hondo River Bayman PR., on Aug 8	.....	.....	.....	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500 0	500 0	
Streams in Eastern Half P R. on Aug. 27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	500.0	500.0	4
Streams in E. Tex Lairds P.R. Oct 6-10	....	.....	.....	.....	.....	8,000 0	...	.....	.....	... .	12 000 0	.	...	42 000 0	62 000 0	6 50
Flash floods on St Thomas and St John V.I.	....	....	.....	.. ..	.. .	... ..	.....	.....	.....	....	...	.....	... .	500 0	500.0	1
Total	..	.....	.. ..	.....	....	8,000 0	...	... .	..	...	12 000.0		...	48 000 0	68 000 0	57
GRAND TOTAL	12 711.5	132.5	1,136 5	164.3	11,449.4	64 503.0	198.9	194 3	781 3	439 1	23 752 6	250 6	2 392.4	107 326 5	225 452 9	135

*Damage estimates under this heading usually refer to losses of income and wages due to suspension of business, and costs of emergency protection evacuation, rehabilitation and relief **Most figures are based on flood damage surveys conducted by the National Weather Service, or are estimates contained in reports of District Offices, Corps of Engineers U.S. Army A Includes all residential losses B Includes all agricultural losses. C. Includes all urban losses. D. Includes all commercial losses. E Includes $3,000.0 in Tonto National Forest. F. Includes 14 lives lost in Tonto Creek watershed alone G. Includes 33 persons missing.

LOSS OF LIFE AND PROPERTY IN THE UNITED STATES FROM FLOODS

Property Losses in Thousands of Dollars
BY DISTRICTS AND YEARS, 1925-1970

District	1925		1926		1927		1928		1929		1930		1931		1932	
	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property
Great Lakes	---	---	---	19	48	15,750	---	---	---	171	---	36	---	1	---	1
North Atlantic	---	50	---	137	40	29,408	3	2,105	---	245	---	---	---	1,050	---	25
South Atlantic	---	2,999	---	---	---	1	5	[illegible]382	8	10,196	---	---	---	31	---	191
East Gulf	2	615	---	37	8	255	---	2,428	5	8,746	---	466	---	174	---	615
Ohio Valley	---	33	2	5,523	94	15,639	4	10,279	34	17,050	---	7,042	---	1	---	288
*Upper Mississippi	14	3,983	1	5,435	---	19,612	---	1,173	---	3,677	---	15	---	20	---	88
Lower Mississippi	---	115	---	42	100	133,898	---	7,819	4	9,980	---	530	---	---	---	1,840
Missouri	---	---	6	1,434	1	4,880	2	6,714	13	2,118	---	13	---	886	---	451
Arkansas	---	224	6	8,938	132	26,183	1	4,349	12	7,516	---	213	---	6	---	2,528
Red	---	---	1	155	---	100,908	---	153	1	100	14	3,616	---	19	---	516
West Gulf	6	1,436	---	301	---	208	---	75	---	8,124	---	924	---	2	11	3,522
Colorado	---	---	---	447	---	12	---	100	12	175	---	---	---	3	---	13
Pacific	14	468	---	---	---	902	---	1,032	---	---	---	---	---	560	---	217
Miscellaneous east of Rockies	---	---	---	1,000	---	---	---	---	---	---	---	2,500	---	---	---	---
Miscellaneous west of Rockies	---	---	---	---	---	---	---	---	---	---	---	495	---	55	---	---
Total	36	9,923	16	23,468	423	347,656	15	44,611	89	68,098	14	15,850	---	2,808	11	10,295

District	1933		1934		1935		1936		1937		1938		1939		1940	
Great Lakes	---	14	---	---	---	13,185	1	[illegible]	---	690	---	240	---	11	2	---
North Atlantic	2	5,418	---	142	52	16,340	24	146,035	---	2,689	8	37,068	2	56	4	2,519
South Atlantic	---	19	---	240	---	77	2	2,391	---	989	---	455	---	454	12	5,034
East Gulf	---	444	---	13	---	719	---	1,240	---	357	---	1,655	1	6,680	---	5,497
Ohio Valley	5	7,725	2	928	5	8,536	82	122,296	65	413,936	8	4,481	80	[illegible]773	28	8,077
*Upper Mississippi	4	1,157	12	1,023	---	1,506	---	313	3	1,127	2	3,659	---	228	---	199
Lower Mississippi	---	6,933	---	---	17	6,631	---	55	72	6,657	---	1	---	1,448	---	---
Missouri	2	1,391	6	1,906	125	38,959	---	109	2	1,367	71	4,333	---	610	5	1,759
Arkansas	---	776	---	18	4	[illegible]344	6	817	---	1,557	---	2,202	---	179	2	1,332
Red	---	38	22	640	8	2,751	---	16	---	24	---	755	---	22	---	12
West Gulf	---	1,160	---	422	20	29,522	24	8,376	---	1,830	6	6,003	---	360	7	7,622
Colorado	---	---	1	22	---	---	---	---	---	264	---	256	---	13	---	180
Pacific	20	11,604	45	5,008	5	557	3	892	---	9,245	85	39,990	---	---	---	[illegible]236
Total	33	36,679	88	10,362	236	127,127	142	282,549	142	440,738	180	101,098	83	13,834	60	40,467

District	1941		1942		1943		1944		1945		1946		1947		1948	
Great Lakes	---	---	---	153	1	9,564	---	130	---	119	---	251	1	5,761	4	20,270
North Atlantic	---	---	35	22,321	4	1	---	---	3	5,729	14	8,500	---	198	4	12,467
South Atlantic	---	89	---	608	---	152	---	1,926	3	1,007	---	172	---	944	1	1,372
East Gulf	---	24	2	155	---	773	---	2,660	---	268	---	2,963	2	654	---	3,122
Ohio	---	1,122	16	16,546	44	31,416	---	806	27	52,887	---	10,914	5	7,812	16	16,871
*Upper Mississippi	---	3,018	1	5,592	16	42,097	7	27,031	---	9,288	4	8,642	27	87,937	---	2,905
Lower Mississippi	---	---	---	475	---	829	---	1,550	---	3,601	---	4,407	1	2,555	---	5,390
Missouri	2	12,019	1	22,511	13	62,630	13	44,616	4	34,403	---	8,305	18	163,176	1	31,490
Arkansas	9	13,346	---	6,577	26	41,850	10	11,171	20	15,068	---	1,791	1	1,424	14	18,721
Red	---	1,855	---	2,205	---	44	---	1,676	6	22,209	---	1,434	---	1,446	---	220
West Gulf	34	5,458	2	12,489	---	2,589	3	8,938	4	10,987	10	15,967	---	330	1	4,604
Colorado	2	1,061	---	3	---	310	---	575	10	182	---	---	---	3	---	1
Pacific	---	1,532	11	8,872	3	7,477	---	---	14	9,530	---	7,367	---	88	37	111,826
Great Basin	---	---	---	---	---	---	---	---	---	520	---	100	---	---	---	---
Total	47	39,524	68	98,507	107	199,732	33	101,079	91	165,798	28	70,813	55	272,328	82	229,959

District	1949		1950		1951		1952		1953		1954		1955		1956	
Great Lakes	---	1,619	9	33,542	---	131	---	2,350	1	2,654	---	15,000	---	2,596	---	1,327
North Atlantic	11	9,273	2	7,149	1	916	5	1,222	1	10,637	11	7,337	211	761,303	11	1,453
South Atlantic	3	291	---	1,203	---	9	---	236	---	109	1	546	2	902	3	2,720
East Gulf	---	1,747	---	1,435	---	4,310	---	347	2	2,444	---	543	6	5,300	1	1,379
Ohio	7	4,754	50	25,195	1	4,889	14	[illegible]940	5	778	9	18,594	15	14,645	12	17,836
*Upper Mississippi	---	406	2	11,060	6	71,799	7	22,439	2	5,602	4	24,656	---	85	---	388
Lower Mississippi	---	10,020	6	10,071	---	5,996	---	444	12	7,857	---	490	---	1,352	---	865
Missouri	6	33,503	18	35,090	31	889,872	8	181,335	14	44,255	---	11,999	1	2,753	1	6,360
Arkansas	---	6,696	---	8,294	10	44,331	---	5	2	2,020	---	296	2	5,362	---	24
Red	2	365	1	1,105	---	2,101	---	836	---	2,061	---	923	---	2,003	1	250
West Gulf	18	22,462	---	417	---	238	10	[illegible]584	1	34,849	29	21,639	2	4,286	3	3,714
Colorado	---	155	---	---	---	889	---	76	---	7	---	1,890	---	2,173	---	---
Pacific	1	2,640	5	37,362	2	3,260	10	20,251	---	8,931	1	2,929	63	186,785	6	27,930
Great Basin	---	---	---	4,127	---	---	---	9,999	---	---	---	---	---	5,946	4	442
Total	48	93,931	93	176,050	51	1,028,741	54	254,064	40	122,204	55	106,842	302	995,491	42	64,688

District	1957		1958		1959		1960		1961		1962		† 1963		1964	
Great Lakes	1	1	---	10	---	12,746	2	1,942	1	216	---	---	1	35,872	---	325
North Atlantic	---	11	---	167	---	6,952	2	15,274	---	1,168	---	[illegible]	6	1,325	---	11,342
South Atlantic	---	166	---	3,917	---	631	---	172	---	600	---	97	---	89	---	16,786
East Gulf	---	4,526	---	3,434	---	241	---	13,780	3	30,386	---	[illegible]768	---	1,726	---	10,490
Ohio	25	135,972	10	68,248	8	82,503	1	7,519	31	33,748	5	30,583	26	98,824	15	94,034
*Upper Mississippi	8	14,648	---	20,770	8	3,427	2	12,901	4	25,320	1	5,341	---	413	---	---
Lower Mississippi	6	15,608	---	11,979	---	199	---	496	---	11,462	---	3,546	---	293	---	1,125
Missouri	15	26,057	21	45,819	3	12,162	8	28,105	7	33,990	2	10,501	3	14,705	37	41,902
Arkansas	5	50,082	---	360	2	12,886	1	3,480	1	[illegible]173	3	1,254	2	563	1	1,607
Red	6	16,037	---	11,768	---	880	---	226	---	1,609	---	581	1	2,361	---	124
West Gulf	16	73,057	6	18,127	4	2,886	14	8,205	1	2,945	2	1,948	---	640	5	7,178
Colorado	---	741	---	240	---	100	---	---	3	552	---	1,080	---	---	---	55
Pacific	---	23,397	10	33,404	---	5,638	2	876	1	1,825	6	12,198	---	15,305	42	463,959
Great Basin	---	---	---	12	---	4	---	---	---	1,039	---	2,332	---	3,530	---	2,715
Total	82	360,303	47	218,255	25	141,255	32	92,976	52	154,033	19	75,237	39	175,646	100	651,642

District	1965		1966		1967		1968		# 1969		% 1970	
Great Lakes	---	20	---	176	1	398	---	100	6	31,364	---	3,100
North Atlantic	2	55	1	535	---	3,726	10	211,690	158	131,921	---	918
South Atlantic	---	268	1	375	---	610	---	---	---	1,962	2	2,338
East Gulf	---	2,665	---	6,388	---	2,614	---	1,241	---	4,888	3	14,970
Ohio	8	3,591	1	10,193	8	52,000	7	51,947	36	80,459	3	10,158
*Upper Mississippi	15	182,053	---	14,167	---	3,431	3	3,309	9	120,892	3	22,017
Lower Mississippi	---	811	---	1,438	---	1,046	---	5,997	1	3,838	1	14,831
Missouri	26	451,832	5	16,021	1	100,617	---	8,655	1	77,530	1	22,911
Arkansas	16	70,152	---	5,245	---	3,731	4	9,793	4	5,911	3	5,942
Red	---	852	2	2,702	---	48	---	17,268	3	1,467	---	94
West Gulf	33	40,039	14	27,608	12	98,239	6	24,302	10	13,132	8	4,149
Colorado	8	12,648	1	4,919	3	3,598	1	509	---	106	33	5,015
Pacific	11	18,745	4	15,525	2	5,106	---	1,149	66	426,994	21	50,654
Great Basin	---	4,315	---	11,712	---	475	---	939	---	190	---	356
Total	119	783,046	29	117,004	27	‡ 275,639	31	**336,899	294	900,654	78	157,453

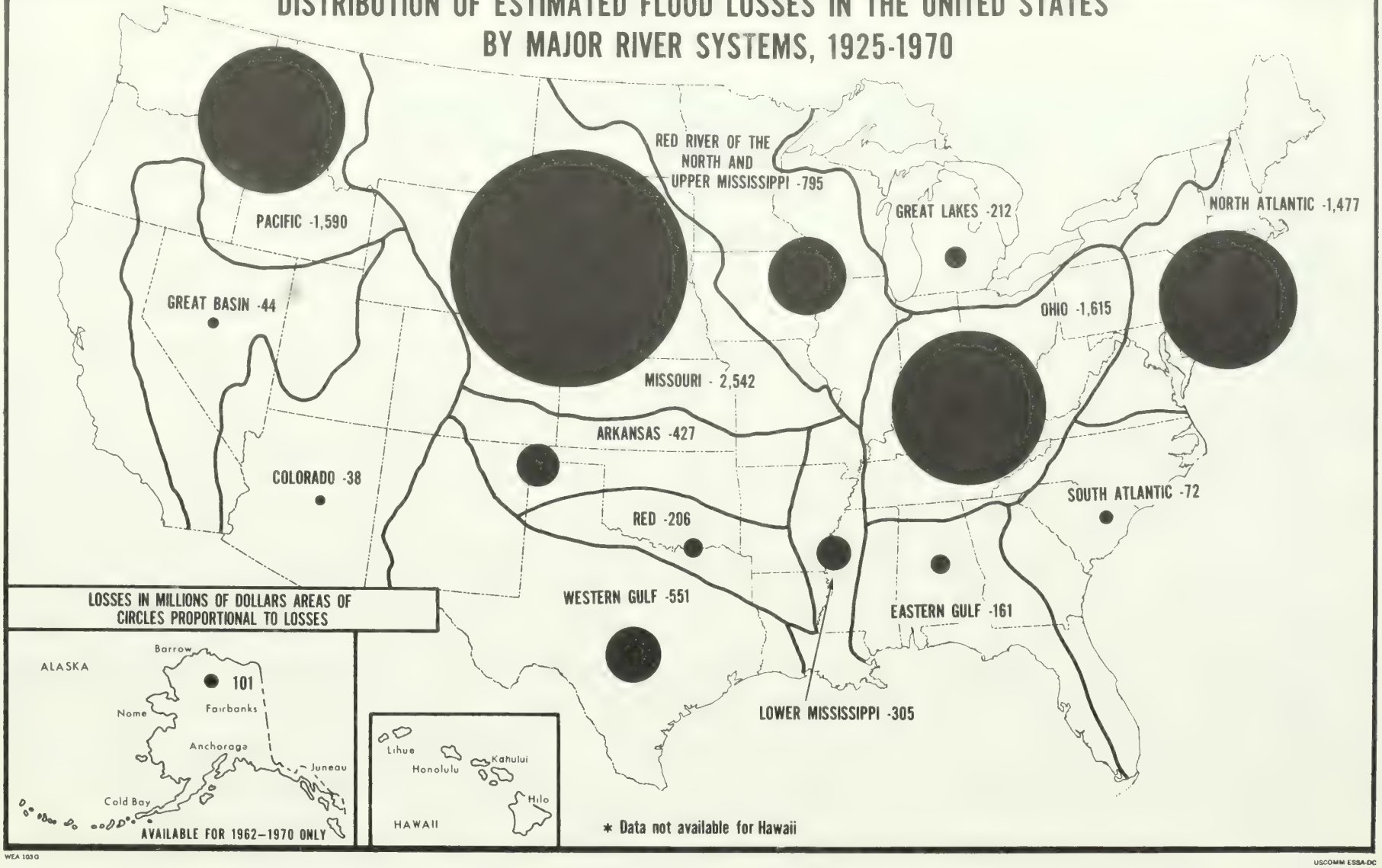
* Including Red River of the North. † Total does not include $2,300 damage in Hawaii. ‡ Total does not include $98,550 damage in Alaska and $1,029 in Hawaii. ** Total does not include $2,500 damage in Hawaii. # Totals do not include 3 lives and $2,000 damage in Puerto Rico. % Totals do not include 56 lives and $67,500 damage in Puerto Rico, and one life and $500 damage in Virgin Islands.

LOSS OF LIFE AND PROPERTY IN THE UNITED STATES FROM FLOODS

PROPERTY LOSSES IN THOUSANDS OF DOLLARS
By Months and Years, 1925-1970

	January		February		March		April		May		June		July		August		September		October		November		December		Total	
Year	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life	Property	Life
1925	3,614	2	141	0	74	0	-	0	65	6	3,980	14	140	0	275	0	1,171	14	380	0	83	0	-	0	9,923	36
1926	19	0	600	0	77	0	293	0	-	0	-	1	55	0	7	0	7,729	6	12,699	6	135	0	1,854	3	23,468	16
1927	2,628	8	1,867	0	407	0	283,207	232	7,566	95	1,125	0	241	0	3,460	0	-	0	1,627	0	45,093	88	437	0	347,656	423
1928	4	0	9	0	758	0	1,168	0	105	0	12,296	1	13,339	0	9,272	3	4,047	5	-	0	3,567	6	46	0	44,611	15
1929	122	0	2,964	0	21,947	47	1,937	0	15,668	5	10,268	5	4,959	32	130	0	92	0	9,379	0	556	0	76	0	68,098	89
1930	7,110	0	7	0	146	0	-	0	5,021	14	3,042	0	244	0	251	0	-	0	29	0	-	0	-	0	15,850	14
1931	-	0	30	0	572	0	-	0	8	0	13	0	1,215	0	201	0	2	0	1	0	744	0	22	0	2,808	0
1932	1,207	0	-	0	165	0	373	0	1,552	0	1,245	0	1,627	0	763	0	2,666	11	335	0	3	0	359	0	10,295	11
1933	308	0	87	0	2,008	1	2,709	4	10,785	4	2,650	4	1,117	0	6,516	4	489	0	10	0	-	0	10,000	16	36,679	33
1934	5,002	45	9	0	706	0	1,693	34	-	0	899	0	178	0	322	9	84	0	28	0	1,287	0	154	0	10,362	88
1935	297	0	1	0	2,177	4	2,698	5	16,903	40	62,702	122	29,370	52	159	5	7,551	0	2,691	0	61	0	2,517	8	127,127	236
1936	341	0	2,107	6	145,936	24	124,743	82	1,118	6	124	0	2,248	20	205	0	5,046	4	378	0	118	0	5	0	282,549	142
1937	411,481	65	7,691	75	62	0	4,524	0	2,627	0	5,429	0	124	2	760	0	140	0	256	0	97	0	7,546	0	440,738	142
1938	260	0	3,712	2	27,819	86	3,008	0	12,402	0	3,624	58	10,373	9	232	8	39,641	17	3	0	5	0	19	0	101,098	180
1939	3	0	1,657	4	738	0	1,982	0	37	0	4,271	1	1,725	78	3,408	0	13	0	-	0	-	0	-	0	13,834	83
1940	58	0	7,246	0	1,048	2	2,185	0	438	0	2,790	12	5,314	0	18,853	40	2,135	6	88	0	95	0	217	0	40,467	60
1941	3	0	516	0	820	2	1,970	4	3,081	7	12,718	12	314	0	23	0	6,247	15	10,446	7	3,361	0	25	0	39,524	47
1942	131	0	1,901	1	327	0	18,369	2	14,837	31	25,586	1	13,064	17	267	0	3,234	0	5,678	2	-	0	15,113	14	98,507	68
1943	3,579	4	69	5	7,183	8	10,161	5	130,478	57	41,771	0	2,870	3	3,651	25	-	0	-	0	-	0	-	0	199,732	107
1944	3	0	35	1	2,633	3	42,646	13	24,103	0	24,535	16	3,198	0	928	0	1,708	0	108	0	-	0	1,182	0	101,079	33
1945	146	0	5,882	0	33,202	14	54,054	36	23,530	0	28,866	8	8,280	3	2,942	13	1,059	3	1,424	3	-	0	6,413	11	165,798	91
1946	13,385	0	4,015	0	631	0	2	0	12,587	12	20,343	3	1,636	4	1,148	0	7,346	9	1,965	0	1,134	0	6,441	0	70,813	28
1947	486	3	96	0	1,458	0	56,037	2	18,032	1	193,134	48	652	1	1,431	0	455	0	248	0	5	0	304	0	272,328	55
1948	6,479	6	11,429	1	17,896	4	28,667	15	107,244	35	22,160	15	17,550	2	1,144	0	590	0	-	0	3,553	0	13,247	4	229,959	82
1949	9,772	6	5,073	2	11,676	3	9,261	2	18,195	10	32,861	17	3,762	5	568	0	618	0	1,551	2	578	1	16	0	93,941	48
1950	4,619	3	6,925	7	3,451	7	14,668	0	51,126	21	22,340	34	19,224	6	1,687	0	3,718	4	5,562	3	6,638	3	36,092	5	176,050	93
1951	884	0	5,823	2	7,264	1	18,287	2	15,166	6	5,383	8	972,458	25	2,509	7	621	0	-	0	-	0	346	0	1,028,741	51
1952	9,139	14	926	1	1,909	9	199,127	10	6,438	3	22,775	2	3,858	9	296	0	9,376	6	-	0	30	0	190	0	254,064	54
1953	8,575	1	368	0	10,675	2	-	0	41,656	5	53,572	29	3,873	1	1,926	2	887	0	42	0	300	0	330	0	122,204	40
1954	2,554	4	84	0	20	0	557	0	6,213	1	52,076	20	2,218	2	6,606	3	3,170	8	33,341	17	-	0	3	0	106,842	55
1955	-	0	1,620	4	17,372	17	2,653	4	9,231	2	3,825	1	1,071	0	712,085	193	3,471	0	52,442	18	1,168	0	190,553	63	995,491	302
1956	9,455	0	2,731	3	3,403	2	1,202	0	24,799	10	2,300	4	5,849	15	11,671	4	-	0	1,892	0	137	3	1,249	1	64,688	42
1957	61,383	15	29,750	2	-	0	106,130	18	44,182	13	101,696	32	4,669	0	722	2	335	0	2,663	0	8,610	0	163	0	360,303	82
1958	273	0	12,501	11	11,193	0	21,145	3	24,384	2	67,537	0	42,779	29	18,631	1	14,560	0	2,336	1	2,416	0	-	0	218,255	47
1959	95,601	8	2,448	0	2,031	6	427	0	7,181	8	890	0	557	0	5,550	0	1,844	0	19,602	3	4,970	0	154	0	141,295	25
1960	534	1	713	2	29,988	4	28,056	0	2,214	3	9,956	13	9,038	1	677	0	5,266	0	5,818	6	360	0	356	0	92,976	32
1961	32	0	13,870	1	14,242	3	5,053	0	67,785	6	4,324	4	5,825	25	3,974	6	26,041	7	580	0	1,161	0	10,666	0	154,048	52
1962	884	0	24,906	9	28,417	4	8,920	0	1,893	0	2,265	2	2,428	1	708	0	3,266	3	-	0	580	0	970	0	75,247	19
1963	2,343	0	16,392	0	99,429	31	2,302	0	1,573	0	14,682	3	4,261	4	36,926	1	38	0	-	0	-	0	-	0	177,946	39
1964	787	0	15	0	97,945	14	16,763	1	1,313	0	71,666	37	29	0	517	0	5,477	3	16,432	1	750	2	439,948	42	651,642	100
1965	11,084	0	2,566	2	4,158	1	180,337	16	36,328	3	495,750	66	24,705	17	193	0	9,652	0	894	0	-	0	22,379	14	788,046	119
1966	13,114	0	12,823	2	2,012	1	40,460	16	1,315	0	4,377	1	840	4	17,773	0	658	0	-	0	528	2	23,104	8	117,004	31
1967	2,213	0	-	0	42,182	4	6,453	0	3,043	1	104,097	5	1,191	4	7,877	0	101,135	11	140	0	-	2	106,887	7	375,218	34
1968	7,436	4	2,971	0	45,925	2	2,053	0	245,670	17	11,216	0	16,350	3	4,009	3	594	0	104	0	-	0	3,071	2	339,399	31
1969	302,378	64	108,781	8	4,065	1	179,999	9	8,798	4	35,403	3	118,455	33	123,524	157	4,557	0	4,931	2	2,000	3	9,763	13	902,654	297
1970	50,941	18	257	1	10,147	3	13,914	8	28,622	6	29,447	3	4,002	4	3,595	16	16,214	25	67,045	53	111	3	1,188	1	225,433	135
Total	1,050,665	271	303,614	152	716,295	310	1,497,885	523	1,055,812	434	1,631,979	605	1,367,456	411	1,018,342	496	302,943	159	263,148	124	90,894	113	913,105	239	10,212,146	3,807
Average	23,348	6	6,747	3	15,918	7	33,286	12	23,462	10	36,266	13	30,388	9	22,630	11	6,732	4	5,848	3	2,020	3	20,298	5	226,943	83

DISTRIBUTION OF ESTIMATED FLOOD LOSSES IN THE UNITED STATES BY MAJOR RIVER SYSTEMS, 1925-1970



WEA 103G

USCOMM ESSA-DC

LOSSES IN INDIVIDUAL SEVERE FLOODS IN THE UNITED STATES SINCE JULY 1902

Property Losses in Thousands of Dollars

Date	Location	Lives #	Property
May-June 1903	Kansas, Lower Missouri, and Upper Mississippi Rivers	100	$ 40,000
July 1908	Red River	---	16,200
March 1912	Lower Mississippi River	---	70,000
March 1913	Ohio River and tributaries	467	147,000
December 1913	Texas rivers	177	9,000
June 1915	Kansas River	---	5,950
August 1916	Rivers of the Carolinas	---	21,700
June 1921	Arkansas River in State of Colorado	120	25,000
September 1921	Texas rivers	215	19,000
October 1923	Lower Arkansas, including the State of Oklahoma	---	15,000
March 1924	Potomac River	---	6,000
Spring of 1927	Mississippi Valley	313	284,118
November 1927	New England rivers	88	45,578
December 1933	Columbia River and tributaries	---	10,000
May 1935	Rivers in eastern Colorado	---	6,000
May-June 1935	Republican and Kansas Rivers	110	18,000
	Lower Missouri River	---	10,000
July 1935	Upper Susquehanna tributaries	52	26,000
December 1935	Houston, Texas area	---	2,500
March-April 1936	Rivers in eastern United States	107	270,000
Jan.-Feb. 1937	Ohio and lower Mississippi River basins	137	417,685
December 1937	Sacramento Valley	---	7,100
March 1938	Streams in southern California	79	24,500
September 1938	Rivers in New England	---	37,000
July 1939	Licking and Kentucky Rivers	78	1,715
Feb.-Mar. 1940	Sacramento Valley	---	6,700
August 1940	Rivers in southern Virginia, the Carolinas, and eastern Tennessee	40	12,000
Oct.-Nov. 1941	Arkansas River basin	---	8,500
April-June 1942	Upper Mississippi, Missouri, Arkansas, Red, and Trinity River basins	---	44,350
May 1942	Delaware & Susquehanna River basins	33	13,000
July 1942	Upper Allegheny River and Sennemahoning Creek basins	15	10,000
Nov.-Dec. 1942	Willamette River	10	6,900
Dec. 1942-Jan. 1943	Ohio River	---	10,540
Apr.-June 1943	Maumee, Wabash, upper Mississippi, Missouri, White, and Arkansas River basins	60	172,500
August 1943	Little Kanawha	23	1,300
April-June 1944	Upper Mississippi, Missouri, Arkansas, Red, lower Mississippi Basins and east Texas Streams	17	82,000
Feb.-Mar. 1945	Ohio River	18	30,000
Feb.-Apr. 1945	Trinity and Sabine Rivers	---	9,000
Mar.-July 1945	Lower Mississippi River	---	9,500
July 1945	Lake Section of Rensselaer County, N. Y.	---	3,500
December 1945	Willamette River	---	6,000
January 1946	Cumberland River	---	3,925
September 1946	San Antonio and Nueces Rivers	---	6,050
December 1946	Willamette River	---	5,525
April 1947	Allegheny	---	4,319
May-July 1947	Rivers in middle West in the lower Missouri and middle Mississippi River basins	29	235,000
June 1947	East Creek at Rutland, Vt.	---	2,000
Apr.-May 1948	Red River of North and tributaries	---	18,700
May-June 1948	[1]Columbia Basin	35	101,725
June-July 1948	Arkansas River and minor tributaries	---	14,500
December 1948	Housatonic River	---	4,200
May 1949	Trinity River	10	14,000
June 1949	Shenandoah and Potomac Rivers	11	8,850
Apr.-May 1950	[2]Red River of North	---	33,000
June 1950	Central West Virginia	31	4,020
Nov.-Dec. 1950	Central Valleys of California and western Nevada	---	23,000

Property Losses in Thousands of Dollars

Date	Location	Lives #	Property
April 1951	Upper Mississippi Basin	---	$ 18,622
June-July 1951	[3]Kansas-Missouri	28	923,224
April 1952	[4]Red River of the North-upper Mississippi-Missouri River basins	11	198,000
May 1952	Great Basin	---	8,373
March 1953	New England States	---	10,000
Apr.-May 1953	Louisiana-Texas	12	38,959
June 1953	Northwestern Iowa	14	32,950
June 1954	Middle Rio Grande and lower Pecos	16	19,079
October 1954	Pecos River in New Mexico	13	1,783
March 1955	Ohio Basin	15	14,396
August 1955	[5]Hurricane floods in Northeast	187	714,079
December 1955	[6]West Coast	61	154,532
May-June 1956	[7]Columbia and Kootenai Rivers	---	14,025
Jan.-Feb. 1957	[8]Streams in southeastern Kentucky, southwestern West Virginia, adjoining portions of Tennessee and Virginia	14	58,000
February 1957	Snake River and tributaries	---	20,500
Apr.-June 1957	Streams in Texas, Arkansas, Kansas, Louisiana, Missouri and Oklahoma	18	105,000
June-July 1957	Wabash River and tributaries	---	63,000
June 1958	White and Wabash Rivers	---	57,000
July 1958	Flash flood on East Nishnabotna River in Iowa	19	5,850
January 1959	Ohio River basin	---	81,921
January 1959	Lake Erie drainage in Ohio and New York	---	11,265
Mar.-Apr. 1960	[9]Snowmelt floods in the Missouri and upper Mississippi Basins	---	34,466
Feb.-Mar. 1961	East Gulf of Mexico drainage	---	13,997
July 1961	Flash flood on small streams in Charleston, W. Va.	22	3,238
September 1961	Kansas-Missouri	---	23,557
Feb.-Mar. 1962	Kentucky	---	16,067
Feb.-Mar. 1962	Southeastern Idaho	---	6,318
March 1963	Ohio River basin	26	97,600
June 1964	Montana	31	54,279
December 1964	California and Oregon	40	415,832
March 1964	Ohio River basin	13	81,602
Mar.-May 1965	[10]Upper Mississippi, Missouri, and Red of North Basins	16	181,325
May 1965	Brazos River	---	30,802
June 1965	South Platte Basin	16	415,076
June 1965	Sanderson, Texas flash flood	26	2,715
June 1965	Arkansas Basin	16	58,340
January 1966	Streams in Humboldt County, Calif.	---	6,850
Apr.-May 1966	Sabine and Trinity Basins, Texas	14	20,100
December 1966	Tulare and Buena Vista Lakes drainages in California	---	11,712
June 1967	Platte River and tributaries in Nebraska	---	35,275
September 1967	Hurricane "Beulah" floods in Texas	---	98,239
August 1967	Tanana and Chena Rivers in Alaska	---	98,550
March 1968	Rivers in New England (except Maine)	---	45,000
May 1968	Rivers in northern New Jersey	---	166,690
Jan.-Feb. 1969	Floods in California	60	399,233
March-April 1969	[11]Snowmelt Floods in upper midwest	---	151,000
July 1969	Northern Ohio	30	87,915
August 1969	[12]James River basin in Virginia	153	116,000
January 1970	Sacramento River and tributaries	18	38,120
September 1970	Arizona	23	5,000
October 1970	Puerto Rico	50	62,000

#Loss of life carried only where ten or more.

References

1. Monthly Weather Review, January 1949
2. Monthly Weather Review, September 1951
3. Technical Paper No. 17
4. Technical Paper No. 23
5. Technical Paper No. 26
6. Climatological Data, National Summary, December 1955
7. Climatological Data, National Summary, Annual 1956
8. Climatological Data, National Summary, January 1957
9. Technical Paper No. 45
10. Technical Report No. WB-3
11. NOAA Technical Report No. 1?
12. Climatological Data, National Summary, October 1970

FLOOD DAMAGE ESTIMATES BY STATES

1955-1970

Flood Losses in Thousands of Dollars

States	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Alabama	3,379	720	2,324	872	-	670	12,625	3,529	1,280	5,343	723	2,366	1,695	408	88	10,891
Alaska	-	*	-	-	-	-	**	***	-	-	-	-	98,550	-	-	-
Arizona	226	-	-	-	100	-	325	1,000	-	55	11,330	3,050	3,576	188	-	5,000
Arkansas	61	255	27,938	6,202	3,090	580	3,503	91	2,500	598	143	5,055	1,497	21,099	3,411	639
California	165,767	8,745	13	33,063	4	516	95	2,780	11,834	229,168	11,321	24,347	1,370	-	423,296	47,798
Colorado	2,567	5,135	2,901	240	-	-	-	80	50	-	452,293	707	-	-	66	2,040
Connecticut	379,360	-	-	-	-	750	-	-	-	-	-	-	-	100	528	-
Delaware	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
District of Columbia	-	51	-	60	-	-	-	-	-	-	-	-	-	-	-	-
Florida	105	1,891	-	-	150	12,047	317	1,481	-	426	144	548	95	46	2,858	145
Georgia	1	212	1,068	323	-	392	5,236	-	445	3,641	397	1,628	23	133	79	348
Hawaii	-	-	-	400	-	-	-	-	2,300	-	-	-	1,029	2,500	-	-
Idaho	1,371	6,222	20,896	3	500	-	939	8,112	2,766	11,704	4,184	-	792	-	111	38
Illinois	102	1,026	1,206	17,970	1,506	7,503	11,553	891	513	3,044	30,564	577	2,629	2,576	9,093	9,124
Indiana	1,003	4,021	66,748	52,302	12,958	2,649	13,306	670	8,266	12,327	20	3,998	4,618	22,463	6,672	2,300
Iowa	35	51	1,543	7,508	128	7,612	9,389	6,778	70	240	32,462	904	4,416	1,650	6,233	977
Kansas	474	33	9,164	4,606	4,061	1,947	13,397	1,826	168	370	29,792	97	15,093	2,304	10,991	4,138
Kentucky	6,629	568	55,233	3,817	2,480	3	12,969	16,885	36,917	35,476	1,044	1,671	17,583	6,036	8,075	707
Louisiana	30	-	4,147	2,842	-	112	6,074	1,908	-	30	-	250	-	2,810	251	1,000
Maine	-	-	-	-	61	-	809	-	-	-	-	528	-	-	300	-
Maryland	5,450	837	-	40	-	-	-	-	-	-	53	-	125	-	200	15
Massachusetts	155,982	-	-	-	-	6,400	-	-	-	-	-	-	-	35,000	-	-
Michigan	-	1,278	-	-	-	1,181	-	-	-	-	-	-	-	100	13	-
Minnesota	-	11	9,128	17	50	212	552	1,290	26	-	97,603	4,300	-	1,197	67,168	4,350
Mississippi	3,132	1,270	2,693	13,826	280	744	15,918	1,982	19	3,152	1,931	2,706	1,192	6,269	1,900	3,586
Missouri	666	167	9,618	38,718	6,018	13,506	27,375	557	152	6,591	33,976	2,781	39,080	890	36,601	14,926
Montana	63	317	33	1	82	57	-	147	148	54,389	253	-	2,947	-	388	581
Nebraska	1,500	865	5,983	3,064	3,753	8,884	674	2,630	13,394	5,146	1,368	11,628	40,644	6,029	1,826	-
Nevada	7,398	237	-	-	-	-	891	762	2,858	2,454	4	307	45	1	-	138
New Hampshire	-	-	-	-	4,500	100	-	-	-	-	-	-	-	800	400	-
New Jersey	23,102	-	-	3	-	-	-	-	-	-	-	-	1,438	166,690	580	-
New Mexico	1,066	-	-	-	-	-	-	-	620	1,235	4,833	1,048	-	-	-	-
New York	30,072	1,089	166	42	5,667	7,229	608	-	33,102	3,275	-	-	777	-	3,383	3,953
North Carolina	625	831	788	3,201	506	100	1,400	-	-	15,816	88	198	1,168	-	1,338	2,326
North Dakota	2	-	100	-	28	136	-	-	-	-	5,192	9,700	-	-	37,436	13,832
Ohio	753	1,056	7	4,867	54,840	191	1,217	6,512	22,359	28,039	-	1,893	6,622	20,074	87,916	2,478
Oklahoma	977	-	35,665	169	8,907	2,638	2,483	792	413	798	2,508	12	3	3,021	762	5,212
Oregon	9,515	6,376	310	363	20	360	757	1,550	299	187,101	5,679	2,283	1,044	538	938	2,518
Pennsylvania	141,381	7,199	1,048	3,582	21,109	3,072	612	15	5,397	16,938	-	705	7,251	421	3,310	365
Rhode Island	28,830	-	-	-	-	-	-	-	-	-	-	-	588	9,000	-	-
South Carolina	74	-	60	680	122	72	369	97	89	1,809	268	140	579	-	623	52
South Dakota	11	10	3,969	-	-	3,417	1	3,030	-	-	740	470	1,125	123	31,898	19
Tennessee	977	279	5,118	128	-	226	2,263	651	6,262	156	2,472	1,608	1,090	648	1,090	13,260
Texas	5,165	3,715	78,881	18,101	2,886	8,093	2,846	1,948	20	5,435	39,395	28,001	98,299	24,267	12,878	3,150
Utah	226	210	169	10	4	-	281	1,272	64	70	1,746	1,577	453	1,260	237	222
Vermont	-	-	3	-	-	-	-	-	-	692	-	-	-	100	680	-
Virginia	10,695	-	139	-	28	211	231	-	5,937	-	2	-	581	-	123,552	148
Washington	1,165	6,472	1,664	50	4,914	-	130	-	1,013	11,817	1,012	592	1,910	611	2,722	380
West Virginia	5,187	3,185	11,052	1,170	709	370	3,455	5,914	17,624	4,169	49	1,868	14,235	47	5,996	297
Wisconsin	50	335	-	-	1,791	996	1,442	57	142	-	14,067	361	-	-	4,763	-
Wyoming	200	11	526	3	-	-	-	-	899	138	390	-	1,096	-	-	500
TOTAL	995,491	64,688	360,303	218,255	141,255	92,976	154,033	75,237	177,946	651,642	788,046	117,004	375,218	339,399	900,654	157,453

*Major Flood in May 1956
**Major Flood in June 1961
***Ice Jam Flooding May 1962
***Serious Flooding June 1962

GENERAL SUMMARY OF RIVER AND FLOOD CONDITIONS
YEAR 1971

Elmer R. Nelson, Office of Hydrology

The most damaging flood in the nation during 1971 occurred in New Jersey during August and September.

The floods during August were due to excessive rainfall accompanying Tropical Storm Doria. The flooding was the most severe in the central portion of New Jersey. The total damages were estimated at $138.5 million and the number of deaths were placed at three.

Damaging floods occurred in New Jersey and the adjacent area of southeastern Pennsylvania during September. This was the second consecutive month that severe floods occurred in this area. The total damages were estimated at $80 million to $100 million with 14 deaths.

This report contains a brief summary, by months of the most significant flooding during 1971. A detailed summary of the flooding appears in the monthly issues of this publication.

JANUARY

Major flooding occurred along coastal streams in southwestern Oregon during January. The most severe flooding was on the Coquille River which remained above flood stage for 5 days. The Rogue and Umpqua Rivers crested 5 to 10 feet above flood stage. The Geological Survey reported that the peak discharges of some streams were the highest for January in more than 60 years. Damage due to the high water was confined mostly to siltation and debris.

Severe flooding occurred in the Chehalis Basin in southwestern Washington. This was the most severe flood since 1937. The peak of 40, 100 c.f.s., at Grand Mound, Wash., USGS gage was the third highest on record. Considerable farmland, numerous roads, many homes and a number of motels and business establishments were flooded. Preliminary damage estimates by the Corps of Engineers were placed at $1 million.

FEBRUARY

The most significant flooding during February occurred in western Iowa, western Missouri, and northeastern Nebraska. Record flooding occurred on Brazile Creek at Niobrara, Nebr., and on the North Branch of the Elkhorn River at Pierce, Nebr. Many other places along creeks and streams reported near record crests. Many communities without gages or records indicated the highest water in memory. Unprecedented lowland flooding occurred along the Elkhorn and other portions of the North Branch. The damages were estimated at $5 million.

Major flooding occurred along the Maquoketa and Wapsipinicon Rivers in Iowa, the Pecatonica River in Wisconsin and Illinois. Record stages were reached on the lower Rock at Joslin and Moline, Ill. The highest stage in the last 20 years was reported on the Nishnabotna River at Hamburg, Iowa.

MARCH

Moderate to severe flooding occurred in some areas in the South Atlantic and East Gulf of Mexico Drainages during March. Flooding on the Ocmulgee River at Macon, Ga., was of record proportions. The Oconee River at Milledgeville, Ga., reached its highest level since 1886. No major damages resulted from the record to near record stages. The highest flooding since October 1964 occurred along the Rocky River at Norwood, N. C., and the highest flooding in a number of years occurred on the Lynches River at Effingham, N. C. The Black River at Kingstree, S. C., rose within 1 foot of the 1945 flood level. Major flooding occurred along the Pee Dee, lower Broad, and Congaree Rivers in South Carolina. The Pee Dee River rose over 18 feet within 24 hours at Cheraw, S. C., equalling the August 1970 flood. Moderate to heavy flooding occurred on the Savannah and Ogeechee Rivers in Georgia.

The most extensive flooding since 1964 occurred in Alabama during March. Major floods occurred on the Alabama and Tallapoosa Rivers with all points exceeding flood stages by several feet. About 25 families were evacuated in the Montgomery area.

APRIL

Widespread flooding occurred along the Pembina River during April as water inundated 25,000 to 35,000 acres of agricultural lands in Canada and North Dakota. Most of the flooding was on the American side of the border. Dikes, built in past years, and enlarged this year, held off flood waters from the Pembina River in Walhalla and Neche, N. Dak., which cut through low-lying land and park areas. The biggest threat along the river was to Neche, N. Dak., where an intensive flood fight saved the town from the highest crest of record, 22.22 feet. The total flood damages and cost of protection measures in the Red River of the North Basin were estimated at $1.2 million. Of this total, $904,000 occurred in the Pembina Basin.

MAY

Near record flooding occurred over the lower Saline River in Kansas during May. This was the first significant overflow in the lower Saline River since May 1961. Major overflows occurred over the lower Republican River, the Little Blue River of Kansas, and several tributaries in north-central Kansas. The flooding on the lower Republican was the highest since May 1961. Considerable agricultural damage resulted from the overflows.

Major ice-jam flooding occurred in southwest Alaska toward the end of May. Many of the inhabitants in the eastern half of Bethel, Alaska, were forced to leave due to high water on the Kuskokwim River. Most of the residents of Napakiak, Oscaiville, and Napaiskak were evacuated.

JUNE

Extensive flooding occurred along the Nueces River from below Crystal City, Tex., to below Cotulla, Tex., during the latter part of June. Major flooding occurred at Cotulla, with a crest on July 1 ranking as the third highest of record.

Moderate to severe flooding occurred in the Shenandoah Basin in Virginia and West Virginia during the latter part of May and the first part of June. The stages in the lower Shenandoah were the highest since 1955.

Serious flooding occurred in Alaska on the lower Yukon, Kuskokwim, and Kobuk Rivers due to ice jams and greater than normal snowpack. The Yukon River near Ruby, Alaska, exceeded the previous maximum stage of 1963.

JULY

Numerous flash floods were reported throughout the

nation during July. The most damaging flash floods occurred in central and eastern Kentucky during the middle of the month. Flood damages were estimated in excess of $3.3 million. The threat to Cave Run's Coffer Dam necessitated the evacuation of 1,500 people from their homes. Flash flooding forced the evacuation of around 50 homes in Morgan, Carter, and McGoffin Counties.

AUGUST

The most damaging floods during August occurred in New Jersey from the heavy rains accompanying Tropical Storm Doria. This flood was the most damaging throughout the Raritan River Basin and the Assunpink Creek in central New Jersey. The communities hardest hit were Bound Brook, Raritan, Green Brook, Lodi, Manville, and Elizabeth, N. J. Power failures, road washouts, homes flooded, and evacuations were widespread throughout Bucks County, Pa., and New Jersey except the northwest hills and the coastal sections of New Jersey. The total damages were estimated at $138.5 million and the total number of deaths was placed at three.

Severe flooding occurred in Baltimore, Md., and the counties of Baltimore and Harford during the first 2 days of August. These flash floods resulted in 16 deaths and property damage estimated at $1 million.

SEPTEMBER

The most destructive flooding during September occurred in New Jersey and southeastern Pennsylvania. This was the second consecutive month that the most damaging floods in the nation occurred in this area. Record flooding occurred in Wissahickon, Cobbs, and Chester Creeks in the Philadelphia, Pa., area. In north New Jersey, the Pascack Brook at Westwood and Saddle River at Lodi reported record gage heights. The Philadelphia, Chester, Delaware, Bucks, and Montgomery Counties of southeastern Pennsylvania and Bergen, Passaic, Essex, and Union Counties of northeastern New Jersey reported heavy damages and record stages. The total damages were estimated at $80 million to $100 million. Eleven deaths were reported in southeastern Pennsylvania and three deaths in New Jersey.

OCTOBER

Widespread flooding, some serious, was reported along small streams, tributaries, and the main steam of the Appomattox River in Virginia during October. The stages along the Appomattox River at Farmville, Va., and at Mattoax, Va., were exceeded only by the 1940 flood. At Deep Creek, the water level exceeded the 1940 stage by 4.7 feet.

Extensive flash flooding occurred on San Diego Creek at San Diego and Alice, Tex., during the middle of October. Two hundred families were flooded out of their homes and one drowning was reported. Alice, Tex., was nearly isolated. Heavy flooding occurred on Spring and Ramirena Creeks, tributaries to the lower Nueces. Major flooding occurred along the extreme lower Nueces.

NOVEMBER

Major flooding occurred along the lower reaches of the Pee Dee River in South Carolina during the first part of November. The flooding, however, was much less severe than during the previous 3 months.

Major flooding occurred on the extreme lower Nueces River in Texas during early November due to excessive rains during mid-October.

Significant flooding occurred on tributaries of the Arkansas River in the southwest quadrant of Kansas during mid-November. The Coon Creek tributaries flooded as much as one-half of Kinsley, Kans., with water up to 1 foot or more deep.

DECEMBER

Major flooding occurred on tributaries of the Arkansas River in northeastern and extreme eastern Oklahoma during December. The Poteau River at Panama, Okla., rose nearly 15.5 feet above flood stage, the fourth highest stage on record. Bird Creek and Pole Cat Creek crested 1 to 1.5 feet lower than the September 1971 flood. The Arkansas River experienced the most flooding since completion of the Arkansas River Navigation Project. Flood damages were heavy and estimated at nearly $16 million.

The flooding along the East Fork of the Trinity River near Crandall, Tex., was the second highest since records began in 1949.

Serious flooding and landslides occurred in southern California during the latter part of December. Many major highways were closed by the mudslides or high water. Several homes along Santa Monica Creek and Franklin Creek were flooded. The hardest hit area was Santa Barbara County where the damages were estimated at $3.5 million.

SOLAR RADIATION DATA

Average daily values (direct and diffuse) received on a horizontal surface, tabulated in langleys.

YEAR 1971

Station	January	February	March	April	May	June	July	August	September	October	November	December	Annual
ALBUQUERQUE N.M.	330	411	536	611	720	744	679	600	509	396	300	220	505
AMES IOWA	167	204	373	499	507	625	569	545	393	307	207	-	-
ANNETTE ALASKA	51	95	183	305	470	477	513	258	-	-	47	40	-
APALACHICOLA FLORIDA	250	330	437	511	581	560	478	488	463	392	337	221	421
ARGONNE NAT. LAB.	177	179	304	452	505	569	526	476	328	250	162	94	335
ASTORIA OREGON	61	158	248	403	426	418	458	484	433	234	-	41	-
ATLANTA GEORGIA	193	264	386	527	583	557	444	445	373	283	276	159	374
BARROW ALASKA#	2	34	178	374	549	665	541	313	121	54	3	0	236
BETHEL ALASKA	-	139	314	491	432	431	358	251	206	102	55	22	-
BISMARCK N.DAK.	170	277	367	439	587	576	688	600	370	236	155	125	382
BLUE HILL MASS.	123	150	273	314	373	666	551	511	339	270	-	120	-
BOISE IDAHO	145	255	347	507	592	637	700	605	475	322	164	128	406
BROOKINGS SOUTH DAKOTA	169	216	305	437	471	516	531	506	328	208	150	129	331
BROWNSVILLE TEXAS	284	382	493	486	576	624	-	568	395	405	334	265	-
BURLINGTON VERMONT	159	210	401	377	551	614	552	453	348	231	118	90	342
CAPE HATTERAS N.C.	168	326	425	540	557	569	485	475	405	260	259	192	388
CARIBOU MAINE	140	-	348	333	424	499	443	359	297	192	132	103	-
CHARLESTON S.C.	218	282	416	489	527	554	442	393	406	248	275	184	370
CHINA LAKE CAL.	-	-	-	-	-	-	-	-	-	396	286	222	-
CLEVELAND OHIO	133	177	283	423	-	520	511	-	-	-	-	84	-
COLUMBIA MISSOURI	201	244	394	524	543	628	543	529	398	316	214	113	387
DAVIS CALIFORNIA	191	331	427	-	565	704	706	658	538	400	262	182	-
DODGE CITY KANSAS	252	314	443	516	632	-	-	-	-	-	-	-	-
E. LANSING MICHIGAN	165	187	291	427	548	567	-	-	-	-	-	-	-
EL CENTRO CALIF. NPF	296	384	498	591	640	663	614	516	483	397	312	254	471
EL PASO TEXAS	325	433	565	623	691	709	665	586	500	398	339	269	509
ELY NEVADA	253	347	465	505	557	710	687	570	580	346	272	-	-
EPPLEY NEWPORT R.I.	167	205	-	369	402	576	514	508	355	260	152	112	-
FAIRBANKS ALASKA	11	48	-	393	499	596	488	331	207	68	30	5	-
FLAMING GORGE UTAH	210	259	410	546	539	591	-	-	-	320	260	191	-
FORT WORTH TEXAS	285	318	456	480	520	582	537	457	399	297	260	161	396
FRESNO CALIFORNIA	199	301	460	560	577	749	701	613	519	388	251	167	457
GAINESVILLE FLORIDA	255	345	441	567	567	-	471	-	-	-	383	273	-
GENEVA NEW YORK	142	163	261	325	396	452	450	390	293	192	116	75	277
GENEVA #2 N Y ‡	-	-	-	-	-	-	-	-	-	-	136	85	-
GLASGOW MONTANA	132	246	371	439	548	586	649	532	373	240	132	117	364
GLOUCESTER PT VA	151	-	-	-	467	527	529	477	404	213	246	178	-
GRAND JUNCTION COLO.	227	315	448	517	609	630	-	-	531	361	239	185	-
GREAT FALLS MONTANA	129	221	372	437	520	593	664	541	381	273	155	119	367
GREENSBORO N.C.	179	270	402	525	488	499	472	454	347	252	249	165	359
INDIANAPOLIS INDIANA	173	199	-	454	504	578	523	493	349	297	186	107	-
INYOKERN CALIFORNIA †	-	-	483	587	649	708	653	561	512	-	-	-	-
ITHACA NEW YORK	202	-	298	423	469	528	497	436	305	240	130	95	-
LAKE CHARLES LA.	243	349	390	470	489	543	485	439	374	343	287	178	383
LAKELAND FLORIDA	312	372	484	495	581	478	499	457	419	358	320	289	422
LANDER WYOMING	192	299	448	509	495	660	598	556	437	282	243	182	408
LARAMIE WYOMING	173	266	379	480	481	632	603	554	444	333	229	200	398
LAS VEGAS NEVADA	278	372	503	616	648	732	-	557	556	373	277	203	-
LEXINGTON KENTUCKY	186	233	-	508	481	-	483	428	307	263	182	-	-
LITTLE ROCK ARKANSAS	199	288	377	463	508	567	511	463	405	324	234	139	373
LOS ANGELES CALIF.	248	349	459	570	557	591	657	615	492	382	281	210	451
LOS ANGELES CALIF.U	250	342	-	-	534	564	670	562	456	366	266	204	-
MADISON WISCONSIN	190	244	366	467	546	588	557	513	388	252	160	117	366
MANHATTAN KANSAS	215	247	354	462	493	605	564	560	423	303	199	131	380
MATANUSKA ALASKA	46	74	258	338	-	457	389	-	210	85	43	381	-
MEDFORD OREGON	114	194	282	428	482	593	650	571	452	301	134	92	358
MIAMI FLORIDA	341	-	459	519	529	432	539	452	427	309	290	278	-
MIDLAND TEXAS	334	420	545	601	601	612	638	516	458	368	321	249	472
NASHVILLE TENNESSEE	157	276	361	504	523	543	494	462	375	282	215	128	360
NEW YORK CENTRAL PRK	162	200	324	430	419	537	530	504	299	241	168	129	329
NORTH OMAHA NEBRASKA	217	265	388	489	490	606	604	513	-	292	177	129	-
OAK RIDGE TENNESSEE	166	250	342	482	497	503	412	457	350	294	215	122	341
OKLAHOMA CITY OKLA.	250	287	458	460	521	581	555	478	399	297	232	168	391
PALMER AAES ALASKA	39	63	235	320	406	401	356	255	183	78	42	12	199
PAGE ARIZONA	-	-	357	-	-	-	-	511	-	-	-	-	-
PHOENIX ARIZONA	299	383	507	564	635	636	631	548	454	390	289	224	467
PORTLAND MAINE	170	211	348	368	380	592	514	458	316	235	147	121	322
PROSSER WASHINGTON	122	201	302	448	564	614	651	531	417	-	-	-	-
RAPID CITY S.DAK.	159	258	344	409	498	555	559	498	371	253	157	140	350
RENO NEVADA	224	287	395	464	465	597	591	525	455	309	194	145	388
RICHLAND 25 NW WASH.	114	211	326	482	586	622	686	602	448	286	148	97	384
RIVERSIDE CALIFORNIA	292	375	504	569	568	718	-	651	542	-	333	255	-
RUSTON LOUISIANA	197	298	368	461	509	576	478	482	398	341	279	-	-
SAINT CLOUD MINN.	179	251	375	453	541	514	560	506	335	181	124	104	344
SALT LAKE CITY	170	277	402	494	578	710	718	583	479	296	214	146	422
SAN ANTONIO TEXAS	281	347	489	483	517	514	617	455	410	316	267	181	406
SANTA MARIA CALIF.	280	369	476	555	563	648	645	603	509	401	295	226	464
SAULT STE MARIE MICH	137	214	368	460	524	543	583	473	303	171	100	74	329
SEATTLE-TACOMA WASH.	64	141	240	385	457	481	585	545	364	189	88	53	299
SEATTLE WASH. UNIV.	71	142	234	344	380	382	472	447	314	180	92	68	261
SPOKANE WASHINGTON	98	176	294	407	524	531	642	556	393	248	102	97	339
STATE COLLEGE PENN.	154	196	299	386	392	417	463	405	240	175	63	-	-
STERLING VIRGINIA	179	224	365	528	467	532	547	544	364	217	198	138	359
SWAN ISLAND W I	-	-	503	561	557	488	472	507	452	405	315	320	-
TALLAHASSEE FLORIDA	219	301	385	437	502	490	388	-	-	-	-	-	-
TAMPA FLORIDA	300	360	482	545	630	538	523	471	415	380	312	298	438
TUCSON ARIZONA	315	391	523	590	676	649	678	591	535	414	330	244	50
UPPER MARLBORO MD	-	-	-	-	435	516	555	501	-	218	198	137	-
WAKE ISLAND PACIFIC	428	446	554	612	677	647	638	591	437	512	435	400	535

Note: Langley is the unit to denote one gram calorie per square centimeter.
(U) Indicates Urban sites.
= Sun below horizon November 19 through January 23, inclusive.
* Station name changed to China Lake, California, effective October 1971.
: Geneva #2, N. Y., is a new pyranometer run concurrently with old equipment for 2 months for comparative purposes. Effective January 1972 Geneva #2 will be known as Geneva.

Chart I. Departure from Normal of Annual Temperature (°F) at Surface, 1971.

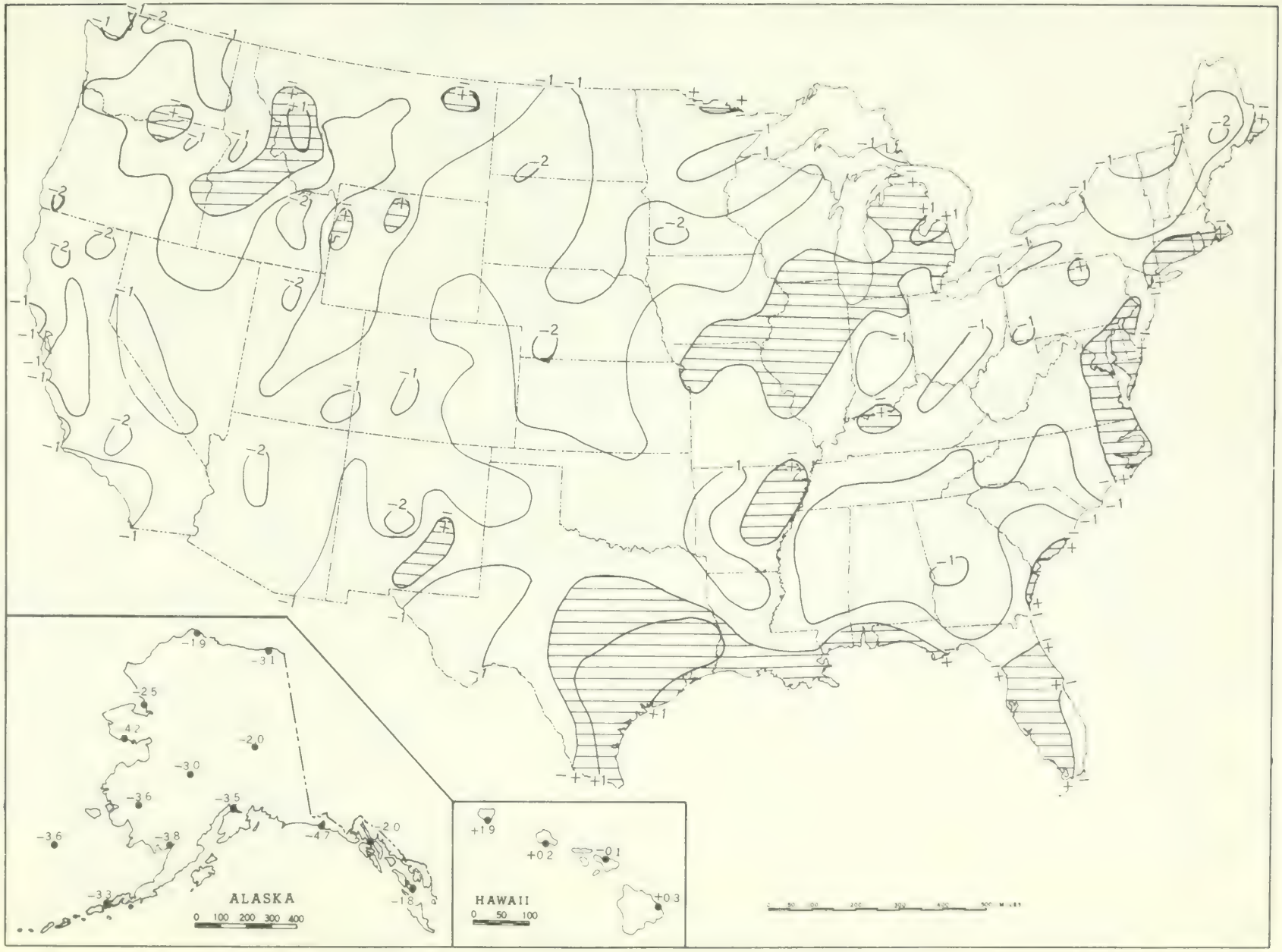


Chart II. Total Annual Precipitation (inches), 1971.

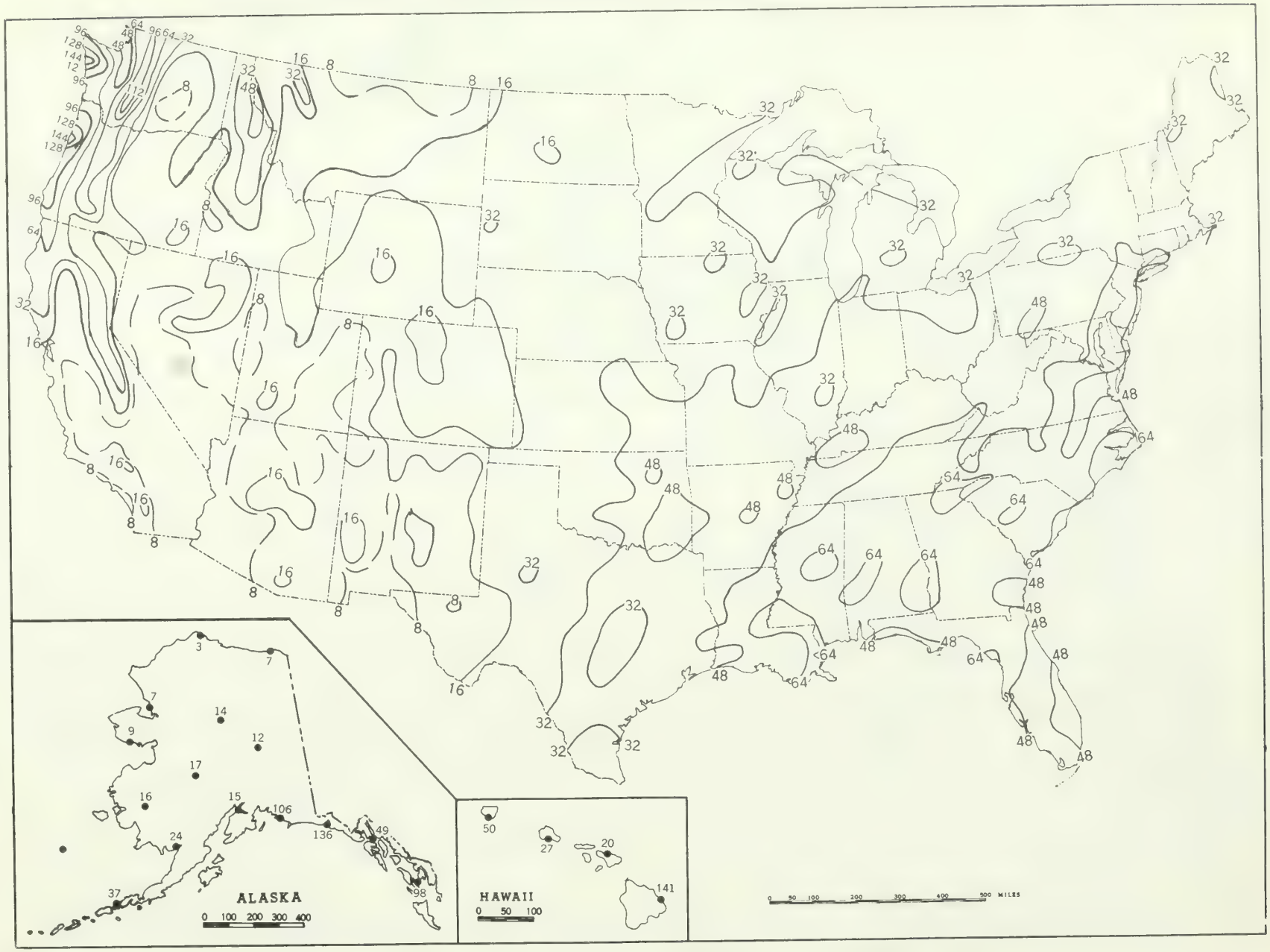
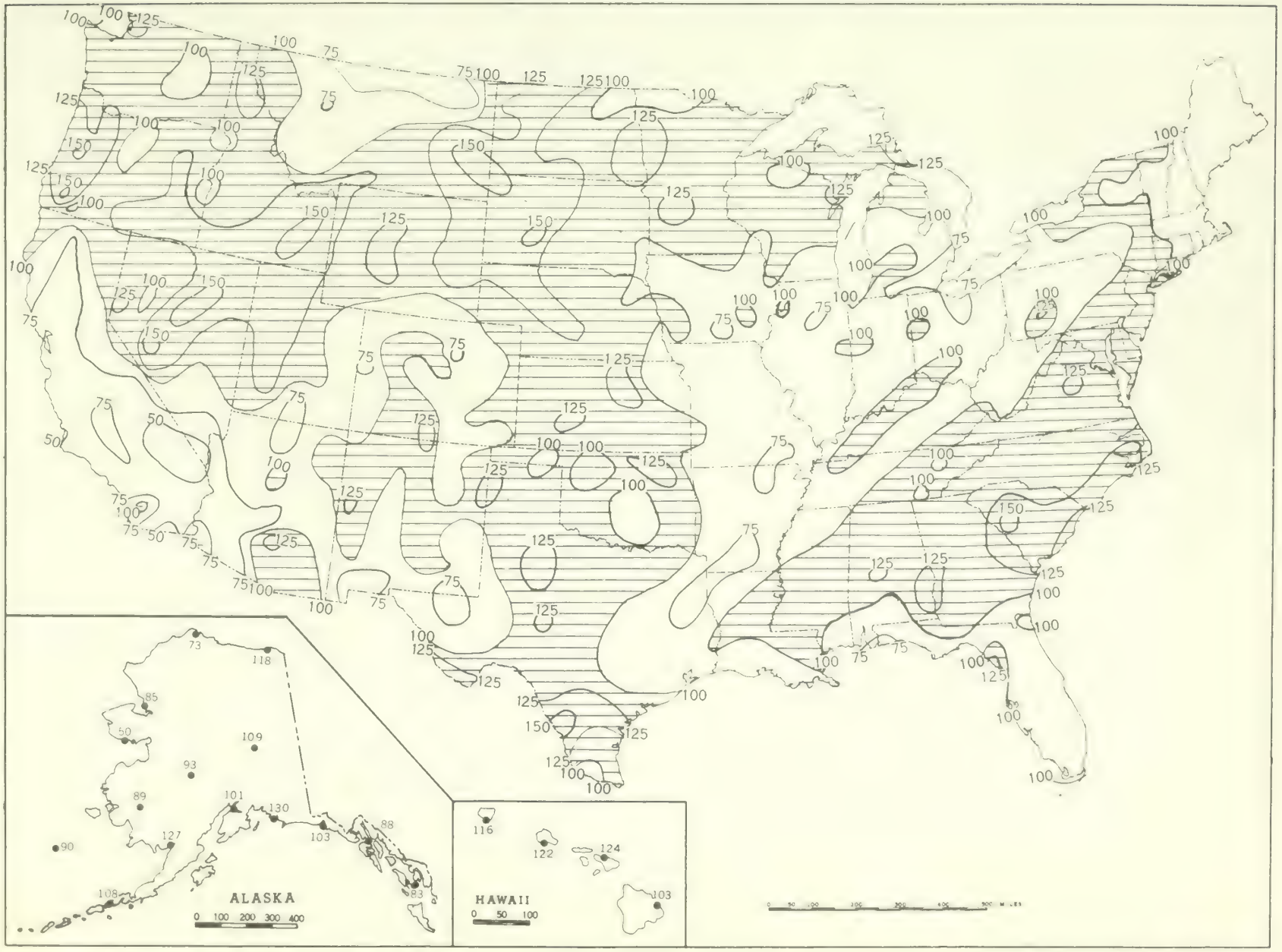


Chart III. Percentage of Normal Annual Precipitation, 1971.



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